

CELSUS

DE MEDICINA

WITH AN ENGLISH TRANSLATION BY
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IN THREE VOLUMES

II



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INTRODUCTION

Book V, Chapters 1-25, contains a list of drugs and prescriptions.¹ Celsus does not classify the ingredients as organic or inorganic, but he first gives a list of substances classified according to their effect on the body (styptics, agglutinants for wounds, substances to repress or mature suppuration, to cleanse wounds, induce healing, relieve irritation and encourage the growth of new flesh, caustics of varying strengths, and emollients), and then passes on to give the prescriptions for poultices, plasters, pastils, pessaries, dusting powders, ointments, gargles, antidotes, anodynes, liniments, draughts and pills.

In his prescriptions Celsus gives quantities, which have been reduced to modern measures,² but as we have no means of ascertaining the standard strength of the preparations which he used, it is impossible to dispense his prescriptions or compare them with those in use to-day.

The internal remedies prescribed by Celsus were chiefly foods or drink (*alimenta*), and he gives details of their use and effect on the body in Book II,

* A few additional prescriptions occur in the description of treatment in Books VI and VII; in Books I-IV, although many foodstuffs or drugs are recommended for use in various diseases, no instructions for compounding are given.

¹ See below, pp. lxx-lxxvii.

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chapter 18 ff.² but when the *medicamenta* proper are described in Book V it is noteworthy that very few are for internal use, and that nearly all are for external application. In the same way in the treatments described in Books I and II, much more attention is given to massage, rubbing and remedial exercise³ than to internal treatment by the purge and vomit, as to the value of which Celsus was very doubtful.⁴

The preference for external remedies was perhaps due to the limited use of dissection, which resulted in a very imperfect knowledge of anatomy and internal conditions, so that Celsus and his contemporaries inclined to prescribe remedies, the results of which could be seen. While in Egypt the practice of embalming had early made men familiar with internal anatomy and the Alexandrian surgeons used dissection of dead bodies and vivisection for purposes of study and investigation,⁵ both methods were strongly condemned by the Empiric school, to whose views Celsus attaches great weight,⁶ and evidently became gradually discredited, for when Galen studied at Alexandria in A.D. 152-157, he had no opportunity of studying human anatomy or morbid conditions by means of dissection. The prejudice against this con-

² See also vol. I, p. 483 ff. for a list of *aliments*. *Aliments* and *medicamenta* overlapped to some extent and several of the former (e.g. honey, mustard) were ingredients or prescriptions for external use.

³ These formed a very important part of medicine from the earliest times; the use of remedial exercise as a treatment is said to have been introduced by Herodicus, the teacher of Hippocrates.

⁴ Vol. I, Pro. 28 ff.

⁵ Celsus relates that the Ptolemies gave Herophilus and Erasistratus the bodies of criminals to vivisect (Pro. 23, 24).

⁶ Pro. 27 ff. The school was founded by Philon.

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tioned during the succeeding centuries and contributed to keep these methods of study in abeyance, and it was not until the renaissance, when they were revived by painters and sculptors eager to regain the standard of Art which had been reached in ancient Greece, that they again became the basis of medical training. The conclusion reached by Celsus himself is that dissection is necessary for the instruction of students^a and in his treatise he directs attention to what, in his opinion, the Art of medicine could then accomplish. He writes without any real knowledge of internal conditions, he treats the symptoms and not the disease.

In the introduction to his whole work, Celsus had already noted with approval the views of the Empirics that physicians should not be bound by hard and fast rules, and that treatment must vary according to climate and other conditions; though treatment must be based on experience, difference of conditions caused the experience of individual practitioners to vary^b; he had also noted the division of remedies into *secunda* and *communia*^c; when the ordinary remedies fail, contrary ones may be employed. An instance was the treatment given to Augustus by the physician Antonius Musa.^d When the regular treatment with hot poultices failed to relieve a pain in the liver, he applied cold ones. It has been suggested that Augustus was suffering, not from a liver abscess, such as Celsus has described (vol. I, p. 415), for which such hot applications were given^e but from typhoid

^a Pro. 74.

^b Pro. 10 E.

^c Pro. 71; see also VI, §. 6 E and note 6.

^d Suetonius, *Augustus*, 81.

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fever, and that Antonius Musa applied a cold pack,¹ a treatment still used, a well known instance is that of King Edward VII, who, when Prince of Wales, was in danger from typhoid fever in 1871. The bold originality of the remedies applied by Petron² were still remembered by Galen writing a century later.³ A similar type of "shock" remedy was the treatment of epilepsy by a draught of gladiator's blood⁴ and of hydrophobia by throwing the patient into a pond,⁵ though the latter may have been more of a homeopathic nature, and would certainly cause the death of a genuine case, though it might be effective in the cases of hysterical symptoms simulating hydrophobia which, as Pasteur observed in his native district, often accompany an outbreak of the disease. But such methods were not always safe, and though they sometimes resulted in spectacular cures, they sometimes killed the patient.

Turning to the actual ingredients of the prescriptions, the greater part were derived from herbs and vegetables, which, as Celsus himself points out⁶ have been used medicinally from the earliest times and by the rudest tribes, but, in addition, many animal organic and inorganic substances were employed. If the herbs used by Celsus are compared with those in a modern materia medica, it will be seen that though many are the same, he often mentions plants which are no longer used, as the drug which they contain can be obtained in a stronger form, or one more satisfactory for use, from some other

¹ Cf. Buchan. *Augustus*, pp. 181, 182.

² *Ill.* 9, 2-4.

³ Galen. *l.* 144, XV. 438.

⁴ *Ill.* 22, 7.

⁵ *Y.* 27, 2 C.

⁶ *Ill.* 9, 4.

⁷ *l.* Pra. I.

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source; * in other cases the preparation which he used was evidently much weaker or applied for some other purpose than to-day,[†] and some of the most important drugs are missing from his list.[‡]

In the same way among the inorganic substances, arsenic, iron and mercury[§] are only used externally.

INTERNAL REMEDIES

Purgatives are comparatively few and treatment by clystering the bowel was preferred by Aesclepiades, whom Celsus is inclined to follow, but he mentions several substances as useful for the purpose, aloes, hellebore, sea-spurge, and others.[¶] Castor oil is not included. For inducing a vomit he recommends only

* The squill provided a salutary skin to digitalis (which Celsus does not know; but less satisfactory is *asa*).

† Opium and castor oil (see *loc. cit.* below), pepper and nixum (so, *oleum*).

‡ For instance strychnine (prepared from *strychnos*, a tree from the E. Indies) which was first used in comparatively modern times and *aconitum napellus*, still a frequent ingredient of liniments, though seldom prescribed now for internal use. *Aconitum* had been known as a poison from the time of Hippocrates, and the *apocia agria*, identified by Celsus with *urofemina* (I. 310 and *loc. cit.* below) is said by Pliny (*N.H.* XXIII, 17) to be a kind of larkspur (*delphinium staphisagria*). He used it as a vermifuge and under the name "*staphisagria*" it is still so used in the United States.

§ There is no mention of calomel, bismuth, iron or magnesium as internal medicines. The only trace of iron used internally is in the popular remedy for enlarged spleen—water in which a smith's red hot tools have been dipped (I. 418); mercury Celsus only mentions in the form of cinabab, used externally, *see list* *s.v.* *cinabab*.

¶ I. 3, 25; II. 12; copper chips were also used, *see list* *cit.*

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the simplest means, tepid water with salt, mustard, honey or hyssop, or a radish;³ pills, pastils and draughts were prescribed for the relief of pain, cough and bladder trouble, and to induce sleep.⁴ The "antidotes" were a class of remedy held in high esteem; Celsus said they were not often used, but were important because of the help they gave in the gravest cases. He gave the prescriptions for three; they are mildly stimulant mixtures chiefly characterised by the very large number of their ingredients; it is difficult to see what value they can have had beyond a slightly tonic effect.⁵

EXTERNAL REMEDIES

It is noteworthy what great importance Celsus attached to tannin in local applications. This substance, now generally recognised as a useful immediate application for burns and scalds, was the chief effective constituent in many of the substances included in his prescriptions.

In addition to the plasters, poultices and other applications whose use is sufficiently explained in the text itself, one large class of remedies may be grouped under the modern term antiseptics, though no general name is applied to them by Celsus.⁶ These substances have the general characteristics of opposing the growth of micro-organisms in wounds and of promoting a free discharge; they include the essential oils, especially rose oil (obtained by steeping the petals in cold water, and keeping them in the cold air till the oil rose to the top and was skimmed off),

³ I. 8, 22.

⁴ V. 24, 25.

⁵ V. 23.

⁶ There were many others, see Galen on *Antidotes*, a work devoted to such medicines (vol. XIV, of Kuhn's edition).

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thyme oil, pitch and turpentine. The phenol or carbolic acid derived from gas tar and used by Lister as an antiseptic was akin to the thymol derived from thyme flowers, though the latter was weaker in its action. The antiseptic which largely replaced phenol in surgical practice was mercuric chloride. Celsus frequently recommends opoponax and sandarach, the arsenic sulphides, for cleaning wounds and ulcerations, but as antiseptics these are much weaker than the mercury chloride. Salt solution, so largely used in the great war in the treatment of wounds, was used in ancient medicine for the same purpose, that of prompting a thin discharge, and is often mentioned by Celsus.*

HOMOEOPATHIC AND RUSTIC OR POPULAR REMEDIES

Throughout history a knowledge of herbs and drugs and their medicinal uses has been connected with the early systems of philosophy and occult lore. The "doctrine of signatures" expressed the popular belief that certain plants and minerals bore symbolical marks which indicated the diseases which nature intended them to cure, or that their outward appearance corresponded with the bodily condition of the patient.^b Traces of this theory and of a belief in sympathetic magic are to be found in many of the remedies, especially the rustic or popular remedies, mentioned by Celsus. A sympathy or "homoeopathy"

* See list a.e. xxi. A split fig, which he mentions as a common application on wounds (vol. II., pp. 160, 161, 289) was used for the same reason, as the sugar in the pulp would promote a thin discharge.

^b For an account of the "doctrine of signatures" cf. T. J. Pettigrew, *Superstitions connected with Medicine or Surgery*, 1844.

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was believed to exist between the remedy and the disease, and they are "homoeopathic" in a much more fundamental sense than that in which the term is used by those who claim to practise homoeopathy to-day. Instances of such remedies are the black hellebore (a powerful aperient) supposed to be especially effective in the black bile disease (melancholia),² or the white hellebore given to reduce swollen glands in the neck because it tended to produce expectoration of white phlegm.³ Ox spleen was given as a remedy for enlarged spleen,⁴ a poultice of pulse reed was applied to a gathering on the hand caused by a splinter, because the commonest source of such splinters was the pole reed;⁵ a decoction of worms boiled in oil was poured into suppurating ears where there were maggots.⁶ Other well known examples, not mentioned by Celsus, are the application of the roots of the lessercelandine (pilewort) as a remedy for piles, because small excrescences which grew on them resembled the disease, and the use of red light and red cloth in treating smallpox with the idea of bringing out the rash and so evacuating the disease, though here again the treatment has been thought to have a real value as excluding harmful rays from the skin.⁷

* II. 12. 1 B.

² V. 22. 7 B (vol. II., p. 160 note).

³ IV. 18. 3. This no doubt originated in the idea that the remedy should resemble the disease; on the other hand the modern treatment of thyroid disease by thyroid extract or liver disease by liver, is at once brought to mind.

⁴ V. 26. 36 G.

⁵ VI. 7. 1 D.

⁷ For many other instances see Sir J. Q. Fraser, *The Golden Bough, The Magic Art*, vol. I, p. 78.

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(References are to volumes and pages of text)

I. LIST OF REMEDIES USED AND THE DRUGS, HERBS AND OTHER IN- GREDIENTS OF PRESCRIPTIONS

Abrotonum (*Habrotonum*); *Artemisia abrotonum*;
southernwood.

This yields a bitter oil resembling that of
hops and was used internally as a carminative,
I. 316, 386, and topically to clean wounds, II.
6, 10, and to relieve gout, II. 30.

Absinthium; *Artemisia absinthium*.

The twigs supply wormwood; the dried flowers
wormseed, from which the bitter oil, absinth,
was distilled; this was taken with honey as a
carminative and diuretic. I. 204, 210, 316, 340,
382, 398, 400, 414, 416, 422, II. 64. It was a
remedy against worms, I. 436; *santonin*, made
from certain species of *artemisia* is still used for
this purpose. It was also used topically, I. 412.
Wines were flavoured with it to make them keep,
I. 496. The harmfulness of the modern absinth
liqueurs is due to the deleterious alcohol used
in their manufacture.

Acacia; *Acacia Arabica*.

The gum mastiche from this, which included
astringent tannin, was used to arrest bleeding
and agglutinate wounds, II. 4, as an exedent,

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II. 8, and generally as an astringent gum in eye salves and lozenges. The juice was also used, II. 190 note, 196.

Acetum; vinegar.

As a drink, I. 186 ff.; used constantly both externally and internally, I. 212, 258, 270, 286, 292, 308, 310, 338, 348, 386, 388, 390, 394, 398, 406, 416, 438, 458; mentioned, II. 4, 8, as a styptic and exedent.

Achariston; name of a salve. II. 194 and note b.

Anopa; *Anodynes*, substances to deaden pain, II. 56 note b. See *Anodyna*.

Acorus; *Acorus calamus*; sweet flag.

The rhizome was dried and eaten, or the oil pressed out of it; it is included among diuretics, III. 316, as an ingredient in an antidote, II. 56, and perhaps (under the name of *calamus alexandrinus*) in an anodyne salve, II. 56.

Adurentia (medicamenta quæ adurant, caustics); a list of these is given, II. 8. see also 130 ff.

Æs Cyprium or *Cuprum*; copper.

Many forms of this were used in prescriptions;

(1) *Ærugo*; basic subacetate and carbonate of copper or verdigris. This was scraped off sheets of copper which had been steeped in vinegar and used as an astringent, repressive or caustic, II. 4, 8, 8.

(2) *Chalcitis*; basic carbonate and sulphate of copper, copperas or green vitriol. This was mixed with oak bark or galls to make *astrucum rutorum*, blacking, and used as a caustic and exedent, to arrest hæmorrhage, to clean wounds and form a scar, II. 4, 8, 8, 10.

(3) *Æs combustum*; calcined copper ore.

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This was used as an erodent, II. 8; or was fused with salt, sulphur or alum into a sulphate chloride and oxide of copper and used to make emollients and eye salves, II. 10, 194, 204, 210-14.

(4) *Flos aeris* or *Chalcanthus*; red oxide of copper.

This substance was like millet seeds and was produced by pouring cold water on molten copper and used as an exedent, II. 8, or as an agglutinant for wounds, II. 2, 10, 44.

(5) *Squama aeris*; black oxide of copper, copper scales.

These were chipped off molten copper, and when washed, pounded and dried acted as a mechanical aperient, I. 168.

(6) *Chryscolla*; borate, carbonate and silicate of copper, gold solder.

This was used as an erodent and caustic, II. 8.

(7) *Diphyges*; sulphide and oxide of copper, mixed with iron and zinc ores.

This was used as an exedent and caustic and for cleaning ulcerations, II. 8, 50.

(8) *Stomoma*; red oxide of copper, copper scales hardened in the fire.

These were used to arrest hæmorrhage and in making an eye salve, II. 4, 194.

(9) *Psoricum*; itch salve, consisted of chalcitis and cadmia (see below *Cadmia*) boiled together in vinegar to form hydrated oxides of copper and zinc, and then buried underground till used, II. 218, 220; the preparation was also applied to the eyelids, II. 220.

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Aleyonium; II. 2, 29, 174; probably a species of coral, perhaps leather coral. It was incinerated to produce quick lime and used as an exedent and for skin diseases.

Alpe; plasters without grease, II. 32.

Allium; *Allium nigrum*, garlic.

As a food, I. 192 ff., 490; a febrifuge, I. 276;
see also I. 208, 330, 370, 390, 424, 436, 436, 448;
used topically as an erodent, II. 6.

Aloe;

(1) *Aquilaria agallocha*, Hgn-aloe.

The perfumed wood of this yields an oil and decays into a resin used in making incense and also (as it was rich in tannin) applied as a topical astringent; to suppress hæmorrhage, II. 8, to agglutinate wounds, II. 44, and as an ingredient in eye salves, II. 154, 196, 212, and ear lotion, II. 232.

(2) *Aloe Socotrina*; aloen.

This was (and still is) used as an aperient, I. 62.

Alumen; *Aluminium sulphate* and *silicate*; alum.

The following varieties were used:

(1) *Alumen liquidum*; alum brine, a styptic, II. 4.

(2) *Alumen acrisile* (schiston); split or feathery alum, a repressive, II. 4, 44.

(3) *Alumen rotundum*; round alum; an epispastic and erodent, II. 6 and 10.

(4) *Pumex*; *silicate* and *carbonate* of *aluminium* (and other alkalis), pumice. This had been formed by volcanic action and was used for cleaning wounds or as an epispastic, II. 6, 24, 28.

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(5) *Lapis Phrygius*; rock alum from Phrygia and Cappadocia coloured by iron and copper sulphates; an exedent, II. 8; in an eye salve, 218.

(6) *Alum earths*; *terra Hyetys*, II. 10, 180; *terra Cimolia*, glutinous hydrated silicate of aluminum coloured by iron and copper, I. 212, 304; II. 4, 102, 124, 184, 534; *terra Melia*, silicate of aluminum (*alumen Melinum*), II. 2, 288; cf. Pliny, *N.H.*, xxv. 182. 67, also Hippocrates, *De Terris*, II, 12 (Littre VI. 412, 414); *terra Lemnia*, silicates and sulphates of aluminum, magnesia and iron; the well known rubric *Lemnia*, red ochre, was exported in packets stamped with the figure of a goat, as the colour due to oxide of iron was ascribed to an admixture of goat's blood; similarly *terra Samia*, alum earth from Samos, was exported with a star stamped on it, II. 204 note.

Alum discut., *medicamenta quae*; purgatives and enemata, I. 62, 168, 172, 208; II. 10; see below *Purgatio* and *General Index* *Clyster*, *Enema*.

Amaracus; *Origanum majus* and, sweet marjoram. Used as a discutient, II. 10.

Ambrosia; name of an antidote (so called from its success in preserving life), II. 54.

Ammoniacum (*Hammoniacum*); *thymistum*; *Dorema ammoniacum* or *Ferula Tingitana*, sulphur.

The milky juice of this plant (specially cultivated around the temple of Jupiter Ammon) was used for incense; it formed a resin containing salicylic acid and a volatile oil which was much used by Celsus, as a cleanser of wounds, II. 8, and a discutient and emollient, II. 18-30, and in

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poultices and plasters, II. 38, 38, and eye salves, II. 210, 214, 216.

Ammoniacum sal; see *Sal*.

Anomum; see *Cardamomum*.

Anastomota; openers of pores, II. 8 note, 26.

Anisum; *Pimpinella anisum*, anise.

Aniseed (still a common flavouring); is indigestible as a food, I. 200 ff., 490; used against flatulence and as a diuretic, I. 206, 210, 340, 413.

Anethum; *Anethum graveolens*, dill.

Among foods, I. 200 ff., 203, 445, 490, 491; as a diuretic, I. 210, 488; as a snuff, I. 272.

Anodyna; *Anodynes* (see *Acopa*, also *Hyoscyamus*, *Mandragora*, *Papaver*, *Solanum*).

(1) Prescriptions given as pills, II. 58; see also I. 211.

(2) Used topically, I. 458, also II. 58 note, 191.

Antherae; preparations from flower blossoms, II. 254 note, 258, 260, 264, 272.

Antidota; antidotes, II. 54, note, 58.

The word is not used when remedies against individual poisons are described, II. 122.

Antiseptics; essential oils from aromatic plants and trees; especially cedar, cinnamon, juniper, pine, thyme, used for their antiseptic qualities, II, xii.

Apium; *Apium graveolens*, celery or *Petroselinum sativum*, parsley.

As a diuretic, I. 210; see also I. 418, 418, 450, 491.*

Apyron; see *Sulphur*.

Argemone; *Papaver argemone*, prickly poppy.

The soothing mucilage of this contains a small

Argenti spuma; see *Plumbum*.

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amount of opium and was applied to poisonous stings, II. 130.

Arida Medicamenta; dry drugs pounded, used as dusting powders, II. 48; and blown through a quill, II. 156, III. 449; or formed into pastiles by means of a little fluid, II. 14.

Aristolochia; *A. longa* and *A. rotunda*, birthwort.

The root yields an irritant glucoside, which was used in poultices and plasters, II. 20, 30, 34, 38, 46, 50, 52, 62.

Aromata; Dried aromatic flowers imported from abroad, I. 318; II. 14, 212.

Armoracia; *Cochlearia armoracia*, horse radish.

This was prescribed as a remedy for spleen affections, I. 416; II. 106.

Arsenicon; see *Auripigmentum*.

Arteriacæ; a medicine for the windpipe, II. 64, note b.

Arundo (*Harundo*); *Arundo donax*, papyrus.

The juice of the root was used for emetic, II. 228; its splinters were dangerous, II. 108-6.

Asafoetida; see *Laser*.

Asclepias; name of a saive, II. 214.

Aspalathus; *Calceyrotoma villosa*.

A decoction from the rose scented wood of this (*ligustic rhodium*) was applied to painful sinews, II. 68.

Atramentum, blacking;

(1) *A. scriptorium*, ink made from the soot of torches, used as an application for baldness II. 182.

(2) *A. sepium*, cuttle-fish ink, used as an aperient, I. 203.

(3) *A. sutorium*, see *Aes*, 2.

Auripigmentum; As_2S_3 , the yellow trisulphide of

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arsenic, orpiment; sandaraca, As_2S_3 , the golden disulphide of arsenic, sandarach (modern realgar), which becomes orpiment when heated.

The two forms were used alternatively in prescriptions (in some both were included) for cleansing wounds, and as erodents, caustics and counter-irritants, II. 6, 10, 28, 50, 52; they were used in the treatment of all sorts of ulcerations, II. 154, 182, 202, 246, 264, 286, 290.

Celsus does not mention them in his chapter on poisons, II. 110 ff.; nor does he refer to the poisonous arsenious oxide, white arsenic, produced by the oxidation of orpiment and sandarach which was known to Geber in a.d. 750, but was perhaps not in use earlier.

Balanos myrsipica (*Balanus myrsipica*), or Myrobalanus; *Hyperanthera decandra*, beanut.

The rind was used for spleen disease, I. 416; II. 18, an ointment was also made from it, II. 110 note.

Balsamum; *Balsamodendron opobalsanum*, balsam of Mecca; *B. myrrha*, myrrh.

The resin of these trees was known as opobalsam and an almost equally valuable essence was obtained by boiling the wood, leaves and seeds (xylobalsam).

It was used internally as a diuretic, I. 318, and the seeds in an antidote, II. 54, 58; externally as an erodent, suppurative, wound cleaner and emollient, II. 6, 8, 12, also in poultices, II. 18, 20, and as a remedy for neuralgia, II. 58, and in an eye salve, II. 223.

Basilicon; a name given to a plaster, II. 32, and to an eye salve, II. 218, 220.

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Bdella or Bdelium; *Borassus flabelliformis*, the *Palmyra* palm.

This tree yields a resin like ammoniacum which was used for incense. Celsus used it externally as a pore-opener, epispastic and emollient, II. 8, 10, 18.

Bitumen; found in the Dead Sea and Euphrates valley.

This was used on plasters as a mild counter irritant, I. 348; II. 5, 10, 32, 34, 40, 44, 253.

Cacly; perhaps the fruit of the herb *Libanotis*, (*Leckia Cretica*), the medicinal uses of which are given by Theophrastus, *Enq. into Plants*, IX. II. 10.

Used by Celsus in a prescription for abscesses, II. 18.

Cadmia (terra);

Zinc ore from Cyprus, which when heated in water produced carbonates and hydrosilicates of zinc; these stuck to the reed (*calamus*) with which the mixture was stirred, and so the name "calamine" is still applied to zinc lotions. Cadmia, when heated, gave off zinc oxide vapour which was sublimated and adhered to the wall of the furnace in clusters; these consisted of oxide of zinc and were scraped off and known as *spodium* (ash).

Cadmia was used as an exedent, desiccant and extractive, II. 5, 50, 344, and in the treatment of malignant ulceration, II. 154; the clusters (*bolusius Cadmius*, *spodium*) to relieve irritation, II. 10, 188, and also for eye salves, II. 194, 204; III. 344, and for earache, II. 234.

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Calamus;

(1) *C. Alexandrinus*, *see* *Acorus*.

(2) *C. scriptorius*, a reed or quill pen, *see* list II.

Calefacientia; heating foods, medicines or applications; I. 62, 206, 244; II. 13.

Calx; limestone;

(1) *Calx viva*; calcium oxide, quick lime; an exedent and caustic, II. 8.

(2) *Cimæ*, ash, produced by burning various substances containing lime; e.g., stag's horn (*cornu cervinum*), used as an exedent, erudent and caustic, II. 3, 8, *see also* *Alcyonium*, *Corallium*, *Salmandra*.

(3) Limestone from Assus, used as a preservative, *see* index of proper names, *Assus*.

(4) *Saxum calcis*; silicates of lime, and magnesia, asbestos; used as an application for a hardened fistula, II. 134.

(5) *Lapis molaris*; millstone, used as a discutient, II. 10.

(6) *Lapis pyrites*; limestone mixed with sulphides, used as a discutient, emollient, and to relieve irritation, II. 10, 32, 166.

(7) *Gypsum*; the sulphate mixed with the carbonate of lime, plaster of Paris, used as an external refrigerant and repressive, II. 212; III. 304.

Campana sertula; *see* *Sertula*.

Canina frogua; *Cynoglossum officinale*. hounds-tongue.

The leaves yield a bitter astringent juice, which was applied to burns, II. 124.

Canopus; name of a salve, II. 214.

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Cantabrica herba; see *Scaevola*.

Cantharides; *Cantharis* or *Lytta vesicatoria*, Spanish fly.

Used externally as a caustic and cleanser for wounds and papules, II. 3, 50, 173. If taken internally it was poisonous, and remedies are prescribed for it, II. 122.

Carbo hirundinis; see *Hirundo*.

Cardamomum;

(1) *Amomum cardamomum subulatum*; Nepaul pepper, I. 236; II. 20, 22.

(2) *Elettaria cardamomum*, cardamon.

The seeds (brought from Malabar and Ceylon) produce an aromatic oil, used internally as a diuretic, I. 318, and externally as a counter-irritant, agglutinant, crodent and emollient, II. 4, 8, 12.

Casia, Cassia; see cinnamon.

Castoreum;

A material derived from the genitals of the Castor fiber, beaver. It had a pungent taste, suggesting musk, was used internally as a stimulant, I. 285, 310, 338, 375, 443, externally in eye and ear salves, II. 158, 240.

Cataplasma; poultice, I. 214. See also *Malaagma*.

Catapodium; pill, I. 318; II. 53-64. Eight of the prescriptions are to procure sleep or relieve pain, four for cough.

Cedrus; *Juniper communis*.

The oil from the berries was used externally as a discutient, II. 10, and in poultices for gout, II. 30.

Centaurea; *Centaurea salnitana*, centaury.

The bitter juice from the roots was used in-

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ternally against snake bite, II. 120, and externally for ear discharge, II. 230.

Cera; wax, used as a discutient, emollient and to form flesh, II. 10. See also I. 272, 365, 378, 381, 410, 442, 446, 448, 455, 460; *ceratua*, *ceratic*, an ointment made with wax.

Cerussa; see *Plumbum*.

Chamaeleon; *Atractylis gummifera*, a thistle, whose gum (similar to mastic and birdlime) was used in a poultice for gout, II. 30.

Chamaepitys; *Ajuga chamaepitys*.

This yields a bitter astringent juice, like pine resin, used as a pore opener, II. 6.

Charta combusta; see *Papyrus*.

Chelidonium majus or *Herba hircundinis*; the greatercelandine, see II. 228 note.

The juice was applied to an inflamed uvula, II. 262.

Cicinum oleum; an oil produced from the seeds of the *Ricinus communis*, castor oil.

It was used as an emollient, II. 42, 58; Celsus does not mention its use as an aperient, but this is referred to by Dioscorides and Galen.

Cicuta; *Conium maculatum*, henlock.

Used internally as an anodyne, II. 62; externally as an emollient, II. 12, and in a poultice for gout, II. 16, and in an eye salve, II. 190. Remedies for those poisoned by it, II. 123.

Cinis; wood-ash (especially from vine twigs).

Used as a refrigerant and repressive, II. 212; II. 228; *cinis Cyprius* (from *Lawsonia inermis* used as an erodent, II. 8.

Cinnamomum; *Cinnamomum cassia* from China

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C. zeylanicum from Ceylon, cinnamon or casia. In two prescriptions (I. 450; II. 30), both names occur. They were perhaps preparations from different parts of the plant.

The unripe fruit or the rolled bark were used internally as a diuretic and remedy for cystalgia or snake bite, I. 316, 414, 450 or externally as a pore opener, erodent and discentient, II. 6, 8, 10, and for podagras, II. 30.

Coccum (or *granum*); *Cnidium* (*Cnidium*); *Daphne Goidium*, spurge laurel (from *Cnidus*).

Used by Celsus externally as a wound cleanser and caustic, and in a poultice to ease pain in side, II. 8, 2, 20; he does not mention the use of the berries as a drastic purge (Galen. *Nat. Fac.*, p. 67, L.C.L. trans.).

Colicos; a medicine against colic, invented by Cassius, I. 430; II. 64 note.

Collyria; salves, II. 154 note, and list II.

Comprimientia; astringents, I. 36, 64, 208, 432, 444, 462; II. 260.

Concoctio; assimilation of food stuffs, digestion, I. 74, 326, see General Index, Digestion. *Medicamenta quae concoquant*, drugs to mature abcesses, II. 6.

Corallum; coral. *C. rubrum*, red coral; see also *Aleyonium cortosium*, leather coral. Both substances were incinerated for the quick lime in the ash and they are included among erodents, exedents and caustics, II. 6, 8.

Coriander; *Coriandrum sativum*, coriander. *

As a diuretic, I. 213; see also I. 208, 212, 316, 491; used externally, II. 16, 156 note.

Cornu cervinum; stag's horn.

When incinerated used as a wound cleanser,

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II. 8, as the ash contained quick-lime (calcium oxide) with some phosphate and carbonate, see *Calx*; the vapour of it while burning was a stimulus in cases of lethargy, as it included a little ammonium carbonate, and when cooled in vinegar it was a remedy for toothache, I. 308; II. 218; it was boiled to a glutinous mucus for use in an eye salve named after it, see II. 208, note a.

Costus; costmary.

The roots of *Sansurea Lappa*, a plant of Kashmir, the oil from which was used internally in an antidote and as a stimulant in cases of snake bite, II. 54, 120, and externally as a suppurative and wound cleanser, II. 8.

Creta; Calcium carbonate, chalk.

(1) *Creta Cimolia*, chalk from Cimolus mixed with alum, see *Alum* (8); used externally as a repressant, I. 212, 304; II. 102, 121, 184; III. 334; also as a styptic, II. 4.

(2) *Creta sigularis*, potter's clay, a styptic, II. 4; cf. *Pliny, N.H.*, xxvi 3, 28.

Crocus; *Crocus sativus*, the autumn flowering crocus.

From the styles and stigmas saffron, a condiment with a slightly bitter taste, was obtained, and from this an orange-coloured oil was expressed which left a residue known as *erucumagna*, saffron dregs. The best variety came from Cilicia. Saffron was used internally as a diuretic, I. 216, and in an antidote, II. 54, externally in an ointment for headache, I. 298, as a wound cleanser and discutient, II. 8, 10, as a remedy against scabies, II. 168, and especially as an ingredient of eye salves, II. 154-220; one of

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which was named the *dia crocu*, II. 220. Crocomagma was also used in an eye salve, II. 214, and in the poultice of Nilcus, II. 30. 22.

Carolinum; Cuminum cyminum, cummin.

Among foods, I. 360 ff., 416, 497; see Cit.

Cumini; a gum mucilage, source not specified; often used with acacia gum and juice, I. 443; II. 4, 10, 190, note a, 196.

Cupressus; C. sempervirens, the pyramidal ever-green cyprus.

Wood, leaves and seed yield *oleum cupressum* containing an aromatic and astringent tannin; the crushed leaves were used internally as a repressive and refrigerant, I. 312, and the seeds as a diuretic, I. 316; externally the leaves were used in a poultice for spleen disease and the oil as a discutient and for erysipelas, eye salves, and gum boils, I. 416; II. 10, 102, 208, 258, and a decoction of the leaves was put in a bath for use after lithotomy, III. 445.

Cydon; name of an eye salve, II. 195 note a.

Cyperus quadratus and C. rotundus: see Juncus.

Cyperus papyrus; see Papyrus.

Cyprus; Lawsonia alba.

From the leaves with their lilac-like perfume *oleum cyprinum*, cyprus oil, was distilled and used as a calefacient, I. 214, and for tetanus, dyspnoea, enlarged spleen, hysteria, and podagra, I. 378, 384, 448, 460; the oil was an emollient and an ingredient in eye and ear salves, II. 58, 320, 228; cyprus ash (*Cyperus coar*) contained caustic soda and is included among exedents, II. 8.

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Cytisus; *C. scoparius*, broom.

The broom tops contain the alkaloid apurine,
and a decoction was used for splenitis, III. 416,
and for toothache, II. 248. 250.

Daphne; *Dis-daphneida*.

A plaster containing laurel leaves, II. 10, 38;
see *Laurus*.

Daucus Creticus; *Athamanta Cretensis*, Cretan or
Candy carrot.

An ingredient of an antidote, II. 56.

Diacerates, **Diacodium**, **Diadaphneidon**, **Diaceron**, **Di-**
libanu; *see* *Corau cervinum*, *Papaver*, *Daphne*,
Crocus and *Libanotis*.

Diachylon; *Emplastrum plumbi*, lead plaster, *see*
Plumbum.

Diaphoretics; *see* *Sudorem evocant*.

Dictamnus Creticus; *Origanum dictamnum*, Cretan
dictamy (called after Mount Dictæ, in Crete,
where it grew in abundance) was a famous
remedy for wounds, cf. *Virgil Aeneid*, XII. 411.

The volatile oil from this is prescribed for
expelling a dead foetus, II. 64.

Diphryges; *see* *As* (7).

Discutientia (*Medicamenta quæ discutiunt*); disper-
sives of diseased material, I. 36, 178, 276, 394;
II. 10.

Ebenus or **Hebenus**; *Diospyrus ebenum* or *melan-*
oxylon, ebony.

The sawdust from this containing humic acid
and black pigment (a remedy used in ancient
Egypt) was prescribed by Celsus internally as

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a diuretic, I. 316; externally as an exedent, epispastic and relief for irritation, II. 8, 10.

Ebur, ivory; the raspings were used as a wound cleanser, II. 8.

Elatarium; *Pebailum* or *Mormodien elaterium*, juice of the wild cucumber, *Cucumis agrestis*.

Used as an epispastic, II. 10; the root in a poultice for pain in the side, II. 20; the root and juice for pain in the uterus, II. 48; the root to heal wounds, II. 108; the juice for sycosis and toothache, II. 130, 250.

Elephantinum; name of a plaster containing white lead, so called from its likeness to ivory, II. 42.

Emollientia; *emollenta*, I. 212, 214; II. 10; *see also* *Malagma*.

Emplastra; plasters, List of, II. 32-44, *also* 14, 24, 46; distinguished from pastils, II. 44, by the method used in compounding, and from emollients by the materials; they were divided into classes, *adipe*, without grease, *lenia*, soothing, *lipara*, greasy, *septa*, exedent, II. 32, 42; many had names, *barbarum*, *Cocon*, *Alexandrinum*, *maragdinum*, *rhypodes*, *raptoxia*, *diodyphaidon*, *enkaisma*, which referred to the place whence they came, their colour, material or effect, II. 32, 30, 38, 42. Others were called after their inventors, *Philotas*, *Attalus*, etc., II. 32 ff.; two in common use were the *tetrapharmacum* and *ennepharmacum* with 4 and 9 ingredients, II. 34. There were also *emplastrum reprimetis* or *epispastica*, II. 32, 36 ff. Pitch plasters, I. 328, 346, 366, and mustard plasters, I. 346, 424, were among those commonly used.

Enchrists; liniments and liquid ointments, II. 58,

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note; only two prescriptions are given under this heading (for ulcers and erysipelas).

Epiaspastica; **Epispastica**, substances that extract diseased matter, II. 10, 16, 38, 38.

Eruca; **Brassica eruca**, rocket.

The plant yields an oil like mustard with an acid flavour and was indigestible when eaten, I. 200, 202; it increased the secretion of urine, I. 210, 452, and reduced an enlarged spleen, I. 416; applied externally the oil acted as an erodent, I. 212, and caustic, II. 5.

Ervum; **Ervum ervilia**, bitter vetch.

In a poultice, I. 214; II. 156.

Erysimum; **Sisymbrium polyceratium**, hedge-mustard.

The oil was used in a poultice to open pores, II. 28, and was administered internally in cases of difficult labour, II. 64.

Eredentia; substances that eat away diseased flesh, II. 6 note 6, 8.

Feniculum; **F. vulgare**, **Anethum foeniculum**, fennel.

This was indigestible when eaten, I. 200, but relieved flatulence, 208; was used as a diuretic, I. 210, and the seeds (externally), as a repressant and refrigerant, I. 212.

Ferrum; oxides, silicates and sulphates of iron:

(1) **Lapis haematites**, haematite, ferric oxide (Fe_2O_3) mixed with silicates and sulphates of aluminium; the name came from the colour which resembles dried blood.

(2) **Bolus rubra** or **rubrica**, ruddle or red ochre; sulphates and sulphides of iron, especially from Siope, see Index of Proper Names, s.v.

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(3) *Sil* or yellow ochre, oxide and sulphate of iron.

(4) *Sory* or inkstone, sulphates of iron with copper and lead.

(5) *Scoria ferri*, iron slag composed of oxides and silicates of iron.

(6) *Ferrugo* or *Robigo*, iron rust.

(7) *Squama ferri*, scales chipped off from red hot iron bars, ferrous oxide (FeO).

These substances are only used externally, to arrest hæmorrhage, clean wounds, as exedents and esodents, II. 4, 6, 8; the yellow ochre from Attica and Scyrus made flesh grow (*see* Index of Proper Names, s.v.); sory was used in a prescription for loosening a carious tooth, II. 248. Celsus only mentioned the internal use of iron once as a "rustic remedy" for enlarged spleen—"water in which a blacksmith has dipped his red-hot iron," I. 416, but treatment by *ferrugo*, iron rust, was mentioned by Pliny, N.H. xxxiv. 43, and fully described by Dioscorides v. 83.

Ficus; (1) *F. Carica* contains the digestive ferment papain and externally was used on wounds, II. xii; *see* General Index, s.v. *Fig.*

(2) *F. Aegyptiaca*; *see* *Sycamorus*.

Filicula; *Polypodium vulgare*, the polypody fern.

This contains a saccharine material resembling liquorice and was used as an aperient, I. 182.

This fern was also a frequent source of splinters in the hand, II. 102.

Foenum Græcum; *Trigonella foenum-græcum*. fenugreek.

The plant itself was eaten as a vegetable, I. 421; its oil was used in enemas, I. 172, and

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heating poultices, I. 214; also in a bath to relieve spasm, I. 378.

Furfur; bran (for poultices), I. 214, 215; in a gargle, I. 362; for snake bite, II. 17, 119.

Galbanum; *Ferulago galbanifera*, galbanum, see *Panaces*.

This yields an aromatic resin (used for incense, Exodus xxx. 34) and was prescribed internally as a diuretic, I. 316, and for dyspnea, I. 386, and externally as a suppurative, pore-opener, erodent and emollient, II. 6, 8, 12, as an ingredient in a poultice for contracted joints, II. 28, and as an antidote for cantharides poisoning, II. 122; the fumes were inhaled as a stimulant, I. 308.

Galls; Oak gall (chief constituent gallic acid).

Used externally as an astringent, erodent and exedent and to relieve inflammation, II. 6, 8, 46; especially for inflamed gonis, II. 370.

Gargarizationes; gargles, II. 52-54.

Gentiana; *Erythraea centaureum*, gentian, fever-wort.

The bitter juice of the roots has been in use from the earliest times as a stomachic remedy and febrifuge, but Celsus only once mentions it, in the prescription for an antidote, II. 56.

Gil; *Nigella arvensis*, *melanthus*, *melanospermum* or black cumm.

The seeds, like carraway, but hotter, and more like nutmeg, were used as a spice, I. 200, also internally as a diuretic, I. 416; for worms, 438; and uterine trouble, 448; externally in heating poultices, I. 214; II. 15, and as an application for papules, II. 172.

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Gluten;

Glue made from hides and horns was used as an agglutinant and cleanser of wounds, II. 4, 6, or to keep eyelashes in position, III. 338. Joiners' glue is referred to, III. 513.

Glutinantia (*Medicamenta quæ glutinosa*); agglutinants (of wounds), II. 4, 44, 82.

Habrotumum; see Abrutumum.

Haliscabum; see Solanum.

Hammoniacum; see Ammoniacum.

Hedera; Hedera Helix, ivy.

Decoctions of the leaves and berries yield helicin and tannin and were used externally as repressants and refrigerants, I. 212, for the relief of lathargy, I. 315, and erysipelas, II. 138; berries were used in dental treatment, II. 250, and to promote the healing of wounds, III. 554.

Helenium; Inula helenium, elecampayne (see Panacea).

The root yields a bitter (helenin) and a glucoside (inulin). It was used externally for the relief of coxalgia, I. 452, and as a diaphoretic, II. 10.

Heliotropium; Herba solaris, sunflower or turnsole.

The seeds and leaves, which yield an oil with a nutty flavour, are prescribed once by Celsus in a decoction against scorpion bite, II. 115.

Hellebore; see Veratrum.

Herba Cantabrica, hyundinis, muralis, salivaris, sanguinalis, solaris, Vetteronica, see Scammonia, Chelidonium, Parthenium, Pyrethrum, Polygonum, Heliotropium, Vetteronica, respectively.

Hibiscus; see Ibisus.

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Hirudinis carbo; swallow's ash, a popular remedy for angina, III. 382.

Hirudinis herba; see *Chelidonium*.

Hyoscyamus; *H. niger*, swinebean or henbane.

This yields the alkaloids hyoscyamine and hyoscyne, isomeric, but not identical with atropine; they are hypnotics and anodynes.

Used by Celsus as a hypnotic, I. 298, and the seeds as a local anodyne, I. 348; the bark was used in a poultice for the joints, II. 28, and the seeds to promote sleep (see above); the leaves in an eye salve, II. 202, the juice for earache, II. 234, and the root for toothache, II. 246. Remedies against poisoning by it are prescribed, II. 122.

Hypericum; *H. perforatum erlapum*, St. John's wort.

The juice was used to make a pargil to expel stone from the bladder; and in an antidote, II. 46, 58.

Hypocistis; *Cytinus hypocistis*.

A scarlet parasite found on the hips of the dog-rose and the roots of the rock-rose.

The astringent juice (chief content gallic acid) was used in an antidote, II. 54, and externally as an exedent, II. 8.

Hysopum; hyssop.

This has not been identified, I. 491; Celsus employed it as a food, I. 200 ff.; as an emetic, stimulant, carminative, expectorant and diuretic, I.-90, 210, 370, 382, 394, 386, 410, 416, 428, 436.

Hibiscus (*Hibiscus*); *Althæa officinalis*, marsh mallow.

The root yields a mucilage like linseed, which was cooked in wine to make a heating plaster for

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inflamed joints, I. 458; Pliny, *N.H.* XX, 4 (14), copies the prescription from Celsus.

Iris; *Iris pallida*, Florentina or Myrica, iris.

The root yields *orris camphor* (commonly known as essence of violets) which was used by Celsus, in the form of hot iris ointment and oil, externally as a caesefacient and cleanser, discutient, repressive and anodyne, II. 8, 10, 12; as a caesefacient it was particularly general, I. 214, 270, 296, 378, 384, 412, 448. He also used it in poultices for gland enlargements, II. 18, abscesses, II. 20, 56, painful joints and feet, II. 28, and for neuralgia, II. 124. It was commonly used for burns, II. 198, 220, 224, and the hot ointment for eyes, headache, deafness, II. 228, 236, 240, and for dressing wounds of the cerebral membrane, III. 514. Internally it was used as a diuretic and in an antidote, I. 318; II. 54.

Juncus quadratus; *Cyperus longus*, schoenon. *Juncus rotundus*; *Cyperus rotundus*, sweet flag, rush, sedge, galingale.

The rhizomes, flowers and seeds of these marsh plants have a scent resembling bay and orris. The seeds of both varieties were used as a diuretic, I. 316, and the flowers of *C. rotundus* in antidotes, II. 54, 56. Externally the rhizomes of *Juncus quadratus* were used as a pore opener and discutient, II. 8, 10, and in a preparation to cure uterine ulceration, I. 448.

Lactuca marina; *Euphorbia paralias*, sea-spurge, wolf's milk (also referred to by its Greek name *Tithymalus*).

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This was used internally as a drastic purge, I. 156, 320 note, externally as an exedent and caustic, II. 8.

Ladanum; *Cladus villosus* Creticus, rock-rose.

The resin of this (combed off sheep's fleeces with a *ladanisterium*), with its musk-like perfume, is still used in pastilles for fumigation. Celsus prescribed it internally as a diuretic, I. 315, and externally as an epispastic, II. 10, and an ingredient of the eroding plasters called *sepea*, II. 40. It was also used to encourage the growth of hair, II. 178, 180.

Lana; wool.

(1) *L. succida* or *uesypum*; unsoured (and therefore greasy) wool. The grease, when purified is now called lanolin; it consists largely of cholesterol. It was often used, II. 36 note, 280, 282, etc., in topical applications. See also I. 302, 368, 402, 408; II. 192; III. 312, 442.

(2) *L. mollis*, soft soured wool, II. 250; III. 446; *lanula*, a flake of wool, II. 250; III. 446.

(3) *L. sulphurata*, wool impregnated with sulphur, I. 393, 406. The word *stera* for a sheet of sulphurated wool is only found in Celsus, I. 406; III. 442, and later in a passage of Scribonius Largus copied from Celsus (Comp. XLIII). For *temineus*, a strip of wool, see III. 454 note.

Lapatum; *Rumex acetosella*, sorrel.

As a food, I. 200 ff.; also as an aperient, 206, and febrifuge, 280.

Lappastrum; *Raphanus raphanistrum*, white charlock.

As a food, I. 204 ff.; as a diuretic, I. 210.

Laser, *Laserpitium*; *Ferula asiphium*, a mild form of asafoetida.

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This was used with grated cheese as a condiment and as a mild stimulant, I. 226, 370, 376, 390, 426.

Laurus; *Laurus nobilis*, the cultivated bay tree.

The crushed berry (laurel berry or daphnia) yielded laurel oil, used as an epispastic and in a plaster called after it diadaphnidon, I. 310, 356; II. 10, 38 and note; and internally it was used for liver disease, I. 414.

Lavandula Stoechas; Lavender from the Isles of Hyères (Stoechades) used to relieve cough, III. 532.

Lentiscus; *Pistacia lentiscus*, mastich.

This came from Scio (Chios) and yields a turpentine-like gum now used as a chewing gum, for flavouring wine and for fumigation.

Celsus used it internally as a repressive, I. 212, 450, externally as an erodent, II. 8, and for coral ulceration, II. 232. Mastich leaves formed part of an application for ulceration of the genitals, II. 272.

Libanotis; see Cachry.

Libanotos or Lus; *Boswellia Carteri*, and other species of frankincense trees; the gum was used for incense; and in an application to a paralysed limb, I. 345; diallabau, II. 204 note, 206, was a plaster made from it; the soot (*fuligo*) was used as a styptic and caustic, II. 2, 4, 6, 6, 24. The gum was slipped in a draught to stop hæmorrhage from the mouth and throat, I. 391.

Ligustrum; *L. sempivirens*, privet.

This yields ligustrin and tannin; it was used externally as a repressive and refrigerant, I. 212 and chewed for ulceration of the gums, II. 260.

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Lilium; *L. candidum*, the white lily.

The roots yield an oil and glucoside used as a discutient, II. 10; unguent made from lilies grown at Susa formed an ingredient in a pessary, II. 48.

Linum; *L. usitatissimum*, flax.

(1) Dressed flax, lint, II. 84, 88, 102, 148, 208; III. 304, 338, 378, 406 B., 454, 538; panicleus, a pad of lint, I. 164, 272; II. 198, 200; III. 334.

(2) Linseed, linseed, yields mucilage, glucoside and an ethereal oil, which includes a little hydrocyanic-acid. It was used externally as a discutient and epispastic, to agglutinate wounds, and in a heating poultice, I. 214, 388, 432; II. 4, 10.

Lipara; plasters with grease, II. 42 note.

Litharge; see **Plumbum**.

Lolium; *L. temulentum*, Italian ryegrass.

The seeds of this when argetized yielded *farina lolii*, daniel meal, which when eaten produced headache and symptoms of intoxication. **Lolium** was used internally in an antidote, II. 56, and topically as a caustic, anodyne and epispastic, and as an application to ulcerations, poisonous stings and papules, I. 234, 452; II. 10, 50, 120, 172.

Lupinum; *Lupinus alba*, lupin.

A decoction of the seeds was given as a remedy for worms in the intestine, I. 436, 438, and externally in a heating poultice, I. 214.

Lycium; *Rhamnus infectiorius*, boxthorn or lycium.

This was exported from Lyda and largely used in dyeing; medically, owing to the tannin it contains, it was an astringent and Celsus

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prescribed it as an application to relieve hæmorrhage and ulceration of the throat, I. 328, also generally to arrest bleeding and induce wounds to heal, II. 2, 95. It relieved ulcerations of the genitals, fingers and nostrils, also those due to scabies, II. 108, 270, 268; III. 306, as well as ear ulceration following an injury, III. 522; it was a frequent ingredient in eye salves, II. 195-212, and checked discharge from the ears and nose, II. 230, 233, 244.

Magma; dregs, see *Croci* (*crocomagma*).

Malabathrum; *Folia Malabathri Indica*, leaves of Malabar or Indian cinnamon.

The oil of this was used in two of the antidotes (II. 54, 56).

Malagma; poultice; list of, II. 14-30; distinguished from *emplastra* and *pastilli*, II. 14. Generally heating, I. 214, but cooling poultices applied to podagra, I. 458; II. 16.

They were usually applied to disperse diseased matter, or draw it out (*digerere, extrahere*) the latter were known as *epispastica*, II. 16, but were used also to relieve pain, II. 18. They were often called after their inventor (*Lysias, Andreas, etc.*, II. 75 ff.).

Malva; *Malva rotundifolia*, mallow.

Mallows were included in a frugal diet, and were a bland and aperient food, I. 208, 260, 350; the mucilage formed a soothing enema, I. 172, and was used externally as an emollient, I. 466.

Mandragora; *Mandragora officinarum*, mandrake.

Both the root and the fruit yield the allied alkaloids scopolamine, hyoscyne and atropine.

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The plant was used internally as a soporific and anodyne, I. 298; II. 60; externally it was used in an eye salve, 150, and for the relief of tooth-ache, 246.

Probably Celsus refers to the plant mandrake, but he may have meant *Atropa belladonna*, the deadly nightshade which was perhaps known as *mandragora*, though the identification is not certain. Cf. Theophrastus, *Plants*, 6. 2. 9.

Marrubium; *M. vulgare*, horehound.

The ethereal and bitter oil from this, cooked in honey, was, till recent times, in use as a remedy for coughs, as it was employed by Celsus, I. 332, 360, 368, 390; externally he used it as an exedent and cleanser, II. 8, 10, and for foul ulcerations, II. 50, 124, 134, maggots in the ear, II. 288, and nasal and genital ulcerations, II. 244, 258; III. 448.

Mastic; see *Lentiscus*.

Mernigmenon; name of a salve, II. 210.

Mentastrium; see *Mentha*.

Mentha; Mint and catmint, I. 492; see also *Nepeta*.

(1) *Mentha piperita*, peppermint.

(2) *Mentha viridis*, green mint; as a food, I. 200, 204; a diuretic, 210, 414; in a draught for cough, I. 390, 404; as a stimulant snuff, I. 422; in a decoction for worms, I. 438.

(3) *Mentha pulegium*, pennyroyal; as a stimulant, I. 210, 212, 422; externally as a pore opener, II. 6.

(4) *Mentastrium*, used against snake bite, II. 120, 250. The calandrat of Dioscorides, which is similarly used, is probably the same plant; others think *mentastrium* = wild mint.

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Minium ; HgS, red sulphide of mercury, cinnabar.

This was largely obtained from Sinope, it was mixed with red oxides of copper, iron and lead. It was used as an antiseptic, I. 434; II. 8, 3, 40, 210, 216; also applied to nasal polypus and foul genital ulcerations, II. 272.

Misy ; see Stibium.

Morum ; mulberry ; see Sycamorus.

Muralis herba ; see Parthenium.

Muscus ; musk.

Used as a repressive and refrigerant, I. 212.

Myrrh ; *Balsamodendron myrrha*, myrrh; but the name was probably applied generally to various species of shrubs in Arabia and Africa with a sweet scented gum.

The gum resin, with its volatile oil, exuded from the trees in drops (raste, II. 56) and had a powerful and lasting odour. It was used internally as a stimulant and diuretic, I. 295, 316, and in an antidote, II. 58, and externally for otorrhea, II. 230.

Myrtus ; *Myrtus communis*, myrtle.

Included among vervains, I. 493; The berries were added to wine, I. 444, though the taste is now esteemed very disagreeable; myrtle oil (olive oil infused with myrtle berries) was used as a repressive and refrigerant, I. 210 ff., 260, 304, 456; II. 42, and in soothing plasters for eczema of the scalp, II. 183.

Narcissus ; *N. serotinus*, narcissus.

The juice of the root was an emollient which reduced the pain of erodents and discutients and was therefore mixed with them, II. 3, 10.

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Nardum; *Nardostachys Jatamansi*, spikenard or nard. The name was also applied to the resin of *Valeriana Celtica*, *nardum Gallicum*.

The resin was used internally as a diuretic, I. 315, 450, and in an antidote, II. 54, 56, and externally in a plaster for the liver, II. 43.

Nasturtium; *Lepidium sativum*, cress.

As a food, I. 200 ff.; as a diuretic, I. 210; see also I. 208, 212, 338, 380, 416, 438, 492; II. 8.

Nepesæ; *N. cataria*, catnip or catmint, mint.

As a food, I. 200, 204; as a diuretic, I. 210; against snake bite, II. 120; see also I. 370, 382, 416, 458.

Nitreum; see *Sal*.

Nuces; *Nuts*; for almonds, hazel nuts, walnuts, and nuts of all kinds as food stuff see index s.v. and vol. I. appendix, p. 495.

Bitter almonds (*nuces amarae*) were used medicinally as a diuretic, I. 318, for jaundice, 340, cough, 398; externally in an emulsion and aperient for headache and podagra, I. 270, 458, for thrush, II. 258. The sweet almonds (*nuces Graecae*) were also used, I. 418, in a draught given for renal pain; see also II. 8, 10, 12, 50, 106, 184, 228, 232, 240.

Ocimum; *Ocimum basilicum*, basil.

Among foods, I. 200 ff., 330, 492; as a diuretic, I. 208, 210, 212.

Oenanthe; see *Vitis alba*.

Oxyppum; see *Lana*.

Olibanum; see *Libanotos*.

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Omphacium.

Juice of unripe olives and grapes. Cleans ulcers and wounds, II. 8; crodent 8, epispastic, 12, for tonsillitis, 252, 252, 272.

Opopanax; see Panaces, all-heal.

Origanum; There were several varieties of this shrub:

- (1) O. Dictamnus; see Dictamnus.
- (2) O. majorana, Anaracis, sweet marjoram, used as a discutient, II. 10.
- (3) O. vulgare, Tragoriganum, goats' marjoram, used as a diuretic and discutient, I. 316; II. 10.

Panaces, Panax (πανάκη); "All-heal"; an emollient moulage, without further activity, from several distinct plants, so called because of its healing properties.

- (1) Ferulago galbanifera, galbanum, q.v.
- (2) Panaces Chelidonium = Inula helenium, elecampane; see Helenium.
- (3) Panaces Asclepium = Ferula nodosa.
- (4) Opopanax hispidus or Panaces Heracleum.

Celsus refers several times to "all-heal" (panaces), as a remedy against snake bite, II. 120, as a pore-opener, II. 8, and to opopanax as a diuretic, I. 316, and in a poultice for supuration, II. 18, in an eye and ear salve, II. 234, 230.

Papaver; Papaver rhoeas, the wild poppy. (For the Papaver argemone, prickly poppy, see Argemone.)

The juice contained a small quantity of opium and was recognised as a mild narcotic

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and anodyne. It was probably the source of the pills made from "poppy tears," II. 80; the juice (*lacrimae*) expressed from slits below the capsules of the poppy was the strongest. The dried capsules were also used, II. 60, for the pills known as *nīacodion* (νῖα κωδίων). Cf. Pliny, N.H. 18. 78; 19. 79.

Celsus never alludes to the cultivated poppy (*papaver somniferum*) from which opium is obtained and this name was first used by Dioscorides, IV. 647. As Celsus does not include poppy juice, in his list of poisons, II. 192, he probably only knew a mild variety of the juice. He used it internally to produce sleep and relieve pain, I. 210; II. 54, 60; and externally in decoctions to any painful part, I. 272, 296, 418, 448, 458.

Papyrus:

(1) Rolled papyrus (*papyrus intorlus*) was used to apply remedies for fistula, II. 156.

(2) *Charta combusta, papyrus ash*.

This yielded caustic potash and soda and was used as a caustic and application to ulcers and putrid wounds and also to hold patches on the scalp, II. 8, 50, 162, 264, 268.

Parthenium or *Herba muralis*; *Parietaria officinalis*, pillitory.

This was used externally as a repressive and refrigerant, I. 212, or the juice was applied to the head in fever, or to painful joints or papules, I. 294, 458; II. 170.

Pastillum; *pastil*, Greek *παξιλλιον*.

Pastils were in tabloid form and could be used internally or externally; a list is given, II. 44-46.

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and they are distinguished from plasters, II. 14.
A celebrated pastil of Polyides was called "the seal," II. 41.

Personina planta; *Arctium lappa*, burdock.

Used as an application for snake bite, II. 120.

Pessoi; pessaries for diseases of women, II. 46, 47.

Peucedanum; *P. officinale*, sulphurwort.

The root yields a bitter foetid resin peucedanine, which was used as an application to painful joints, II. 28.

Pinus; *Pinus pinus*, the stone pine.

The pine kernels (*seeds pinis*) were eaten, I. 200, 202, 210, and were given in honey for cough, and to relieve inflammation of the kidney, I. 410, 418, 452; as was the *res pinis* in liver disease, I. 414; externally the resin was given as a suppurative, pore-opener, erodent and epispastic, II. 8, 10, 12, and pitch was also used in the same way and as an emollient, II. 8, 12, 36; pitch plasters were also commonly used, I. 326 note. 346, 365.

Pitch resin was closely akin to turpentine (see *Terebinthus*).

For other refs. to pine products, see I. 303, 410, 414, 418, 452, 458.

Piper; *Piper nigrum*, pepper. Two varieties are referred to, long and round, I. 210, 492; among foods, I. 206, 217; as a diuretic, I. 210; in fever, I. 256; to promote sneezing, 306; see also I. 376, 378, 382, 418, 436, 459; used in local applications, I. 214; II. 6, 8, 16-30, 55, 58-64, 250.

Plantago; *P. major*, plantain.

Plantain and especially the seeds yield a very glutinous mucilage; it was used as a food, I.

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206 fl., and in a draught for phtisis, hæmorrhage, and dysentery, I. 332, 394, 436; it was also applied externally for elephantiasis, I. 344.

Psyllium; *Plantago psyllium*, Fleawort.

An agglutinant for wounds, II. 4.

Plumbum; lead.

(1) *Galenæ* (μολύβδαινα) sulphide of lead; when fused this was known as *plumbum combustum*, and after washing as *plumbum electum*; it was used to arrest hæmorrhage, II. 4.

(2) *Plumbi stercus* or *recrementum plumbi* (σκαρία μολύβδου), lead slag. This was applied externally as an emollient, for burns and ulcerations, II. 12, 42, 124, 242.

(3) *Spuma argenti* (λιθόργυρος), litharge; oxide of lead separated after heating lead and silver ores; litharge was heated with oil to make lead plaster (*emplastrum plumbi*), diachylon. It was used to check bleeding, II. 82; and sweating in cardiac disease, I. 304; to clean wounds, II. 8, 8; and was applied to putrid flesh, 60; to pustules, 168; and to nasal ulcerations, 212.

(4) *Cerussa* (λευρίτις), white lead (basic lead acetate) formed by pouring vinegar over lead shavings; when heated *cerussa* produced the yellow and red oxides of lead, I. 272, 455. It was used as an application for recent wounds and ulcerations, II. 42, 168, also for headache and joint pain, I. 272, 455. Remedies against poisoning by it are given, II. 122.

(5) *Plumbum album*, perhaps tinstone, see II. 108 note.

Polium; *Tenectum polium*, polygermander, the grey evergreen germander, hylwort.

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The popular name for this was *trivago*, because its leaves resembled the castor oil plant, *trixis*.

A decoction of the leaves was used for the relief of pain in the side and cough, I. 406; III. 532, and also for snake bite, II. 120.

Polygonum; *P. aviculare*, knotgrass.

The juice of this was very rich in tannin and gallic acid, and so was a powerful astringent, much used to arrest hæmorrhage; hence it was known as *herba sanguinalis*, I. 212, 332, 414; II. 4, 185, 236.

Populus; *P. alba*, the white poplar.

An application was made from the bark of the roots for toothache, II. 246.

Portulaca; *Portulaca oleracea*, purslane.

As a food, I. 200 ff., 212, 492; also used as an aperient, I. 208; to promote urination, I. 418; and chewed to check bleeding from the gums, I. 334.

Potio; a draught, I. 84, 455-459.

Psoricum; see *Aca* (9).

Psyllium, fleawort; see *Plantago*.

Pulegium, pennyroyal; see *Mentha*.

Pulvis (ex vis); road dust.

In an application for inflammation of the stomach, I. 388.

Punicum malum; *Pomum* or *Malum granatum*, pomegranate.

The fruit was regarded as specially digestible, I. 204. All parts of the plant contained tannin, and so were used as astringents, I. 212; the flowers (which yielded the scarlet dye *balanistrinum*) were used as a mild corrosive, II. 50; the fruit

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and its juice were used in several prescriptions, II. 230, 232, 234, 252, 256; as were the capituli, the red fleshy calices, II. 38, 44, 48; and the bark, cortex *mafi pasci* or *malicorum*, which was dried, I. 442; II. 232, 248. See also I. 210, 404, 432, 444, 482.

Purgantia; drugs to cleanse wounds, II. 4, 12.

Purgatio, purging; value of, I. 53; purgatives, I. 168, 208.

Pyrethrum or *Herba calivaris*; *Anthemis pyrethrum*, chamomile.

The plant yields a brown acrid resin with a volatile oil and much tannin; it served as a pore-opener, caustic and epispastic, II. 4, 8, 40; and in applications for pain in the side, scrofulous tumour, and toothache, II. 20, 22, 50.

Pyrron; name of a salve, II. 210 note c.

Pyxium; name of a salve, II. 214.

Quinquifolium; *Potentilla reptans*, cinquefoil.

The juice contains a great deal of lactic acid and was used internally for dysentery, I. 432, and externally, with hyoscyamus, for toothache, II. 246, and in healing poultices, I. 214.

Radix, Radicula; *Raphanus sativus*, radish.

Mentioned as a bland food stuff, I. 192, 202, 288 and a diuretic, I. 210, but of bad juice, I. 202. It was commonly used for morning emetics, I. 60, and was probably coarser than the modern variety.

Radix dulcis; *Glycyrrhiza glabra*, liquorice.

This root yields a peculiar sugar, valuable as an adjunct to honey before the introduction of

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cane sugar, I. 492; medicinally it was used internally in an antidote and to expel stone from the bladder, II. 46, 54, and externally in a gargle for the throat, II. 252.

Radix Pontica; probably *Rheum Ponticum*, rhubarb.
Used in an antidote, II. 56.

Refrigerantia; cooling foods, drugs or application, refrigerants, I. 200, 212, 214; II. 10.

Reprimantia (*Medicamenta quæ reprimunt*); repressives (to check inflammation), I. 154, 212; II. 4.

Resina; see *Pinus* and *Terebinthus*.

Rhus Syriacus; *R. coriarius Syriacus*, the currier's or tanner's tree.

The astringent sumach obtained from this was applied to ulceration of the mouth following thrush, II. 256.

Ricinus; castor oil plant; see *Cicium*.

Rodentia (*medicamenta quæ rodunt*); substances that bite or blister the flesh, II. 6 note b.

Rosa; *Rosa Gallica*, rose.

Rose oil (*oleum ex rosa*) was made from the fresh petals, and the dried petals were used especially as discutients and emollients, I. 212, 280, 270, 272, 282, 304, 308, 316, 386, 323, 400, 432, 443; II. 10, 12.

Ruta; *R. graveolens*, garden rue or *Peganium harmala*, wild rue. This plant with its foetid odour and acrid taste was used for food, I. 200 E. and also medicinally as a local irritant, I. 210, 210, 446, 452; II. 6.

Sagapenum; *Ferula Persica*, sagapenum.

This yields a gum resin akin to *asafoetida*; used in an antidote, II. 58.

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Sal; sodium chloride, salt.

It was constantly included in prescriptions, without any qualification, I. 166, 172, 182, 212, 260, 316, 366, 368.

Rock salt (*sal fastile*) is specified as an ingredient in an eye salve, II. 214; salted water is constantly used, I. 212, 172, 270, and strong brine, *saluga maris dura*, I. 418.

Salt (sodium chloride) has no aperient action, II. 6, but was used in an enema, I. 172; the aperient compounds, sulphates of sodium and magnesium were not distinguished.

Several compounds of sodium chloride were used by Celsus.

(1) *Nitrum, soda*. Hydrated carbonate of sodium mixed with chlorides and calcium carbonate. This was especially obtained from pools north west of Cairo and received its name from the Arabic *natrum*, I. 172, 214, 260, 338, 346; II. 235.

(2) *Spuma nitri, soda-secca, aphronitrum*. Carbonates and nitrates of soda and potash coloured by copper and iron oxides. This was used as an erudent and on a poultice for abscesses and inflamed joints, II. 5, 20; see also II. 30.

(3) *Sal ammoniacum* (ammoniac salt); sodium chloride rendered hygroscopic by the inclusion of calcium and magnesium chloride; this substance, which was also mixed with gypsum (calcium sulphate) was so called because it was found in the sand near the temple of Jupiter Ammon in Libya.

It was used in preparations to draw out inflammation and mature abscesses, II. 16, 20,

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22, 24, 38; for a black eye, II. 226, and in a draught to expel a dead foetus, U. 64.

Salamandra; *Lucertus Salamandra*, the salamander.

The ash (cinis) produced by burning this was rich in lime and used as an erodent, exedent and caustic, II. 6, 8.

Salivaris herba; see *Pyrethrum*.

Salix; *Salix alba*, white willow.

The leaves boiled in vinegar yielded salicin and astringent tannin; applied to ulcerations of the anus, II. 285.

Sampsychus Cyprus; see *Origanum*.

Sandaraca; see *Auripigmentum*. (Celsus does not mention the bee bread and gum resin, also known as *sandaraca*, Aristotle, *H.A.* IX. 40; Pliny, *N.H.* XXXIV. 18. 55, 56.)

Sanguinalis herba; see *Polygonum*.

Sanguinem supplementia; styptics, haemostatics, II. 8.

Satureia; *Satureia thymbra*, savoury.

Used with other herbs as a food stuff and diuretic, I. 200, 210; see also I. 415, 493.

Saxum Caleis; see *Calx*.

Scammonea; *Convolvulus scammonia*, scammony (*Herba Cantabrigia*).

This was a drastic purge, I. 310 note, 340; used as a vermifuge, I. 425, and for snake-bite, II. 120; typically it was used as an exedent, II. 8.

Schiston; see *Alumen*.

Schoinon; see *Juncus*.

Scilla; *Scilla arginea maritima*, squill.

The bulbs yield scillitin, which resembles digitalin, but is much less certain in its action as a cardiac stimulant and often produces vomiting;

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the bulb, its bitter taste disguised by vinegar or honey was sucked or taken internally for dropsy as a diuretic, I. 316, 320, 390, 418; externally it was applied as a counter irritant in paralysis, I. 345, as an emollient or exedent or mouth wash, II. 46, 156, 244, 254.

Serpyllum; *Thymum serpyllum*, creeping thyme.

The serpyllot from this resembled oil of thyme, and acted as an antiseptic and discutient, I. 212, 272, 282, 292, 418; II. 10.

Sertula Campana; several plants were included under this name, especially *Melilotus officinalis*, a species of lotus (melilot).

The plants had a sweet smell like new hay and were applied to foul ulcerations, II. 10, 12, 50, 124, 232.

Sesamum; *Sesamum Indicum*, sesame.

The oil from this, which was an inferior substitute for olive oil is included among emollients, I. 186; II. 12.

Sinapis alba, nigra; *Brassica alba, nigra* mustard.

As a food, I. 493; indigestible, 200; acrid, 202; heating, 286, 416; in local applications and plasters, erodent and extractive, I. 212, 318, 346, 358, 370, 434, 446; inhaled as a stimulant, 310.

Sisir; *Sium sisarum*, skirret.

One of the medicinal herbs mentioned as a repressive, I. 212; also as a food, I. 200 ff., 495.

Solanum or *Strychnos*; bitter-sweet or night shade.

There were several species, one specially mentioned by Celsus was the winter cherry or *Halimolobos* (*Physalis Alkengi*).

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All the varieties yielded scopolamine, which is allied to atropine and hyoscyne, and so acted as local anodynes while the tannin which they contained made them astringents as well; they were used to soothe the insane (in a local application to the scalp) and the hysterical, I. 212, 294, 448; the bark of *halicacabus* was used as an application to foul ulcers, *solanum* leaves for erysipelas, and *solanum* juice for prominent navels, II. 46, 102, 366.

Solaris herba; see *Heliotropium*.

Sordes; used as a local suppurative, II. 10 note a, 12, 60 note a; see also II. 38, 62, 88.

Spartes; see *Cytisus*.

Sphaerion; name of a salve, II. 212.

Spodium; see *Cadua*.

Spongia; sponge, mentioned as a compressive, I. 212; in fomenting, I. 382; II. 154, 158.

Staphis agria; I. 318, see *Tamus* (*Uva Tamara*); for another identification, see p. xi, note c.

Stibium; Antimonium sulphide. antimony sulphide or missy, Arabic kohl.

This was much adulterated with oxide of lead and charcoal and was used as a slight irritant and caustic in plasters and pastils for ulcers, II. 19-56 and 268-286, and especially in eye salves, II. 194 ff., of which it has been an ingredient from very early times.

Stoechas; see *Lavandula*.

Stomoma; see *Aca*.

Storax; see *Styrax*.

Strychnos; see *Solanum*.

Sudorem evocare; methods of eliciting a sweat, diaphoretics, I. 184, 514, 516.

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Styrax; *Storax officinalis, storax.*

The resin of this shrub (*Liquidambar orientalis*) includes styrax and benzoin resins, and the perfume of the balsam resembles jessmin. It was used internally as a diuretic and in antidotes, I. 316; II. 54, 56, and externally for maturing abscessions and promoting suppuration and for cleansing wounds, and as a discutient, emollient and epispastic, II. 6, 10, 12, 18; also for contusions and painful joints, II. 26, 28.

Sulphur; sulphur.

This was chiefly used in external applications; *apron*, unheated sulphur, was used in its natural state, II. 22; *s. preparatum*, sublimed sulphur, was used to impregnate wool (*lana sulphureata*, q.v.).

It was used as a suppurative, pore opener and cleanser, II. 4, an exedent, II. 8, and a discutient, II. 10; and in a fomentation to relieve pain in the limbs, I. 348; internally it is once prescribed to relieve cough, I. 390.

Sycamorus; this name was applied to two distinct species.

(1) *Morus nigra*, mulberry tree, I. 230.

The mulberry (*morum*) is used as a food, I. 204 ff.; as a soporific, I. 210; for thrush, I. 258; as a purgative, I. 208. See also p. 495. There was a medicine of mulberries, I. 382; II. 266; a decoction of the leaves was used, I. 436.

(2) *Sycamorus Aegyptiaca*, Egyptian fig; this was called *Sycamoros* or *Sycamorus*, the former name being derived from the likeness of its leaves to those of the white mulberry, see I. 296;

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II. 20. *Laetima rhamni* (the gum) was used in an application for headache, I. 296. and for pain in the side, II. 20; the figs grow on the stem (not like *figs carica* on the twigs). See St. Luke. xvi. 8.

Tamarix; *T. tetrandra*, tamarisk.

This tree exudes a manna containing various sugars and much tannin. It was used as a repressive and refrigerant, I. 212.

Tamus; *Tamus communis*, black bryony, lady's seal.

The berries (*ovae terminae*) hang in bunches, like grapes; hence their name. They were much used by Celsus as diuretics, I. 318, and in local applications, II. 8-12, 30, 48, 50, 228, 250, 230.

Terebinthus; *Pistacia terebinthus*, turpentine tree.

The resin (*terebinthina resina*) was constantly used, with pitch resin, as an erodent, II. 8, and internally to relieve dyspnoea, I. 338.

Thapsia; *Thapsia garganica*, scorching fennel.

The very powerful juice of this was used as a counter irritant, especially for contusions of the face, II. 28 (Pliny, *N.H.* XIII. 22. (43), also mentions this use), and for baldness, II. 132.

Thlaspis; *Capsella bursa pastoris*, shepherds' purse.

The seeds had a flavour like mustard; used in an antidote, II. 56.

Thymum; *Thymbra capitata*, Cretan thyme.

The flowers yield the antiseptic thymol; they were an indigestible food, I. 200, 204; a decoction served as a diuretic, I. 210, 418; also in a gargle for paralysis of the tongue, 370; and for angina, 382.

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Tithymalus, II. 8; see *Lactuca marina*.

Tragacantha; *Astragalus Creticus*, *tragacanth*.

The pith is a mass of mucilage from which gum exudes, it was used especially as an excipient, I. 368, also as an agglutinant, to relieve irritation and in eye salves, II. 4, 10, 193, 204.

Tragoniganum; see *Origanum*.

Tylixago; see *Polium*.

Trixis (castor oil plant); see *Cicinnus*.

Trifolium; *Trifolium fragiferum*, trefoil.

This herb, which yields a mucilage with a fragrance like honey, was used in a poultice for enlarged spleen, I. 418, and also against snake bite, II. 118.

Trygodes; a salve invented by *Enepides*, II. 196.

Tus (Incus) or *Olibanum* (Greek, *λεβανωρίς*), frankincense, see *Libanotos*.

Unguenta; ointments, II. 10, 43, 58 note.

Urisum moventia; diuretics, I. 52, 210, 316, 340, 418; II. 10.

Urtica; *Urtica urens*, nettle.

Used internally as a food-purgative, I. 208, 380, and part of a light diet for fever, I. 380; for intestinal worms, I. 436; externally in paralysis to irritate the skin, I. 348.

Uva; Grape. See General Index, grapes; also see below. *Vitis*: for *uva tannina*, see above *Tannus*.

Veratrum album or *album*; *Veratrum album*, Hellebore (the two varieties are not now distinguished).

Celsus, like Hippocrates, used the rhizomes and rootlets as a drastic purge, and as an emetic; it

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was especially employed for cases of mental excitement and as a treatment for the insane, I. 110, 152, 169, 174, 296, 300, 308, 331, 335, 342, 398, 412, 498. Externally it was used as an erodent and caustic, II. 8, 10, to excite sneezing, II. 52. It was also used as an emetic for cases of struma, II. 140.

Vervains; aromatic shrubs, I. 212, 292, 434, 452, 456; see further, vol. I. Appendix, p. 403.

Vettonica herba; *Betonica officinalis*, betony.

This herb was introduced at Rome by Antonius Musa, physician to Augustus. He found it used medicinally by the Vettones, a tribe of North west Spain. The dried leaves were used as snuff, the juice of the root as a purge. Celsus mentions it only once as a cure for snake bite, II. 120.

Viola; *Viola odorata*, violet.

The flowers and seeds yield an expectorant and emetic, violin, which resembles ipocatantha. It was used by Celsus externally as a pore opener and discutient, II. 8, 10.

Viscum; *Viscum album*, the berry of *Loranthus Europæum*, mistletoe.

The unripe berries resemble gutta percha, and were used in the poultices of Apollonides and Andreas, II. 18, 20.

Vitis; *Vitis alba silvestris*, wild vine.

The juice of the flowers (*osmanthe*) was a diuretic, I. 316, and used locally as a caustic, II. 8.

The cultivated vine (*V. vinifera*), besides producing grapes, had tendrils, *caprivi*, which yielded tannin and were included under repressives and refrigerants, I. 212.

LIST OF MEDICAMENTA

Vomitum inducere; methods of inducing a vomit,
I. 58, *see* General Index, Emetics.

Zingiber; ginger.

This is only once mentioned as an ingredient in
an antidote, II. 56.

Zmaragdinum (emerald-like); name of a plaster,
II. 32.

Zmilion (razor-like); name of a salve, II. 214.

II. LIST OF SURGICAL INSTRUMENTS AND APPLIANCES USED IN TREATMENT

Abrus, a woollen bandage, I. 406; III. 442 note.

Acta, a suture of twisted wool, *see* suture (General
index).

Acus, needle (surgical), III. 344, 364, 378, 388;
for cataract, 350; cautery needle, III. 336, 338,
344, 360.

Aneter, *see* Fibula.

Calamus, a reed or quill pen, used to blow powders
into a fistula or gangrene, II. 156, III. 446;
in the treatment of ear or nose trouble, to
keep the passage open, III. 360, 366; in
extracting missiles from a wound, III. 318.

Canalis, gutter splint, III. 526, note c, 550, 584;
fitted with straps (*fora*), III. 546, 568.

Clyster; (1) Clyster oricularis, ear syringe, II. 268;
III. 444, 450, 466.

(2) For clystering the bowels, *see* General
index, Clyster.

LIST OF MEDICAMENTA

Collyrium, II. 154 note

(1) A salve, especially an eye salve, II. 192-193, 200, 216.

(2) A medicated bougie, tent, used to probe a fistula, II. 154 note, III. 306.

Corvus, a surgical knife, III. 404.

Cyathiscus (of Diocles), a surgical instrument used for extracting missiles, III. 318.

Fascia, bandage, I. 184; II. 68, 192, III. 320, 408; for fractures and dislocations, III. 524 ff.

Ferrum, Ferramentum, a surgeon's knife, I. 2; a lithotomy knife, III. 428; that invented by Meges, 426; a knife used to cut away a polypus, 364, and in a case of dropsy, 382; an instrument to extract missiles, III. 316; Ferrum candens, cautery, I. 330, 356; II. 134; III. 300, 374; Ferrum was also used of a smith's tools, I. 416; II. 130.

Ferula, a cane splint, made from the stem of the *Narthex communis*, was used in fractures of the clavicle, humerus, etc., III. 628 and note, 540 ff.

Fibula, Greek *ἀγρύππη*, originally a brooch, safety pin, was used by Celsus of pins passed through the margin of wounds and fixed by a thread twisted round them in a figure of 8, similar to the "hare-lip pin" still in use, though now largely superseded by clips, II. 82; III. 305, 324, 416; *infibulare adulescentulas*, III. 422, 424.

Fistula, a straw, or pipe of reed, used to drink through, I. 74; a pipe of brass or lead, used as a catheter, III. 424; for drainage, 382, 454.

For an anatomical or pathological fistula, see General index, *Fistula*, *Urethra*.

Forfex, & forceps, III. 316, 320; a dental forceps,

LIST OF MEDICAMENTA

- II. 368, 370; shears used in an abdominal operation, II. 328; an instrument specially made for use in cases of fractured skull, III. 514.
- Habenas, straps, used in treating dislocations and fractures, III. 520, 538, 542, 546, 570, 575, 580.
- Hamus, hook, III. 318, 372, 386; used in scalping operations, III. 358, and in an operation on the tongue, 374 (*Amular*).
- Lamina, *see* Meningophylax.
- Lenniscus, a woollen bandage, III. 465 note.
- Lenticula, a gouge, II. 268 note.
- Lorum, a strap, to secure a splint, III. 545, 566.
- Meningophylax (*Lamina*), a plate for protecting the brain during operations on the head, III. 500, 514.
- Mitella, a sling, III. 546.
- Modiolus, III. 498, note, a crown trephine.
- Novacula, a razor used to shave the scalp, II. 182.
- Paxillus, a wedge, used in treating fractures, III. 564.
- Rhizagra, a dental forceps, III. 570 and note.
- Scala Gallinaris, a poultry ladder to the roost for hens, used in reducing dislocations, III. 570.
- Scalpellus, a surgical knife, I. 162-166, 182; II. 275, 290; III. 298, 302, 316, 372, 420, 432, 436.
- Scalper, a cutting chisel, III. 495, 498, 500, 506, 512.
- Serrula, an amputation saw, III. 470.
- Spatula or Spatula lignea; a wooden board fitted with straps (*lorae*) used in reducing a dislocated humerus, III. 568.
- Specillum, a probe, II. 134; III. 310, 360, 368, 498, 508, 618; an ear scoop, II. 288; a rasp (*S. asperatum*), II. 316.
- Strigil, II. 228 note.
- Sutura, suture of wounds, *see* General Index, Sutura.
- Terebra, a trepan, III. 320, 496 ff., 508, 612.

LIST OF MEDICAMENTA

Uncus, a hook, used in embryotomy, III. 456, 458, for lithotomy, III. 428, 434.

Volsella, a small forceps or tweezers, II. 274, 272 ; also a smith's instrument, small tongs or pinchers, III. 552.

WEIGHTS, MEASURES, SYMBOLS

(Weights and measures are converted to the metric system)

Dry measures.

LIBRA or PONDUS, pound, about 336 grammes.

Res librae, two thirds, 224 grammes.

Sesibra, one half, 168 grammes.

Tylenus librae, one third, 112 grammes.

Quadrans librae, one quarter, 84 grammes.

Sextans librae, one sixth, 56 grammes.

Sesquiquarta (sesuncia) librae, one eighth, 42 grammes.

Uncia librae, one twelfth, 28 grammes.

DENARIUS, DRACHMA, one seventh* of an uncia librae, about 4 grammes

Res denarii, two thirds, 2·66 grammes.

Semi denarius, one half, 2 grammes.

Quincunx denarii, five twelfths, 1·66 gramme.

Triens denarii, one third, 1·33 gramme.

Quadrans denarii, one quarter, 1 gramme.

Sextans denarii, one sixth, 0·66 gramme.

Uncia denarii, one twelfth, 0·33 gramme.

SCRIPULUM, one twenty-fourth of an uncia librae, 1·18 gramme.

OBOLUS, one sixth of a denarius, 0·66 gramme.

Hemiobolus, half an obolus, 0·33 gramme.

* This measure was not universal ; in V. 17. 1 C. Celsus explains the system that he follows.

WEIGHTS, MEASURES, SYMBOLS

Liquid measures.

AMPHORA, about 30 litres.

SEXTARIUS, about $\frac{1}{4}$ litre, 500 c.cm.

Hemina sextarii, about $\frac{1}{8}$ litre, 250 c.cm.

Quadrans sextarii, about $\frac{1}{16}$ litre, 125 c.cm.

ACETABULUM, $\frac{1}{16}$ sextarius, 63 c.cms.

CYATHUS, $\frac{1}{16}$ sextarius, 42 c.cms.

Fractions.

— $\frac{1}{2}$.

= $\frac{1}{2}$.

— — $\frac{1}{4}$.

= — $\frac{1}{4}$.

= = — $\frac{1}{8}$.

= = = $\frac{1}{8}$.

= = = $\frac{1}{8}$.

Symbols.

P followed by a numeral one pondus (libra) or more.

P with no numeral following, ponds, by weight.

SS, scilicet, $\frac{1}{2}$.

P —, uncia librae, $\frac{1}{16}$ of a pondus (libra).

P bes, bes librae, $\frac{1}{4}$.

P = = or P ZZ, triens librae, $\frac{3}{8}$.

P = —, quadrans librae, $\frac{1}{8}$.

P = or P Z, sextans librae, $\frac{1}{12}$.

WEIGHTS, MEASURES, SYMBOLS

* followed by a numeral, one denarius or more (also represented by H or X followed by a numeral).

P * — or P * —, uncia denarii, $\frac{1}{12}$ of a denarius.

P * S, semi-denarius, $\frac{1}{2}$.

P * = = or P * ZZ, triens denarii, $\frac{1}{3}$.

P * = — or P * Z, quadrans denarii, $\frac{1}{4}$.

P * = or P * Z, sextans denarii, $\frac{1}{6}$ (one obolus).

P * — — —, quinquox denarii, $\frac{1}{12}$.

P * = =, bes denarii, $\frac{1}{2}$.

P ⊂, dextans denarii, $\frac{1}{12}$ (this sign only occurs V. 18. 17).

⊕, followed by a numeral, one scripulum or more.

S, followed by a numeral, one sextarius or more.

S, with no numeral following, semi, one half.

CELSUS ,
DE MEDICINA

A. CORNELII CÆLSI DE MEDICINA

LIBER V

Ita de his malis corporis, quibus victus ratio maxime subvenit: nunc transeundum est ad eam medicinae partem, quae magis medicamentis pugnat. His multum antiqui auctores tribuerunt, et Erasistratus et ii, qui se empiricos nominarunt, praecipue tamen Herophilus deductique ab illo viro, adeo ut nullum morbi genus sine his curarent, Multaque etiam de facultatibus medicamentorum memoriae prodiderunt, qualia sunt vel Zenonis vel Andriae vel Apolloni, qui Mys cognominatus est.

- ² Horum autem usum ex magna parte Asclepiades non sine causa sustulit; et cum omnia fere medicamenta stomachum laedant malique sui sint, ad huius victus rationem potius omnem curam suam transtulit. Verum ut illud in plerisque morbis otiosius est, sic multa admodum corporibus nostris inaddere consueverunt, quae sine medicamentis ad sanitatem pervenire non possunt. Illud ante omnia salubre convenit, quod omnes medicinae partes ita funerae sunt, ut ex toto separari non possint sed ab

* The word *victus* like the *dieta* (regimen) of Hippocrates includes not only dieting, but rubbing, rocking, rules for exercise, etc.

CELSUS

ON MEDICINE

BOOK V

I HAVE spoken of those maladies of the body in which the regulation of the diet^a is most helpful: now I pass on to that part of medicine which combats them rather by medicaments. These were held of high value by ancient writers, both by Erasistratus and those who styled themselves Empirics, especially however by Herophilus and his school, inasmuch that they treated no kind of disease without them. A great deal has also been recorded concerning the powers of medicaments, as in the works of Zeno or of Andreas or of Apollonius, surnamed Mys. On the other hand, Asclepiades dispensed with the use of these for the most part, not without reason; and since nearly all medicaments harm the stomach and contain bad juices, he transferred all his treatment rather to the management of the actual diet. But while in most diseases that is the more useful method, yet very many illnesses attack our bodies which cannot be cured without medicaments. This before all things it is well to recognize, that all branches of medicine are so connected together,* that it is impossible to separate off any

CELSUS

3 ea nomen trahant, a quo plurimum petunt. Ergo et illa, quae victu curat, aliquando medicamentum adhibet, et illa, quae praecipue medicamentis pugnat, adhibere etiam rationem victus debet, quae multum admodum in omnibus corporis malis proficit.

Sed cum omnia medicamenta proprias facultates habeant, ac simplicia saepe opitulentur, saepe mixta, non alienum videtur ante proponere et nomina et vires et mixturas eorum (capp. 1-xxv), qui mixtur ipsas nobis curationes exsequentibus iura sit.

1. Sanguinem supprimunt atramentum autorium, quod Graeci chalcanthron appellant, chalcitis, arsenia, et ex aqua Lycium, tus, aloe, cummi, plumbum combustum, porrum, herba sanguinalis; creta vel Cimolia vel figularis, misy; frigida aqua, vinum, acetum; alumen Melinum, squama et ferri et acris [atque huius quoque duae species sunt, alia tantum aeris, alia rubri aeris].

2. Glutinant vulnus myrra, tus, cummi, praeci pueque acanthinum; paylleum, tragacantha, cardamomon, bulbi, lini semen, nasturtium; ovi album, gluten, lethycolla; vitis alba, confusae cum testis suis coctae, mel coctum; sponsia vel ex aqua frigida vel ex vino vel ex aceto expressa; ex eisdem lana succida; si levis plaga est, etiam aranea.

Reprimunt alumen et scissile, quod οχτορός vocatur, et liquidum; Melinum, auripigmentum, serugo, chalcitis, atramentum autorium.

one part completely, but each gets its name from the treatment which it uses most. Therefore, both that which treats by dieting has recourse at times to medicaments, and that which combats disease mainly by medicaments ought also to regulate diet, which produces a good deal of effect in all maladies of the body.

But since all medicaments have special powers, and afford relief, often when simple, often when mixed, it does not seem amiss beforehand to state both their names and their virtues and how to compound them, that there may be less delay when we are describing the treatment itself.*

1. The following suppress bleeding: Blacking which the Greeks call chalcantho, copper ore, scarla, and lycium with water, frankincense, lign-alon, gums, lead sulphide, leek, polygonum; Cimolian chalk or potter's clay, antimony sulphide; cold water, wine, vinegar; alum from Melos, iron and copper scales [and of this last there are two kinds, one from ordinary copper, the other from red copper].

2. The following agghutinate a wound: myrrh, frankincense, gums, especially gum arabic; fleawort, tragacanth, cardamon, bulbs, linseed, nasturtium; white of egg, glue, isinglass; white vine, snails pounded with their shells, cooked honey, a sponge squeezed out of cold water or out of wine or out of vinegar; unscoured wool squeezed out of the same; if the wound is slight, even cobwebs.

The following subdue inflammation: alum, both split alum called schiston, and alum brine; quince oil, orpiment, verdigris, copper ore, blacking.

* For a list of the drugs given and the probable identification of those which are doubtful see Introduction to vol. II.

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3. Concoquit et movent pos nardum, murra, costus, balsamum, galbanum, propolis, storax, turis et fuligo et cortex, bitumen, pix, sulphur, resina, sebum, adeps, oleum.

4. Aperiant tamquam ora in corporibus, quod stomum Græce dicitur, cinnamomum, balsamum, panaces; luncus quadratus, palejum et flos albae violæ, helleb, galbanum, resina terebenthina et picea, propolis, oleum vetus; piper, pyrethrum, chaniopitys, uva taminia; sulphur, alumen, rutæ semen.

5. Purgant ærugo, auripigmentum, quod arsenicon a Græcis nominatur [huic autem et sandaracæ in omnia eadem vis, sed validior est squama aeris], pumex; iris, balsamum, storax, tus, turis cortex, resina et pix et terebenthina liquida, ornanthe; lacerti sterens, sanguis columbae et palumbi et ² hircundinis; Hammoniacum, bdellium [quod in omnia idem quod Hammoniacum potest, sed valentius est habrotonum], flos arida, onocum Onidium, scobis eberis, amphacium, radicula; coagulatum, sed maxime leporinum [cui eadem quæ ceteris coagulis facultas, sed ubique validior est], fel, vitellina crudus, cornu cervinum, gluten taurinum, mel crudum; misy, chalcitis; crocum, uva taminia; habrotonum, spuria argenti, galla, squama aeris, lapis haematites, minium, costum, sulphur, pix cruda; sebum, adeps, oleum; ruta, porrum, lentibula, ervum.

6. Rodunt alumen liquidum, sed magis rotundum.

* These drugs were intended to open the pores (stomata of Erasistratus) at the ends of veins, and so to relieve congestion; for stomata, see vol. 1. pp. 10, 382.

3. The following mature abscessions and promote suppuration: nard, myrrh, costmary, balsam, galbanum, propolis, storax, frankincense, both the root and the bark, bitumen, pitch, sulphur, resin, suet, fat, oil.

4. The following open, as it were, mouths in our bodies, called in Greek *στρογγύαι*:^a cinnamon, balsam, all-heal; rush-root, pennyroyal, white violet flowers, bdellium, galbanum, turpentine and pine-resin, propolis, old olive oil; pepper, pyrethrum, ground pine thistle, black bryony berries, sulphur, alum, rue seed.

5. The following have a cleansing effect: verdigris, orpiment, called by the Greeks *arsenikon* [now this has the same property as sandarach, but copper scales are stronger], pumice; orris root, balsam, storax, frankincense, frankincense bark, pine-resin and liquid turpentine, vine-flowers; lizard dung, blood of pigeon and wood pigeon and swallow; ammoniacum, bdellium [which has the same virtue as ammoniacum, but southernwood is more powerful], dry fig, Cildian berry, powdered ivory, onphacium, radish; rennet, especially of the hare [which has the same faculty as other rennet but is far more active], ox-bile, uncooked yolk of egg, burnt stagshorn, ox-gall, raw honey, antimony sulphide, copper ore; saffron, black bryony berries, southernwood, litharge, oak-gall, hæmatite, minium, costmary, sulphur, crude pitch, suet, fat, oil, rue, leek, lentil, bitter vetch.

6. The following are exsiccants:^b alum brine, especially when made from round alum, verdigris, copper

^a *Rodera—exalere—adurere*—The substances given in sections 3-6 are divided into these three classes according to the severity of their action upon the tissues.

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aerugo, chalcitis, misy, squama aeris, sed magis rubri, res combustum, sandaraca, minium Sinopieum; galla, balsamum, murra, tus, turis cortex, galbanum, resina terebinthina umida, piper utrumque, sed rotundum magis, cardamomum; auripigmentum, calx, nitrum et spuma elus; [apil semen], narcosis radix, [omphacium?], aleyonium, [oleum ex amara nucleis], allum, mel crudum, vinum, lentiscus, aqua ferri, fel taatinum, scamonia, ura tamina, cinnamomum, styrax, cicutae semen, omphacium, apil semen, resina, narcissi semen, fel, nuclea adiasac oleumque earum, atramentum sutorium, chrysocola, veratrum, cinis.

7. Exedunt corpus asclae succus, habenna, aerugo, squama aeris, chrysocola, cinis, cinis Cyprius, nitrum, cadmia, spuma argenti, hypocistis, diphryges, sal, auripigmentum, sulphur, cicuta, sandaraca, salamandra, [aleyoneum], aeris flus, chalcitis, atramentum sutorium, ochra, calx, [acetum], galla, alumen, lac caprifisci vel lacturae marinae, quae bithynallos a Graecis appellatur, aleyoneum, fel, turis fuligo, spodium, lenticula, mel, oleae folia, marribium, lapis haematites et Phrygius et Assius et scellis, misy, vinum, acetum.

8. Adarunt auripigmentum, atramentum sutorium, chalcitis, misy, aerugo, calx, charta combusta, sal, squama aeris, faex combusta, murra, stercus et lacerti et columbae et palumbi et hbrandinis, piper, coecum Cnidium, allum, diphryges, lac utrumque, quod proxime [capite supra] comprehensum est, veratrum et album et nigrum, cantharides, corallum, pyrethrum, tus, salamandra, cruce, sandaraca, ura tamina, chrysocola, ochra, alumen scissile, ovillum stercus, oenanthe.

ore, antimony sulphide, copper scales, especially from red copper, calcined copper, sandarach, minium from Sinope; oak-galls, balsam, myrrh, frankincense, frankincense bark, galbanum, liquid turpentine, pepper of both kinds but especially the round, cardamon; orpiment, lime, soda and its seum; [parsley seed], narcissus root, [onophastrum], corai, [oil of bitter almonds], garlic, uncooked honey, wine, mastich, iron scales, ox-bile, scammony, black bryony berries, cinnamon, storax, hemlock seed, onophastrum, parsley seed, resin, narcissus seed, bile, bitter almonds and their oil, blacking, chrysocola, hellebore, ash.

7. The following are exedents: acacia juice, ebony, verdigris, copper scales, chrysocola, ash, cyprus ash, soda, cadmia, litharge, hypceistis, slag, salt, orpiment, sulphur, hemlock, sandarach, salamander-ash, [corai], flowers of copper, copper ore, blacking, ochre, lime, [vinegar], oak-gall, alum, milk of the wild fig, or of sea spurge which the Greeks call lithymallos, coral, bile, frankincense, spode, lentil, honey, olive leaves, horehound, haematite stone, Phrygian, Assian and iroeschist, antimony sulphide, wine, vinegar.

8. The following are caustics: orpiment, blacking, copper ore, antimony sulphide, verdigris, lime, burnt papyrus-ash, salt, copper scales, burnt wine-lees, myrrh, dung of lizard and pigeon and wood pigeon and swallow, pepper, Cnidian berry, garlic, slag, both the milks mentioned in the previous chapter, hellebore both white and black, cantharides, coral, pyrethrum, frankincense, salamander-ash, rocket, sandarach, black bryony berries, chrysocola, ochre, split alum, sheep's dung, vine-flower buds.

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9. Vadem fere crustas ulceribus tanquam igne adustis inducunt, sed præcipue chuleitis, utique si cocta est, flos aeris, uerugo, auripigmentum, misy, et id quoque magis coctum.

10. Crustas vero has resolvit farina triticea cum ruta vel portu, aut lenticula, cui mellis aliquid adiectum est.

11. Ad discutienda vero ea, quæ in corporis parte aliqua coierunt, maxime possunt lubrotum, belenium, amarusus, alba viola, mel, lilium, eumpsychus Cyprius, lac, sertula Campana, scorpillum, cupressus, cedrus-iris, viola purpurea, narcissus, rosa, crocum, passum, linceus quadratus, nardum, cionomonum, casta, Hammoniacum, cera, resina, ura taminis, spuma argenti, styrax, ficus arida, tragoriganus, lini et narcissi semen, bitumen, sordes ex gymnesio, pyrites lapsi aut molari, crudus vitellus, amarae nutes, sulphur.

12. Evocat et educit iadanum, alumen rotundum, bebenus, lini semen, onphacum, fel, chalcitis, bdellium, resina terebenthina et pinæ, propolis, ficus arida deonera, stercus columbae, pumex, farina lolii, grossi in aqua cocti, elaterium, lauri buccæ, nitrum, sal.

13. Levat id, quod exasperatum est, spodium, bebenus, cunctui, ovi album, lac, traganum.

14. Carnem slit et ulcus implet resina pinæ, oebra Atticæ vel Seyrice, cera, butyrum.

15. Molluit aes combustum, terra Eretria, nitrum, papaveris lacrima, Hammoniacum, bdellion, cera, sebum, adeps, oleum, ficus arida, sesamum.

^a What is scraped off the skin by the strigil after exercise.

^b i.e. they draw out collections of matter and bring them to the surface; *διεσπινάζειν* *πέπρωτα*, p. 17.

9. The foregoing generally induce scabs on ulcerations almost as when burnt by a caustery, but most of all copper ore—especially after being heated—copper flowers, verdigris, urpiment, antimony sulphide, and that also more after being heated.

10. But such scabs are loosened by wheat flour with rue or leek or lentils, to which some honey has been added.

11. The following, again, are most powerful to disperse whatever has collected in any part of the body: southernwood, elecampane, marjoram, white violet, honey, lily, Cyprian marjoram, milk, melilot, thyme, oil of cypress, cedar-oil, iris, purple violet, narcissus, rose, saffron, raisin wine, angular rush,nard, clove-stem, cassia, ammoniacum, wax, resin, black bryony berries, litharge, storax, dry fig, goat's marjoram, linseed, narcissus seed, bitumen, sordes* from the gymnasium, pyrites or millstone, raw yolk of egg, bitter almonds, sulphur.

12. The following are epispastics¹: ladanum, round alum, ebony, linseed, omphacium, oxbile, copper ore, bdellium, turpentine and pine-resin, propolis, dried fig cooked, pigeons' dung, pumice, daniel meal, unripe figs cooked in water, elaterium, laurel berries, soda, salt.

13. The following relieve any irritated part: oxide of zinc, ebony, gum, white of egg, milk, tragacanth.

14. The following make the flesh grow, and fill in ulcerations: pine-resin, ochre from Attica or Scyros, wax, butter.

15. The following are emollients: calcined copper, Eretrian earth, soda, poppy-seeds, ammoniacum, bdellium, wax, suet, soft fat, oil, dried fig, sesamum,

sertula Campana, narcissi et radix et semen, rosae folia, coagulum, vitellus crudus, amarae nuxes, medullae asinae, sibi, pix, coctus, cicutae semen, plumbi roccementum (στυράκις ποτρίβαν Graeci vocant), panaceae, cardamomum, galbanum, resina, uva tansia, styrax, iris, balsamum, sordes ex gymnasio, sulphur, buturum, ruta.

16. Cutem purgat mel, sed magis si est cum galla vel croco vel lentiscula vel marrubio vel iride vel ruta vel nitro vel aerugiue.

17. Expositis simplicibus facultatibus dicendum est, quemadmodum miscantur, quaeque ex his fiant. Miscantur autem varie, neque huius ullus modus est, cum ex simplicibus alia demantur, alia adiciantur, fisdemque servatis ponderum ratio mutetur. Itaque cum facultatum materia non ita multiplex sit, innumerabilla mixturarum genera sunt: quae comprehendi si possent, tamen esset supervacuum.

B Nam et idem effectus intra paucas compositiones sunt, et mutare eas cuilibet cognitis facultatibus facile est. Itaque contentus sis ero, quas accepi velut nobilissimas. In hoc autem volumine eas explicabo, quae vel desiderari in prioribus potuerunt, vel ad eas curationes pertinent, quas protinus hic comprehendam, sic ut tamen quae magis communia sunt, C simul iungam: si qua singulis vel etiam parvis adcommodata sunt, in ipsum locum differam. Sed et ante scribi volo, in uncia pondus denarium septem

melilot, narcissus root and seed, rose-leaves, curd, raw yolk of egg, bitter almonds, marrow of any kind, antimony sulphide, pitch, snails boiled, hemlock seed, lead-slag which the Greeks call σκωρία πολυβίου, all-heal, cardamon, galbaum, resin, black bryony berries, storax, iris, hakea, gymnosium sordes, sulphur, butter, rue.

16. The following cleanses the skin: honey, but better if mixed with gails or bitter vetch or lentil or horsehound or iris or rue or soda or verdigris.

17. The powers of medicaments when unmixed having been set out, we have to say how they may be mixed together, and what are the compositions so made. Now they are mixed in various ways and there is no limit to this, since some simples may be omitted, others added, and when the same ingredients are used the proportion of their weights may be changed. Hence though there are not so very many substances having medicinal powers, there are innumerable kinds of mixtures; and, even if all of them could be included, yet this would be needless. For the same effects are produced by but a few compositions, and to vary these is easy to anyone who knows their powers. Therefore I shall content myself with those I have heard of as the best known. Now in this book I will set forth those compositions which may have been required in the previous treatments or which pertain to those treatments which I am going shortly to mention here, so that I may bring together at the same time compositions which are more generally used: those that are applicable to a particular disease, or even to a few, I shall mention in their appropriate places. But I wish to make clear in advance that our uncia has the weight

esse, unius deinde denarii pondus dividi a me in sex partes, id est sextantes, ut idem in sextante denarii habeam, quod Graeci habent in eo, quem obolon appellant. Id ad nostra pondera relatum paulo plus dimidio scrupulo facit.

- 2 Malagmata vero atque emplastra pastillique, quos trochiscos Graeci vocant, cum plurima eadem habeant, differunt eo, quod malagmata maxime ex odoribus¹ etorunisque etiam sureulis, emplastra pastillique magis ex quibusdam metallicis fiunt; deinde malagmata confusa abunde mollescent: nam super integrum cutem iunguntur: laboriose vero conteruntur ea, ex quibus emplastra pastillique fiunt, ne
B laedant vulnera, cum imposita sunt. Inter emplastrum autem et pastillum hoc interest, quod emplastrum ullique liquatis aliquid accipit, in pastillo tantum arida medicamenta aliquo umore iunguntur. Tum emplastrum hoc modo fit: arida medicamenta per se teruntur, deinde mixtis his instillatur aut acetum aut si quis alius non pinguisumor accessurus est, et ea rursus ex eo teruntur. Ea vero, quae liquari possunt, ad ignem simul liquantur, et si quid
C olei misceri debet, tum infunditur. Interdum etiam aridum aliquid ex oleo prius coquitur: ubi facta sunt, quae separatim fieri debuerunt, in usum omnia miscentur. At pastilli haec ratio est: arida medica-

¹ There is a variant reading floribus.

* For the approximate conversion of the weights and measures to the metric system and for a list of symbols and fractions, see Introduction to vol. II.

¹ Malagma (μαλagma to soften), a poultice; emplastrum (ἐμπλαστρον or ἐμπλάστω), a plaster; pastillum (πάστιλλον), a

of seven denarii, next that I divide one denarius by weight into six parts, namely, sextantes; so that I have in the sextans of a denarius the same weight as the Greeks have in what they call an obolus. That being reduced to our weight, makes the obolus a little more than half a scrupulus.^a

Now emollients and plasters and pastils^b which the Greeks call trochisci, whilst they have much in common, differ in this, that emollients are made chiefly from essences of flowers and even from their shoots, plasters and pastils rather from certain metallic materials: again, the emollients if crushed become quite soft enough; for they are applied over intact skin; the materials out of which plasters and pastils are made are rubbed together laboriously in order that they may not irritate wounds when they are applied to them. But between a plaster and a pastil there is this difference: a plaster must contain some liquid ingredient, in a pastil only dry materials are used, combined together by a little fluid. Then a plaster is made in this way: dry medicaments are rubbed down separately, then when they have been mixed, either vinegar is dropped in or any other liquid free from fat that is at hand, and these ingredients are rubbed together again. The materials capable of being liquefied are melted all together over the fire, and if there is to be any admixing of oil, it is then poured in. A dry ingredient is even sometimes boiled in oil beforehand: when what should be done separately has been accomplished, all are mixed together. But the making of pastils, on the other hand, is this: dry medicaments

ball or disc-shaped pill or tablet which could be swallowed or applied externally.

CRISUS

menta contrita umore non pingui, ut vino vel aceto, coguntur, et rursus euacia huiusmodi, atque ubi utendum est, eiusdem generis umore diffunduntur. Tum emplastrum imponitur, pastillus influitur, aut alicui oleosiori, ut cerato, miscetur.

18. His cognitis, primum malagmata subleiam, quae fere non sunt refrigerandi sed calfaciendi causa reperta. Est tamen, quod refrigerare possit, ad calidas podagras aptum. Habet gallae et immaturae et alterius, coriandri seminis, ciculae, lacrimae aridae, cummis, singulorum plenum acetabulum; cerati eloti, quod *σκληρύνειον* Graeci vocant, selibram.

Reliqua fere calefaciunt. Sed quaedam digerunt materiam, quaedam extrahunt, quae *ἐκροσσοειδ* vocantur; pleraque certis magis partibus membrorum accommodata sunt.

- 2 Si materia extrahenda est, ut in hydropico, in lateris dolore, in incipiente abscessu, in suppuratione quoque mediocri, aptum est id, quod habet resinae aridae, nistri, Hammoniaci, galbani, singulorum pondus; cerac pondus. Aut in quo haec sunt: aeruginis caesae, turis, singulorum P. ♀ II; Hammoniaci salis P. ♀ VI; squamae asae, cerac, singulorum P. ♀ VIII; resinae aridae P. ♀ XII; aceti cyathus. Idem praestat cumini farina cum struthio et melle.
- 3 Si secur dolet, id in quo est balsami lacrimae P. ♀ XII; costi, cinnamomi, casiae corticis, murrinae, croci, succi rotundi, balsami seminis, iridis Ilyricae, cardamomi, amomi, nardi, singulorum P. ♀ XVI.

² For *prolepta* cf. vol. I. Appendix (p. 463).

³ *σκληρύνειον* cf. *σκληρύνειον*.

which have been rubbed together are mixed by the aid of a liquid free from fat, such as wine or vinegar and the mixture is dried again, and when required for use, dissolved in a liquid of the same kind. Further, a plaster is laid on, a pascal is smeared on, or is mixed with something softer such as a verate.

18. Premising the above, I will speak first of emollients, almost all of which were invented, not for the purpose of cooling but for heating. There is, however, one kind which can cool, being suitable for hot podagras.* It is a cupful of oak-galls, unripe or otherwise, coriander seed, hemlock, dried poppy-tears, and gum, of each 83 c.cm.; of washed cerate called by the Greeks *σκήπτρον*,† 158 grms.

Almost all the rest are heating. But some disperse the diseased matter, some extract it and are called epispastic;‡ most are designed rather for particular parts of the body.

If diseased matter has to be extracted, as in the case of a dropay, pleurisy, incipient abscession, also in cases of moderate suppuration, the following emollient is suitable which contains: dried resin, soda, ammoniacum, galbanum, 338 grms. each, wax 336 grms. Or that one which contains: scrapings of verdigris and frankincense, each 8 grms., ammoniac salt 24 grms., copper scales, wax, each 32 grms., dried resin 48 grms., 42 c.cm. of vinegar. Cumia meal with soap-wort and honey serves the same purpose.

If there is pain in the liver§ apply the emollient which consists of balsam tears 48 grms., costmary, cinnamon, casia bark, myrrh, saffron, round rush, balsam seeds, Illyrian iris, cardamon, anemum, nard.

* *Antrographed phlegma*, p. 10 note b

† IV. 15. 1.

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Quibus adiecitur nardum [unguentum], donec cerati crassitudo sit. Et huius quidem recentis usus est: si vero servandum est, resinae terebenthinae P. & XVI, ceræ P. & X ex vino leni coquantur, tum eo misceantur.

4. At si lienis torquet, glandis, quæ balanon μυμώων Græci vocant, cortex et altrum paribus portionibus contunduntur, respergunturque aceto quam acerrimo. Ubi cerati crassitudinem habet, linteis ante in aqua frigida madefacto iniungitur et sic inponitur, superque farina hordeæ inieciatur: sed manere ibi non amplius sex horis debet, ne limenti consumat; saliusque est id bis aut ter fieri.
5. Compositum autem et locinæ et lienis et abscessibus et strumæ, parotidibus, articulis, calcibus quoque suppurantibus aut aliter dolentibus, etiam concoctioni ventris Lysias composuit ex his: opopanax, styracis, galbani, resinae, singulorum P. & II; Haemoniaci, bdelli, ceræ, sebi taurini, tridis aridæ P. & III; cacherjos acetabulo, piperis granis XI.; quæ contrita irino unguento temperantur.
6. Ad laterum autem dolores compositio est Apollonphanis, in qua sunt resinae terebenthinae, turis fuliginis, singulorum P. & III; bdelli, Haemoniaci, tridis, sebi vitulini aut capri a renibus, visci, singulorum P. & IIII. Hæc autem eadem omnem dolorem levant, dura emollunt, mediocriter caesaciunt.
7. Ad idem [latos] Andreæ quoque malagma est, quod etiam resolvit, educit umorem, pus maturat,

^a IV. 18. 1.

^b i.e. by burning the skin over it.

each 54 grms. To these is added hard ointment until the consistency is that of a cerate. And this is for use whilst fresh; but if it is to be kept, turpentine resin 54 grms., and wax 40 grms., are pounded up together in mild wine, and then mixed with the above.

But if there is acute pain of the spleen: the rind of the nut, called by the Greeks *βάλανος μασχουρή*, and soda are pounded together in equal proportions and sprinkled with sharpest vinegar; when of the consistency of a cerate this is spread on lint previously moistened in cold water, and so applied, with barley-meal dusted over it; but it should not be kept on longer than six hours, lest it consume the spleen; it is better to apply it two or three times.

Lysias compounded an emollient equally useful for the liver and spleen and for abscesses and scrofulous tumours, for pericard swellings and joints, for herbs suppurating or otherwise painful, even for promoting digestion, from the following: opopanax, storax, galbanum, resin, each 8 grms., ammoniacum, bdellium, wax, beef suet, dried iris, each 16 grms., cachry, 63 c.c.m., and 40 peppercorns, all pounded with iris ointment to the right consistency.*

Again, for pains in the sides there is the composition of Apollonphanes: turpentine-resin and frankincense soot, each 16 grms., bdellium, ammoniacum, iris, calf's or goat's kidney-suet, mistletoe juice, each 16 grms. This composition relieves pain of all kinds, softens indurations, and is moderately heating.

The emollient of Andrens is for like use; and it also relaxes, draws out humour, matures pus, and

* *De Compositiōe Medicamentorum*. XIII. 345, quoting from Aesclepiades, gives the same prescription.

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ubi id maturum est, cutem rumpit, ad cicatricem perducit. Prodest impositum minutis maioribusque abscessibus, item articulis ideoque et coxis et pedibus dolentibus: item, si quid in corpore conlissum est, reficit; præcordia quoque dura et inflata emollit, ossa extrahit, ad omnia denique valet, quæ adiuvari calor potest. Id habet ceræ P. * I; visci, sycamini, quam alias sycomororum vocant, lacrimæ, singulorum P. * I; piperis et rotundi et longi, Hammoniæ thymiamatis, bdelli, aridis Illyricæ, cardamomi, amomi, xylobalsami, turis masculi, murræ, resinæ aridæ, singulorum P. * X; pyrethri, cocci Caudi, spumæ nitri, salis Hammoniæ, aristolociæ Creticæ, radicis ex cucumere agresti, resinæ Lerebenthinæ liquidæ, singulorum P. * XX. Quibus adiicitur unguenti irini, quantum satis est ad ea mollienda atque coeunda.

8 Præcipuum vero est ad resolvenda, quæ astricta sunt, mollienda, quæ dura sunt, digerenda, quæ coeunt, id, quod ad Polyarchum auctorem refertur. Habet iunci quadrati, cardamomi, turis fuliginis, amomi, ceræ, resinæ liquidæ partes portiones.

9 Aliud ad eadem Nilei: croci magmatis, quod quasi recrementum eius est, P. * III; Hammoniæ thymiamatis, ceræ, singulorum P. * XX. Ex quibus duo priora ex aceto teruntur, cera cum rose liquatur, et tum omnia iunguntur.

10 Proprie etiam dura emollit id, quod Moschi esse dicitur. Habet galbani uociam; turis fuliginis P. —; ceræ, Hammoniæ thymiamatis triones; picis aridæ P. II; acetî heminas tres.

* The residuum of saffron, after extracting the oil.

† Galep. Di Comp. Med., XIII. 182.

when it is contused ruptures the skin, and brings a scar over. It is applied with advantage to abscesses, both small and large, likewise to joints and so both to the hips and feet when painful; further, it repairs any part of the body that is contused; also softens the pæccordia when hard and swollen; draws outwards splinters of bone—in short, is of service in all cases which heat can benefit. It is composed of wax 4 grms., mistletoe juice, and tears of sycamorus, also called sycamoros, 4 grms. each, round and long pepper, ammoniacum for fumigation, bdellium, Myrian iris, cardamon, ammonum balsam wood, male frankincense, myrrh, dried resin, 40 grms. each, pyrethrum, Coidian berries, scum of soda, ammoniac salt, Cretan aristolochia, wild cucumber root, liquid turpentine and resin, 30 grms. each, to which is added a sufficiency of iris ointment to give it proper consistency.

A special emollient for relaxing parts constricted, for softening parts indurated, and for dispersing any collection is ascribed to Polyarchus. It contains squaræ root, cardamon, frankincense root, ammonum, wax and liquid resin in equal quantities.

Another emollient for the same purpose is that of Nileus: crocomagma,^c which is as it were saffron-lace, 16 grms., ammoniacum for fumigating, and wax, 80 grms. each. Of these the first two are rubbed up in vinegar, the wax is liquefied by melting in rose-oil, and then all are mixed together.^d

Especially useful for softening induration is an emollient said to have been invented by Moschus. It contains galbanum 28 grms., frankincense root 58 grms., wax and ammoniacum for fumigation, 112 grms. each, dried pitch 872 grms., vinegar 750 c.c.m.

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- 11 Fertur etiam ad digerenda, quae coeunt, sub auctore Medio, quod habet ceræ P. =; panacis P. S.; squamæ aeris, aluminis rotundi, item scissilis, singulorum P. I; plumbi combusti P. I S.
- 12 Ad eadem Pantæus utebatur calcis P. S.; sinapis contriti, item faeni Grævi, aluminis, singulorum P. I; sebi bubuli P. II S.
- 13 Ad strumam multa malagmata invenio. Credo autem, quo prius id malum est tribusque facile discutitur, eo plura esse temptata, quæ in persona
- 14 varie responderent.--Andrias auctor est, ut hæc misceantur: urticæ serotile P. * I; piperis rotundi, bdelli, galhani, Hammoniaci thymiamatis, resinae aridae, singulorum P. * IIII; resinae liquidæ, ceræ, pyrethri, piperis longi, lactucæ maritimæ seminis, sulphuris ignem non experti, quod apyron B vocatur, pares portiones. Hoc autem quod Niconis est: faecis aridae aceti, spumæ nitri, salis Hammoniaci, sinapis, cardamomi, radicis ex cucumere silvestri, resinae, singulorum P. * VIII; quæ ex levi vino contunduntur.
- 15 Expeditius ad idem fit, quod habet visci, simini stercoris, resinae, sulphuris ignem non experti pares portiones; et in quo est sulphuris P. * I, lapidis quem pyritem vocant P. * IIII, camini acetabulum. Item in quo est lapidis eiusdem pars una, sulphuris duæ partes, resinae terebenthinae partes tres.
- 16 Arabis autem eiusmodi est ad strumam et orientia tubercula, quæ phymata vocantur, quod hæc digerit. Habet muræ, salis Hammoniaci, turis, resinae et liquidæ et aridae, croci magnatis, ceræ,

We have also one ascribed to Medius for dispersing collections of matter. It contains wax 56 grms., panax 168 grms., copper scales, round alum, split alum, 336 grms. each, calcined lead 304 grms.

Pentagruis used for the same purpose, quicklime 168 grms., pounded mustard, also fenugreek and alum, 336 grms. each, ox-suet 840 grms.

For scrofulous tumour I find many emollients. Now I think that the worse this disease, and the less easy its dispersal, the more have been the remedies tried, with results varying according to the several patients. Andrias invented the following: nettle-seed 4 grms., round pepper, bdellium, galbanum, ammoniacum for fumigation, dried resin, 16 grms. each, with equal parts of liquid resin, wax, pyrethrum, long pepper, seed of sea spurge, unheated sulphur, which is called apyrum. Steun's emollient contains dried vinegar lees, soda-scum, ammoniac salt, mustard, cardamom, wild cucumber root, resin, 32 grms. each. These are pounded up together in mild wine.*

A more active emollient for the same purpose contains mistletoe juice, ape's dung, resin, untreated sulphur, equal parts; another emollient contains sulphur 4 grms., the stone called pyrites 16 grms., and 83 c.c.m. of cumin. In another are pyrites one part, sulphur two parts, turpentine resin three parts.

As emollient, the invention of a certain Arab, serves to disperse scrofulous swelling, and the sprouting small tumours which are called phymata. It contains myrrh, ammoniac salt, incense, resin both liquid and dried, crocomagma, wax, 4 grms. each.

* For another prescription see V. 18. 28.

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singulorum ℞. ✱ I; lapidis eius quem pyriten vocant P. ✱ III; quibus quidam adiciunt sulphuris P. II.¹

- 17 Est etiam proficiens in strumis et in his tuberculis, quae difficiliter concoquantur, et in iis, quae carcinomae vocantur, quod ex his constat: sulphuris P. ✱ II; nitrī ℞. ✱ III, murræ P. ✱ VI, fuliginis turis P. ℞.,² salis Hammoniaci P. —, ceræ P. I.

- 18 Protarchus autem ad parotidas eoque tubercula, quae melicerides [favi] vel phymata nominantur, item mala ulcera pumicis, resinae pineae liquidae, turis fuliginis, spumae nitri, irisidis, singulorum P. ✱ VIII cum ceræ P. ✱ VIII miscbat, hisque olei cyathum et dimidium adieiebat.

- 19 At adversus panum, . . .³ tum primum orientem, quod phygetron Graeci vocant, et omne tuberculum, quod phyma nominatur, miscetur ocre quae Atticae nominatur cum duobus partibus stullae, hisque cum tandantur subinde mel instillatur, donec malagmaticis crassitudo sit.

- 20 Discutit etiam omne tuberculum, quod phyma vocatur, id quod habet calcis, nitri spumae, piperis rotundi, singulorum P. ✱ I; galbani ℞. ✱ II; salis P. ✱ III, quae excipiuntur cerato ex rosa facto.

- 21 Supprimuntque omne quod abscedit id, in quo est galbani, fabae frescae, singulorum P. ✱ I; murræ, turis, ex radice capparidis curlicis, singulorum P. ✱ III. Satisque omnia abscedentia digerit murex combustus et bene contritus, aceto subinde adiecto.

¹ Marx keeps to the MSS, P. II a. 852 grms. Dioscorides, followed by Dorenberg, amends to P. ✱ II = 8 grms. This is the usual quantity prescribed and is the amount given in § 17.

² Signs of distant demari—i.e. ℥ of a denarius: this only occurs here.

³ Marx conjectures that the words cum unum have fallen out, and this text is translated.

the stone called pyrites 16 grms., to which some add sulphur 372 grms.

There is also an emollient efficacious for scrofulous swellings, and for those boils which are slow to come to a head, also for those which are called carcinode. It contains sulphur 8 grms., soda 78 grms., myrrh 24 grms., frankincense scot 2·3 grms., ammoniac salt 86 grms., wax 338 grms.

Protargibus, for parotid swellings, and for those small tumours which are named melicerides (favi) or phymata, and for bad ulcerations, mixed together: pumice, liquid pine-resin, frankincense scot, soda-seum, iris, each 32 grms., along with wax 26 grms., to which are added 63 c.ccm. of oil.

But against *panus** at any stage and when incipient, the condition called by the Greeks phygetron, and against any small tumour called phyma, the oclire named Attic is mixed with equal parts of wheat flour, and whilst these are being stirred together, honey is dropped in until the consistency is that of an emollient.

Also all the small tumours called phymata are dispersed by an emollient containing quicklime, soda-seum, round pepper, each 4 grms., galbanum 8 grms., salt 16 grms., which are taken up in a cerate made of rose oil.

Any abscession† is suppressed by galbanum and crushed beans, each 4 grms., myrrh, frankincense, caper root bark, each 15 grms. And calcined murex‡ well pounded, with vinegar gradually added, is sufficient to disperse an abscession when forming.

* *whorl*, *afflux*, a superficial abscess in a hair follicle.

† I. 89, note.

‡ I. 204, note.

- 22 At si satis sanguis subit, recte imponitur quod adversus phymata quoque potest. Constat ex his: bdelli, styracis, **Hammoniaci**, galbani, resinae aridae et liquidae pineae, item ex lentisco, turis, iridis, singulorum P. # II.
- 23 Carcinode vero phymata commode his leniuntur: galbani, visci, **Hammoniaci**, resinae terebenthinae, [†] in, singulorum P. # I; sibi taurini P. S.; facies combustae quam maxima portione, dum id siccius non faciat quam esse malagma oportet.
- 24 Quod si facies contusa livor subeumentus est, haec compositio valet, et die imposita tollit: aristolochiae, thapsiae, singulorum P. # II; bdelli, styracis, **Hammoniaci** thymiamatis, galbani, resinae aridae et ex lentisco liquidae, turis masculi, iridis Illuriens, ceræ, singulorum P. # III. Idem faba quoque imposita prodest.
- 25 Sunt etiam quaedam malagmata, quae anastomatice Graeci vocant, quoniam aperiendi vim habent. Quale est, quod ex his constat: piperis longi, spumae nitri, singulorum P. # II; erysini P. # III, quae cum melle miscentur. Idemque etiam strumae aperiendae sunt. Eius generis est . . .^a vehementiusque ex his est id, quod habet caeleis P. # III; piperis grana VI; nitri, ceræ, singulorum P. # XII; mellis P. —; olei hemiarum.

^b *Marz conjectures that the corrupt is furnished by some MSS. may represent anad — anad.*

^c *Marz notes that some words have fallen out here.*

^a *Celsus probably means that when enough blood has been lost either naturally or by resection the treatment described should follow; but some translators think he is describing an extravasation of blood and Constantine adds plus before solis*

But if sufficient blood comes up,^a it is right to apply a remedy which is also useful against phymata. It consists of the following ingredients: bdellium, storax, ammoniacum, galbanum, pine-resin liquid and dried, also lentiscus-resin, frankincense, iris, 3 grms. each.

But the phymata called carcinoid are relieved by the following: galbanum, mistletoe juice, ammoniacum, turpentine-resin, 4 grms. each, beef-suet 108 grms., of burnt wine-lees as large an amount as can be added without making the mass too dry for an emollient.

But if after a blow on the face there is discolouration and bruising, the following prescription applied night and day takes it away: aristolochia and thapsia, each 8 grms., bdellium, storax, ammoniacum for fumigation galbanum, dried resin, liquid from lentiscus-resin, male frankincense, Illyrian iris wax, each 15 grms. The application of bean-meal also has the same effect.

There are certain emollients called by the Greeks *anastomatika*, because they have the property of opening the pores.^b Of these one contains long pepper and soda-scum, each 8 grms., hedge mustard 16 grms., these are mixed together with honey. They are also suitable for scrofulous tumours. Of this class is . . . a yet more powerful one of this kind is that which consists of lime 16 grms., 8 pepper-corns; soda and wax, each 48 grms., honey 56 grms., and 260 c.cm. of oil.

and believes that excessive loss of blood (through venesection) is referred to, comparing II. 10, 12. Cf. vol. I. p. 184, as blood-letting.

^a p. 6, note a.

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- 26 Nicotia quoque est quod resolvit, aperit, purgat. Habet steyoneum, sulphur, nitrum, pumicem paribus portionibus, quibus tantum picis et ceræ adicitur, ut fiat ceræ crassitudo.
- 27 Ad spissam¹ autem Aristogenia fit ex his: sulphuris P. * I; resinæ terebenthinæ, nitri spuræ, et ex cella partis interioris, plumbi eleti, singulorum P. * II; turis foliginis P. * VIII; ficus aridæ quam pinguisimæ, sebi taurini, singulorum P. * VIII; ceræ P. * XII; iridis Macedonicæ P. * VI; sesami fricti acetabulum.
- 28 Maximeque nervis et articulis malagma convenit. Igitur Eudyleis est ad articulos, et ad omnem dolorem et ad vesicæ, et ad recenti cicatrice contractos articulos, quas ancylas Græci nunciant, quod habet: fuliginis turis acetabulum; resinæ tantundem; galbanis sine succulis sesquoniam; ammoniaci, bdelli . . .² P. * III . . . singulorum P. =; ceræ P. S. Ad eodem digitos iudis, ammoniaci, galbani, nitel, singulorum P. * XIII; resinæ liquidæ P. * VI; ceræ P. * XVI.
- 29 Ad dolores articulorum Sosagoræ: plumbi combusti, papaveris lacrimæ, corticis hyoscyami, styracis, pucedani, sebi, resinæ, ceræ, partes portiones.
- 30 Chryssippi: resinæ liquidæ, sandaracæ, piperis, singulorum P. * XII; quibus ceræ paululum adicitur.
- 31 Clesiphontis: ceræ Creticæ, resinæ terebenthinæ, nitri quam ruberrimi, singulorum P. S., olei cyathi

¹ Some MSS. + and ome.

² Moss notes that singulorum has fallen out after bdelli; and that there is a further loss of words after P. * III. Durelurey omits P. * III. The prescription then read ammoniacum and bdellium of each of these, as in the following sentence. (Cf. list of apothecaries' signs, Introduction to vol. II.)

There is also a prescription of Nicot which relaxes, opens and cleans. It contains coral, sulphur, soda, and pumice, equal parts, to which pitch and wax are added to the consistency of a cerate.

Again, for the hard parts there is the emollient of Aristagoras made from the following: sulphur 4 grms., turpentine-resin, soda-scum, the inner part of a squill-bulb, washed lead, 3 grms. each, frankincense soot 32 grms., the ripest figs and beef suet, 32 grms. each, wax 48 grms., Macedonian iris 24 grms., parched sesame 83 c.cm.

And most of all is an emollient suitable for sinews and joints. Thus there is that of Euthylenus, suitable for joints and for any kind of pain, including that of the bladder, and for joints contracted by recent scarring which the Greeks call *anclinae*¹: it consists of frankincense soot 53 c.cm., of resin the same, galbanum without stalks 42 grms., ammoniacum and bdellium, of each 12 grms. . . of each 56 grms., wax 188 grms. Another for similar pain in the fingers contains ammoniacum, galbanum, and soda, each 56 grms., liquid resin 24 grms., wax 84 grms.

The emollient of Sosagoras for pain in joints contains calcined lead, poppy tears, hyoscyamus-bark, storax, sulphurwort, suet, resin and wax, equal parts.

That of Chrysippus contains liquid resin, sandarach, pepper, 48 grms. each, to which a little wax is added.

That of Clesiphon² consists of Cretan wax, turpentine resin, the reddest soda, 188 grms. each, and

¹ *δυκλιναι*, swollen joints.

² Galen, *De Comp. Med.*, XIII. 938.

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tra. Sed id nūtrum ante per triduum instillata aqua teritur, et cum sextario eius incoquitur, donec omnisumor consumatur. Potest vero ea compositio etiam ad parotidas, phymata, strumam omnemque coitum umoris emolliendum.

- 32 Ad articulos scii quoque aridi partem nepetae mixtam vel ovam tamniam sine seminibus cum pulvis recte aliquis imponit.
- 33 Eadem podagrae praesidio sunt. Sed ad eam sit Arlstonis quoque, quod habet: nardi, cinnamomi, casiae, chamaeleontis, iunci rotundi, singulorum P. ♀ VIII; sebi caprini ex irido liquati P. ♀ XX; iridis P. ♀ I, quae in aceto quam acerrimo iacet per xx dies debet. Idem autem etiam recentia phymata doloresque omnes discutit.
- 34 At Theoxenus ad pedum dolores sebi a renibus partem tertiam, salis partes duas miscebat, hisque membramulam ulitari imponebat, tum superiusciciebat Hammoniacum thymolam in aceto liquatum.
- 35 At Numenius podagram oeternaue articulos induratos hoc mollebat: habrotoni, rosae aridae, papaveris lacrimae, singulorum P. ♀ III; resinae cerebenthinae P. ♀ IIII; turis, spumae nitri, singulorum P. ♀ VIII; iridis, aristolochiae, singulorum P. ♀ XII; ceras¹ P. III; quibus adiicitur cyathus I, olei lauri cyathi III, olei acerbi sextarius.
- 36 Si quando autem in articulis callus increvit, Dexter docuit inponere calcis P. ♀ IIII; cerusae P. VII; resinae pineae P. ♀ XX; piperis grana XXX; ceras P. =; quibus, dum contunduntur, hemina vini lenis instillatur.

¹ Duremberg amends to P ♀ III = 12 grs. as the amount given, 1 kilogram, seems much too large.

126 c.cm. of oil. But this soda is pounded up beforehand over a period of three days, water being added drop by drop, and then boiled in half a litre of water until all fluid has gone. This emposition too can be applied to parotid swellings, phymata, serous tumours, and to soften any collection of humour.

Some apply to joints with good effect part of a dried fig mixed with catuinit; or black bryony berries without the seeds, with pennyroyal.

The same are good for podagra. But for this there is also Ariston's emollient which consists of hard, cinnamon, casia, chamæleon, angular rush, 32 grms. each, goat's suet in liquid iris oil 80 grms., iris which should have been steeped in the sharpest vinegar for 30 days, 4 grms.: this emollient also disperses recent phymata and pain of all sorts.

But Theoxenus for pain in the feet mixed one part of kidney-suet with two parts of sull and applied a thin membrane smeared with these, then poured over it ammoniacum for fumigation dissolved in vinegar.

But Nimerius used to soften podagra and all cases of indurated joints with an emollient consisting of southernwood, dried rose-leaves and poppy-seeds, 12 grms. each, turpentine-resin 14 grms., frankincense and soda-seum, 32 grms. each, iris and aristolochia, 48 grms. each, wax 1 kilogram, to which is added of cedar-oil 42 c.cm., of laurel-oil 126 c.cm., of bitter olive-oil 500 c.cm.

If at any time callus has formed in joints, Dexius advised an application of lime 16 grms., white lead 32 grms., plac-resin 80 grms., 30 peppercorns, wax 68 grms. While these are being pounded together 250 c.cm. of mild wine is dropped in.

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19. Ex emplastris autem nulla maiorem usum præstant, quam quæ cruentis protinus vulneribus induntur: cathacna Græci vocant. Hæc enim reprimunt inflammationem, nisi magna vis eam concitat, atque illius quoque impetum minuunt; tum glutinant vulnera, quæ id patiuntur, escaticæ isdem indigent. Constat autem ex medicamentis non pinguibus, ideoque alpefuc¹ nominantur.

8 Optimum ex his est quod barbarum vocatur. Habet æruginis rase P. ♀ XII; spumæ argenti P. ♀ XX; aluminis, picis ældæ, resinæ pineæ aridæ, singulorum P. ♀ I; quibus adiciuntur olei et aceti singulæ hemlibæ.

2 Alterum ad idem, quod Coacan vocant, habet spumæ argenti P. ♀ C; resinæ aridæ tantundem: sed spuma prius ex tribus olei hemlibis coquitur. His duobus emplastris color niger est, qui fere talis fit ex picæ atque resinæ: at ex bitumine nigerrimus, ex æruginis aut æris squama viridis, ex cinis ruber, ex cerussa albus.

3 Paucae admodum compositiones sunt, in quibus aliquid mixturæ varietas novat. Ergo id quoque nigrum est, quod basilicon nominatur. Habet panacis P. ♀ I; galbani P. ♀ II; picis et resinæ, singulorum P. ♀ X; olei dimidium cyathum.

4 At, quia perviride est, smaragdinum appellatur in quo sunt: resinæ pineæ P. ♀ III; ceræ P. ♀ I; æruginis P. S.; turis fuliginis P. =; olei tantundem; aceti, quo fuligo et ærugo in unum cogantur.

¹ *ἀλπεῖν ἀλπεῖν* Hippocrates II. 253 (*On Joints*, LXII. 33).

² *Ἄλπες* without grease.

³ See V. 33. 251. Foreign tendencies are to be generally avoided, but this was an exception.

19. Among the plasters none render greater service than those for immediate application to bleeding wounds, which the Greeks call *enchaena*.^a For these repress inflammation, unless a severe cause excites it, and even then they lessen its attack; further, they agglutinate wounds which allow of it, and induce a scar in them. But, as the plasters consist of medicaments which are not greasy, they are named *alips*.^b

The best of these is the plaster called *barbarum*.^c It contains scraped verdigris 48 grms., litharge 80 grms., alum, dried pitch, dried pine-resin, 4 grms. each, to which is added oil and vinegar 250 c.c.m. each.

Another one called *Coacan*,^d used for the same purpose, consists of litharge 400 grms., dried resin the same, but the litharge should be first boiled in three-quarters of a litre of oil. In these two plasters the colour is black, which is the colour generally produced by the pitch-resin, but the blackest is from bitumen, green from verdigris or copper scales, red from minium, white from white-lead.

There are very few compositions in which diversity of ingredients makes any change.^e Hence that plaster which is called *basilicon* is also black. It consists of all-beal 4 grms., galbanum 8 grms., pitch and resin, 40 grms. each, oil 20 c.c.m.

But, because it is bright green, a plaster is called *emerald-like* which contains pine-resin 12 grms., wax 4 grms., verdigris 168 grms., frankincense soot 68 grms., oil the same, and vinegar enough to combine into one the soot and verdigris.

^a *Kaucha*, "belonging to Cas" (the home of Hippocrates).

^b i.e. in the black colour due to the pitch-resin; *emplastivum* is an exception.

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- 5 Est etiam coloris fere rufi, quod celeriter ad cicatricem vulnera perducere videtur. Habet turis P. * I; resinae P. * II; squamae aeris P. * IIII; spumae argenti P. * XX; cereae P. * C, olei huiusmodi.
- 6 Praeterea est quam *παιτρικὴν* a glutinando vocant. Constat ex his: bituminis, aluminis scissis P. * IIII; spumae argenti P. * XI; olei veteris hemina.
- 7 Praeterea sunt quaedam generis eiusdem, quae, quia capitibus fractis maxime conveniunt, cephalicae a Graecis nominantur. Philotae compositio habet: ceruae Eretrinae, chalcitidis, singulorum P. * IIII; murræ, aeris combusti, singulorum P. * X; iethyocollae [singulorum] P. * VI; aeruginis rosae, aluminis rotundi, nixis crudi, aristolochiae, singulorum P. * VIII; squamae aeris P. * X; turis masculi P. * II; cereae P. I; rosae et olei asperhi ternos cyathos; acetî quantum satis est, duo acida ex eo confuleruntur.
- 8 Aliud ad idem viride: aeris combusti, squamae aeris, murræ, iethyocollae, singulorum P. * VI; nixis crudi, aeruginis rosae, aristolochiae, aluminis rotundi, singulorum P. * VIII; cereae P. * I, olei hemina, acetî quod satis sit.
- 9 Puri autem movendo non aliud melius quam quod expeditissimum est: tetrapharmacum a Graecis nominatur. Habet pares portiones cereae, picis, resinae, sebi taurini, si id non est, vitelini.
- 10 Alterum ad idem enthepharmacum nominatur, quod magis purgat. Constat ex novem rebus: cera, melle, sebo, resina, murra, rosa, medulla vel cervina

* *Μερον (σφαιρὸν)*, a composition which "sews up" the wound.

* Galen, *De Comp. Med.*, XIII. 145.

There is also one, almost red in colour, which is found to bring wounds rapidly to a scar. It contains incense 4 grms., resin 8 grms., copper scales 16 grms., litharge 80 grms., wax 450 grms., oil 250 c.cm.

As well, there is one called *rhaptousa*,² because it agglutinates, consisting of bitumen and split alum 15 grms., litharge 160 grms., and 250 c.cm. of old oil.

There are also some plasters of the same class, called by the Greeks *cephalica*, because they are especially suitable for broken heads. That of *Philotas*³ has the following composition: Eretrian earth and chalcitis, 16 grms. each, myrrh and calcined copper 40 grms. each, isinglass 24 grms. (each), scraped verdigris, round alum, crude antimony sulphide and aristolochia, 32 grms. each, copper scales 40 grms., male frankincense 8 grms., wax 336 grms., rose-oil and bitter olive-oil, 125 c.cm. each, and sufficient vinegar to rub up the ingredients while keeping them dry.

A green plaster for the same purpose consists of calcined copper, copper scales, myrrh and isinglass, 24 grms. each, crude antimony sulphide, scraped verdigris, aristolochia and round alum, 32 grms. each, wax 4 grms., oil 250 c.cm., and as much vinegar as is required.

But for promoting suppuration there is nothing better than the plaster called by the Greeks *tetrapharmacum*, which acts very quickly. It contains wax, pitch, resin and bull's suet, or, if that is not at hand, veal-suet, in equal proportions.

Another for the same purpose is named *enneapharmacum*, which is more for cleaning wounds. It has nine ingredients: wax, honey, suet, resin, myrrh,

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vel vitulina vel bubula, aesyra, butyro. Quorum ipsorum quoque poudera paria miscentur.

- 11 Sunt autem quaedam emplastra, quibus utriusque rei facultas est, quae si¹ . . . singula habendu sunt, meliora sunt: sed in copia rescenda sunt, his potius adhibitis, quae proprie id, quod eo tempore opus est, consequuntur. Exempli causa duo proponam.

Est igitur ad vulnera Attalum, eund habet: squamae aeris P. * XVI; turis fuliginis P. * XV; Hammoniaci tantundem; resinae terebenthinae liquidae P. * XXV; sebi taurini tantundem; aceti lenius tres, olei sexlucium.

- B At inter ea, quae fracto capiti accommodantur, habent quidam id, quod ad acutorem Iudaeum refertur. Constat ex his: salis P. * III; squamae aeris rubri, aeris combusti, singulorum P. * XII; Hammoniaci thymianalis, turis fuliginis, resinae aridae, singulorum P. * XVI; resinae Colophoniaceae, cerae, sebi vitulini curati, singulorum P. * XX; aceti sesquicyathus, olei minus cyathus. *τεφεσσυγέρα* Graeci appellant, quae curata vocant. cum ex sebo puta omnes membranulae diligenter exemptae sunt [ex alio medicamento].

- 12 Sunt etiam quaedam emplastra notilia ad extrahendum. Quae ipsa quoque *ἐκτρακτικά* nominantur; quia est quod, quia luri bacis habet, his *δυσλινιδαν* appellatur. In eo est resinae tere-

¹ *Marz thinks the text is corrupt and that there is a considerable lacuna after it; he suggests the following: . . . quae si <capl et pos movet et glutinunt. Neque tamet his quae inposita ad> which are both suppurative and agglutinate. And these are not better than those which are to be applied for the given purpose.*

* The grease from unwashed wool, cf. Galen, IX. 886.

rose-oil, deer or calf or ox marrow, casyngum,^a butter; equal weights of which are mixed together.^b

Now there are certain plasters which produce both effects^c which if . . . they are to be applied for both purposes are better; but if there is a choice these are to be rejected, and those plasters rather are to be selected which especially effect what is needed at the time. I will mention two as examples.

There is the plaster of Attalus for wounds, which contains copper scales 64 grms., frankincense soot 60 grms., ammoniacum the same; liquid turpentine 100 grms., bull-suet the same amount; vinegar three-quarters of a litre, oil half^a a litre.

But among those suitable for broken heads, some include the one which is ascribed to Iulæus. It is composed of salt 10 grms., red copper scales and calcined copper, 48 grms. each, ammoniacum for fuming, frankincense soot and dried resin, 64 grms. each, Colophon resin, wax and prepared calf's suet, 60 grms. each, vinegar 65 c.cm., less than 40 c.cm. of oil. The Greeks call *tetherapeumena*, what we call prepared, when, for instance, from suet all membranous particles are carefully removed, and so in the case of other medicaments.

There are besides certain plasters noteworthy for extracting, and these too are named epispastic;^d for instance, that called *dia daphnidon*,^e because it contains laurel berries. In it there are terebintli-resin

^a Both the 4-ingredient and the 9-ingredient plasters are often mentioned later, e.g. by Galen, *De Comp. Med.*, XII, 328.

^c i.e. preparation and cleansing.

^d See p. 10, note b.

^e *Diá daphnidon*, containing laurel (*dáphy*) berries, Galen, *De Comp. Med.*, XII, 378.

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berthinae P. * X; nitri, ceræ, picis aridæ, bacarum lauri, singulorum P. * XX; olei paulum. Quotiens autem bacam aut nucem aut stellæ aliquid posuero, scire oportebit, antequam expendatur, ei summam pelliculam esse deponendam.

- 13 Aliud eodem nomine, quod puri quoque mouendo est: sebi vitulini, Hammoniaci thymiamatis, picis, ceræ, nitri, bacarum lauri, resinae aridæ, aristolochiae, pyrethri paræ portiones.

- 14 Præter has est Philberatis, quod habet: salis Hammoniaci P. * VII; aristolochiae P. * VIII; ceræ, resinae terebenthinae, fuliginis turis, singulorum P. * XV; spumæ argenti P. * XXXII, quibus, ut pur quoque moveant, iridis P. * III et galbani P. * VI adiunguntur.

- 15 Optimum tamen ad extrahendum est id, quod a similitudine sordium rhypodes Græci appellant. Habet murræ, croci, iridis, propolis, bdelli, capitulorum Funiculi mali, aluminis et scissilis et rotundi, misy, chalcitis, atramenti autori cocti, panacis, salis Hammoniaci, vici, singulorum P. * III; aristolochiae P. * VIII; squamæ aeris P. * XVI; resinae terebenthinae P. * LXXV; ceræ et sebi vel taurini vel hircini, singulorum P. * C.

- 16 Hecataeo quoque auctore emplastrum generis eiusdem sit ex his: galbani P. * II; fuliginis turis P. * III; picis P. * VI; ceræ et resinae terebenthinae singulorum P. * VIII; quibus paululum irini unguenti miscetur.

- 17 Valensque ad idem emplastrum viride Alexandrinum est. Habet aluminis scissilis P. * VIII; salis Hammoniaci P. * VIII; squamæ aeris P. * XVI; murræ, turis, singulorum P. * XVII; ceræ P. * CL; resinae Colophoniacæ aut pineæ P. * CC; olei heminam, aceti sextarium.

40 grms., soda, wax, dried pitch, laurel-berries, 80 grms. each, with a little oil. But whenever I mention a berry or nut or the like, it should be understood that the outer husk is to be removed before weighing.

Another of the same name which also promotes suppuration, contains calf-suet, ammoniacum for fumigation, pitch, wax, soda, laurel-berries, dried resin, aristolochia and pellitory, equal parts.

There is also that of Philocrates, which consists of ammoniac salt 28 grms., aristolochia 32 grms., wax, turpentine resin, frankincense soot, 60 grms. each, litlarge 128 grms., to which is added, in order to promote suppuration, iris 16 grms., and galbanum 24 grms.

The best as an extractive, however, is that called by the Greeks *clypodes*, from its resemblance to dirt. It contains: myrrh, crocus, iris, propolis, bdellium, pomegranate seeds, alum both split and round, antimony sulphide, copper ore, boiled blacking, all-heal, ammoniacum salt, mistletoe juice, 18 grms. each, aristolochia 32 grms., copper scales 56 grms., turpentine resin 300 grms., wax and ox or he-goat's suet, 400 grms. each.

The plaster invented by Hecateus is of the same class, and is composed of galbanum 8 grms., frankincense soot 16 grms., pitch 24 grms., wax and turpentine-resin, 32 grms. each, with which is mixed a little iris ointment.

Efficacious for the same purpose is the green Alexandrian plaster. It consists of split alum 32 grms., ammoniac salt 32.66 grms., copper scales 64 grms., myrrh and frankincense 72 grms., wax 600 grms., Colophon or pine resin 600 grms., oil 250 c.cm., vinegar half a litre.

- 19 Quaedam autem sunt emplastra exedentia, quar apta Graeci vocant; quale est id, quod habet resinae terebenthinae, fuliginis turis, singulorum P. =; squamae aeris P. * I; ladan¹ P. * II; mioninis tantundem; spumae argenti (singulorum) P. * III.
- 19 Exest etiam vehementer corpus utque ossa quoque resolvit et supercreascentem carnem coarctet id, quod habet spumae argenti, squamae aeris uncias singulas; nitri ignem non experti, lapidis Aesii, aristolochiae P. sextantes; cerae, resinae terebenthinae, turis, olei veteris, acramenti sutarii, salis ammoniaci P. S.; aeruginis cassae P. besson; acet¹ acilliti heminam; vini Amnaci tantundem.
- 20 Sunt etiam adversus morsus quaedam adcommodata, quale est Diogeni nigrum, quod habet: butyris, cerae, resinae pineae aridae, singulorum P. * XX; spumae argenti P. * C; olei sextarium. Aut in quo sunt squamae aeris P. * III; cerussae et aeruginis cassae, singulorum P. * VI; Hammoni¹ P. * XII; cerae, resinae pineae, singulorum P. * XXV; spumae argenti P. * C; olei sextarium. Aut in quo sunt squamae aeris P. * XIII; galbani P. * VI; cerussae et aeruginis cassae, singulorum P. * VII; Hammoni¹ P. * XI; cerae, resinae pineae, singulorum P. * XXXV . . .¹ spumae argenti concoquitur.
- 21 Rubrum quoque emplastrum, quod Ephesium vocatur, huc aptum est. Habet resinae terebenthinae P. * II; galbani P. * III; mirti Sinoplei P. * VI; turis fuliginis P. * VI; cerae P. * VIII; spumae argenti P. * XXXVI; olei veteris heminarum.

¹ *Marz suggests that ex quo has fallen out before spumae: Targa would amend to spumae argenti P. * C; olei sextarium in quo concoquitur.*

Some plasters, called by the Greeks *septa*,^a eat away flesh; one such contains turpentine-resin and frankincense soot, each 56 grms., copper scales 4 grms., galbanum 8 grms., also the same amount, litharge 16 grms.

The following prescription is even violent in its action on soft tissue, and also causes exfoliation of bone and keeps down fungating flesh: litharge and copper scales 28 grms. each, untreated soda, Assus stone, aristolochia, 56 grms. each, wax, turpentine resin, incense and old oil, blacking and ammoniac salt, 108 grms. each, scraped verdigris 224 grms., vinegar of squills 250 c.c.m., Aminean wine the same amount.

There are also some suitable for bites; one of these is the black plaster of Diogenes, which contains bitumen, wax, dried pine-resin, each 80 grms., litharge 400 grms., oil half a litre. Another consists of copper scales 16 grms., white-lead and scraped verdigris, each 32 grms., ammoniacum 48 grms., wax and pine resin, each 100 grms., litharge 400 grms., oil half a litre. Or there is that in which there are copper scales 56 grms., galbanum 24 grms., white-lead and scraped verdigris, each 32 grms., ammoniacum 48 grms., wax and pine-resin, each 144 grms. cooked with litharge.

The red plaster called Ephesian is likewise suited for this purpose. It contains turpentine-resin 8 grms., galbanum 16 grms., minium from Sinope 24 grms., frankincense soot 24 grms., wax 32 grms., litharge 144 grms., old olive-oil 250 c.c.m.

^a This word is used by Aristotle (*H.A.* VIII. 29. 807a. 3) as a drug that erodes flesh, *συντείνει σάρκα*, though its usual meaning was rotten, decomposed (of food); cf. Hippocrates, *Πύρετος* (II) VI. 45f.

- 22 Item id, quod ex his constat; squamae aeris, turis fuliginis, singulorum P. * III; galbani P. * VI; salis ammoniaci P. * XII —; ceras P. * XXV; olei tribus heminis. Haec autem alia quoque recentioribus vulneribus recte imponuntur.
- 23 Sunt etiam alia lenia (leuca Graeci vocant) fere con gravibus vulneribus accommodata, praecipueque senilibus. Quae est quod habet: cerussae P. * XXXII; sibi vitulini curati et ceras, singulorum P. * XLVIII; olei heminas tres; ex quibus ea cerussa coquitur.
- 24 Aliud quod habet cerussae P. * XX; ceras P. * XXXV, olei heminam, aquae sextarium. Quae quotiens adiciuntur cerussae vel spumae argenti, scire licet illa ex his coquenda esse. Est autem ea per candida compositio quae supra posita est, idemque elephantinae nominatur.
- 25 Lenia quoque quaedam emplastra sunt, quas liparas fere Graeci nominant; ut id, quod habet nini P. * III; spumae argenti P. * XXV; ceras et adipis suillae, singulorum P. * XXXVII; vitellos quattuor.
- 26 Alia compositio generis eadem: ceras, resinae terebenthinae, singulorum P. * VI; cerussae P. * VIII; spumae argenti, plumbi recementi (*σπορίαν μολύβδου* Graeci vocant), singulorum P. * XX; olei et martei singulorum heminae.
- 27 Tertia, quae ad auctorem Archagathum refertur: nix cocti, aeris combusti, singulorum P. * III; cerussae coctae P. * VIII; resinae terebenthinae P. * X; spumae argenti P. * VI.

There is another similar one which consists of copper scales and frankincense soot, each 16 grms., galbanum 24 grms., ammoniac salt 48·65 grms., wax 100 grms., olive-oil 750 c.cm. These plasters, however, may be also usefully applied to more recent wounds.

There are also sootings white plasters, called by the Greeks *leues*, fitted in general for wounds which are not severe, especially in old people. Such is that containing white-lead 32 grms., prepared calf's suet, and wax, each 192 grms., olive-oil 750 c.cm., with which the white-lead is boiled.

Another consists of white-lead 80 grms., wax 140 grms., olive-oil 250 c.cm., water half a litre. Whenever these liquids are added to white lead or litharge, it is understood that those drugs are to be boiled up in the liquids. But the above composition being of a glistening white appearance is called ivory plaster.

There are also some sootings plasters, commonly called *liparæ** by the Greeks, such as that containing minium 16 grms., litharge 100 grms., wax and lead, each 144 grms., with the yolk of 4 eggs.

Another composition of the same sort contains wax and turpentine-resin, each 24 grms., white-lead 32 grms., litharge and lead-slag, called by the Greeks *σικερά μολύβδου*, each 80 grms., castor-oil and myrtle-oil, each 250 c.cm.

A third, said to have been invented by Archagathus, contains boiled antimony sulphide and calcined copper, each 16 grms., boiled white-lead 32 grms., turpentine-resin 40 grms., litharge 24 grms.

* Greasy plasters: the opposite of *ἀλοιφή λιπαρά*, p. 32, note b.

CELSUS

23 Etiamnum generis eiusdem: spumae argenti, ceræ, adipis sillæ, singulorum P. $\frac{1}{2}$ XXVII; vitelli cocti IIII; rosæ hemina. Aut: cerati ex oleo myrteo facti partes tres; adipis sillæ pars quarta; paulum ex plumbi rocremento. Aut: spumae argenti selibra, ex olei beuina et aquæ marinæ altera cocta, donec bullire desierit, cui paulum ceræ sic adiectum. Aut: pares portiones ceræ, sebi, stibis, spumae argenti, cerussæ.

20. Pastilli quoque facultates diversas habent. Sunt enim ad recentia vulnera glutinanda sanandaque apti: qualis est qui habet chalcitis, misy, spumae nitri, floris aeris, gailæ, aluminis scissilis modice cocti, singulorum P. $\frac{1}{2}$ I; aeris combusti, capitulorum mali Punici, singulorum P. $\frac{1}{2}$ III. Hunc oportet diluere aceto, ac sic, ubi vulnus glutinandum est, inungere. At si nervosus aut musculosus is locus est, commodius est cerato miscere, sic ut illius VIII partes, nona huius sit.

23 Alius ad idem constat ex his: bituminis, aluminis scissilis, singulorum P. $\frac{1}{2}$ I; aeris combusti P. $\frac{1}{2}$ III; spumae argenti P. $\frac{1}{2}$ XI; olei sextario.

2 Sed longe Polydus celeberrimus est, sphragis autem nominatur; qui habet aluminis scissilis P. $\frac{1}{2}$ I =; stramenti autori P. $\frac{1}{2}$ II; murræ P. $\frac{1}{2}$ V; aloes tantundem; capitulorum Punici mali, fellis caurini, singulorum P. $\frac{1}{2}$ VI; quæ contrita vino austero excipiuntur.

3 Ad ulcera sordida et nigritem in auribus, naribus, obocenis partibus, inflammationesque eorum: chrysocollæ P. $\frac{1}{2}$ I; stramenti autori, aluminis scissilis,

Yet another of the same class consists of litharge, wax and lard, each 168 grms., yolk of 4 eggs boiled, rose-oil 250 c.c.m. Another consists of a cerate made with myrtle-oil three parts, lard a fourth part, and a small quantity of lead-slag. Alternatively: litharge 168 grms., olive-oil 250 c.c.m., and an equal quantity of sea water, boiled, to which, when off the boil, a little wax may be added. Or: wax, suet, antimony sulphide, litharge and white-lead, equal parts.

20. Pastils have also divers faculties. For some are suitable for agglutinating and making the scar upon recent wounds: such as that containing copper ore, antimony sulphide, soda-sour, flowers of copper, oak-galls, split alum moderately boiled, each 4 grms., calcined copper and pomegranate-heads, each 12 grms. It should be dissolved with vinegar, and so smeared on for agglutinating a wound. But if the part wounded involves sinews or muscles, it is better to mix the pastil with a cerate, eight parts of the former to nine of the latter.

Another for the same purpose is composed of bitumen and split alum, each 4 grms., calcined copper 16 grms., litharge 44 grms., oil half a litre.

But the pastil of Polyides* called the "seal" is by far the most celebrated. It contains split alum 4-88 grms., blacking 8 grms., myrrh 20 grms., lign aloes the same, pomegranate heads and ox-bile, 24 grms. each; these are rubbed together and taken up in dry wine.

For foul ulcerations and gangrene in the ears, nostrils and genitals, and their inflammatory complications, take chrysocola 4 grms., blacking and split

* Also referred to by Galen, *De Compositione Medicamentorum*, *Lib. 9. 13 XIII.* 634.

CELSUS

singulorum P. * II; hallicacabi corticis P. * III; mini P. * VI; spumae argenti P. * XI; cerussae P. * XVI; quae ex aceto et coguntur et, ubi utendum est, diluuntur.

- 4 Andronia vera est ad uvam inflammata, ad naturalia sordida, etiam cancro laborantia: gullae, atramentum autorii, murræ, singulorum P. * I; aristolochiae, aluminis scissilis, singulorum P. * II; capitulorum Punici mali P. * XXV; ex passio coacta, et cum usus exigit, aceto vel vino diluta, prout valentius aut lenius vitium est, cui medendum est.

- 5 Proprie autem ad ani fissa, vel ora venarum fundentia sanguinem, vel cancerum: aeruginis P. * II; murræ P. * III; cummisi P. * VIII; turis P. * XII; stibis, lacrimae papaveris, acaciae, singulorum P. * XVI. Quae ex vino et teruntur et in ipso usu deliquantur.

- 6 Expellere autem ex vesica cum urina calculum videtur haec compositio: casiae, croci, murræ, costi, nardi, cinnamonis, dulcis radicia, balsami, hyperici pares portiones conteruntur, deinde vinum lenè instillatur, et pastilli sunt, qui singuli habeant P. * =, bisque singuli cotidie mane ieiuno dantur.

21. Haec tria compositionum genera [id est, quae in malagmatibus, pastillis emplastrisque sunt] maximum praecipueque variam usum praestant. Sed alia quoque utilia sunt, ut ea, quae feminis subiciuntur: per seos Graeci vocant. Eorum haec proprietas est: medicamenta composita molli lana excipiuntur, eaque lana naturalibus conditur.

* Cancer means septic and gangrenous forms of inflammation, rather than what is now called cancer. Cf. vol. I p. 58 II.; and vol. III. Appendix, p. 589 B.

¹ pessaries; for prescriptions see p. 49.

alum 5 grms. each, winter cherry bark 15 grms., mirroon 24 grms., litharge 48 grms., cerussa 54 grms.; these are both compounded with vinegar and dissolved for use with the same.

The pastil of Andron is for inflammation of the uvula, and for the genitals when foul, and even when affected by cancer.^a It contains oak-galls, blacking, and myrrh, 4 grms. each, anatolochia and split alum, 8 grms. each, pomegranate-heads 100 grms., compounded with raisin wine, and when required for use dissolved in vinegar or wine, according as the disease to be treated is more severe or milder.

But the following is appropriate for anal fissures, for bleeding piles, or for canker, verdigris 8 grms., myrrh 15 grms., gum 32 grms., frankincense 48 grms., antimony sulphide, possey tears and acacia, 84 grms. each. These are both pounded up in wine and for actual use are dissolved in the same.

The following prescription is efficacious to expel stones from the bladder along with the urine; casia, crocus, myrrh, costmary, nard, cinnamon, liquorice root, balsamum and hypericum juice, equal parts; these are rubbed together, then mild wine is poured on, and pastils are made, each weighing 5-86 grm.; one of them is given every morning on an empty stomach.

21. These three classes of compositions [emollients, pastils and plasters], have very wide and varied uses. But there are other useful compositions, such as those which are introduced into women from below, the Greeks call them *perizon*.^b Their characteristic is that the component medicaments are taken up in soft wool and this wool is inserted into the genitals.

CELSUS

- B Ad sanguinem autem evocandum Canneis duabus adieitur citri P. * S — ; aut alii semen conteritur, adieitur myrrae paululum, et unguento Suisio miacetur: aut eucumeris silvestris pars interior ex lacte muliebri diluitur.
- 2 Ad vulvam molliendam ovi vicellus et foenum Graecum et rosa et crocum temperantur. Aut elateri P. * = ; salis tartundem; uvae tomintae P. * VI melle excipiuntur.
- 3 Aut Boetio auctore croci, resinae terebenthinae, singulorum P. * IIII; myrrae P. * = = ; rosae P. * I; sebi vitulini P. * I — ; cerne P. * I) misceantur.
- 4 Optima autem adversus inflammationes vulvae Numerii compositio est, quae habet: croci P. * = — ; cerae P. * I; butyri P. * VIII; adipis asserini P. * XII; vitellos coctos duos, rosae minus cyathis.
- 5 Si vero infans intus decessit, quo facilius eiciatur malionium ex aqua terendum eoque utendum est.
- 6 Si concidere vitio lacrum mulier solet, cocleae cum testis suis comburendae conteyendaeque, deinde his mel adiciendum est.
- 7 Si non comprehendit, adeps leonina ex rosa mollienda est.

22. Quaedam autem mixturae medicamentorum sunt, quibus aridis neque coactis utimur, sic ut inspergamus, aut cum aliquo liquido mixta inlinamus. Quae est ad carnem supercrescentem exedendam, quod habet: squamae aeris, fuliginis turis, singulorum P. * I; scrugula P. * II. Haec autem eadem cum melle purgant ulcera, cum cera inpiant.

* bynesal lita, cf. IV. 97. 1 (vol. 1. p. 446).

A pessary for inducing menstruation contains soda 2.67 grms., added to two Capuean figs; or garlic seeds are pounded, a little myrrh added, and these are mixed with Sesine lily ointment; or the pulp of a wild cucumber is diluted in woman's milk.

To mollify the womb a yolk of egg, fenugreek, rose-oil and saffron are mixed together. Or elaterium 0.66 grm., the same quantity of salt, and black bryony berries 24 grms. are taken up with honey.

The pessary invented by Boethius consists of saffron and turpentine resin, 16 grms. each, myrrh 1.33 grms., rose oil 4 grms., calf's suet 4.66 grms., wax 5 grms., mixed together.

But against inflammations of the womb, the composition of Numeius is the best; it consists of saffron 1 grm., wax 4 grms., butter 32 grms., goose-fat 48 grms., 2 yolks of egg boiled, and of rose-oil less than 40 c.cro.

If the foetus is dead, to render its expulsion more easy, pomegranate rind should be rubbed up in water and so used.

If a woman is liable to fits² owing to genital disease, snails are to be burnt with their shells, and pounded up together; then honey added to them.

If a woman does not conceive, lion's fat is to be softened by rose-oil.

22. Now, some mixtures of medicaments are used dry, without being combined, so that they are dusted or smeared on after some liquid has been mixed with them. Such is the prescription to eat away fungous flesh, which contains copper scales and frankincense root, 4 grms. each, verdigris 5 grms. But when combined with honey this compound cleans ulcers, when with wax it glues them up. Also antimony

CRISUS

Mix quoque et galla, si paribus portionibus misceantur, corpus consumunt; eaque vel arida inspergere licet vel excepta cadmia inflicere.

- 2 Putrem vero carnem continet neque ultra scerpere patitur et leniter exesi mel vel cum lenticula vel cum marrubio vel cum oleae foliis aut ex vino decoctis. Item acryta Campana in mulso cocta, deinde contrita; aut calx eadem orato; aut asinae truces cum alio, sic ut huius pars tertia sit, paulumque his cynei adiciatur. Aut quod habet spumae argenti P. * VI; cornu bubuli combustum P. * XII; oles mortel et vini
- B cyathos ternas. Aut quod ex his constat: floris Purici mali, atramenti sutorii, aloes, singulorum P. * II; alundula scissilis, turis, singulorum P. * III; gallae P. * VIII; aristolochiae P. * X. Vellementius idem facit etiam adjuvendo auripigmentum cum chalcitide et aut nitro aut calce aut charta combusta: item al cum aceto. Vel ea compositio, quae habet: chalcitidis, capitulorum Purici mali, aloes, singulorum P. * II; alundis scissilis, turis, singulorum P. * III; gallae P. * VIII; aristolochiae P. * X; mellis quantum satis sit ad ea coquenda.
- C Vel cantharidum P. * I; sulphuris P. * I; loli P. * III; quibus adicitur picis liquidæ quantum satis est ad iungendum. Vel chalcitis quoque cum resina et tuta mixta; aut cum eadem resina diphryges; aut cra crumina cum pice liquida. Idem vero possunt et faecia vini combustae et calce et nitri paræ portiones; vel aluminis acussilis P. * = =; turis, sandaracæ, nitri, singulorum P. * I; gallae P. * VIII; aristolochiae P. * X; mellis quantum satis sit.

* Made of terra cadmea from Cyprus, which contained oxide of iron.

sulphide and oak galls, if they are mixed in equal proportions, corrode flesh. We may either sprinkle this mixture on dry or take it up in caducian^a ointment and smear it on.

Honey mixed with lentils or with horehound or with olive leaves previously boiled in wine holds on cheek putrid flesh, prevents its further spread, and is a mild corrosive. The same is the action of melilot, boiled in honey wine, then pounded up; or lime with cerate; or bitter almonds with garlic in the proportion of three to one, with the addition of a little saffron. Or the composition containing lilarge 24 grms., burnt ox-bum 48 grms., myrtle-oil and wine, 125 cmm. of each. Or that mixture which consists of pomegranate flowers, blacking and lign-aloes, 8 grms. each, split alum and frankincense 16 grms., oak-galls 32 grms., aristolochia 40 grms. Stronger as a corrosive is that compounded by calcining urpiment with copper ore, and with either soda or lime or burnt papyrus; salt with vinegar is similar. Or that composition which contains copper ore, pomegranate heads, lign-aloes, 8 grms. each, split alum and frankincense, 16 grms. each, oak-galls 32 grms., aristolochia 40 grms., with sufficient honey to combine them. An alternative is the composition containing causticides 4 grms., sulphur 4 grms., dandel 12 grms., to which is added enough liquid pitch to combine them. Or also that composed of copper ore mixed with resin and rut; or slag similarly with resin; or black bryony berries with liquid pitch. The same property too belongs both to burnt wine-les and lime and soda, equal parts, or to split alum, 1-35 grms., frankincense, sandarach and soda, 4 grms. each, oak-galls 32 grms., aristolochia 40 grms., and as much honey as is required.

- 3 Est etiam Heræ compositio, quæ habet murræ, chaletidis, singulorum P. ♀ II; aloes, turis, aluminis scissilis, singulorum P. ♀ III; aristolochiæ, gallæ immaturæ, singulorum P. ♀ VIII; malicori contriti P. ♀ X.
- 4 Est Iudæi, in qua sunt calcis partes duæ; niltri quam ruberrum pars tertia, quæ urina impubes pueri coguntur, donec strigenti crassitudo sit. Sed ubinde is locus, cui id infunditur, madefaciendus est.
- 5 Al lulas chartæ combustæ, sandaracæ, singulorum P. ♀ I; calcis P. ♀ II; auripigmenti tantundem miscebat.
- 6 Si vero ex membrana, quæ super cerebrum est, profluit sangula, vicellus combustus et contritus inspergi debet: si alio loco sanguinis profluvium est, auripigmenti, squamæ æris, singulorum P. ♀ I; sandaracæ P. ♀ II; marmoris cocti P. ♀ III inspergi debet. Eadem cancro quoque obstatunt. Ad inducendam cicatricem: squamæ æris, turis fuliginis, singulorum P. ♀ II; calcis P. ♀ III. Eadem inrescentem quoque carnem coequent.
- Timæus autem ad ignem sacrum, ad tuncrum his utebatur: murræ P. ♀ II; turis, stramento aulori, singulorum P. ♀ III; sandaracæ, auripigmenti, squamæ æris, singulorum P. ♀ III; gallæ P. ♀ VI; cerussæ combustæ P. ♀ VIII. Ea vel arida inspersa vel melle excepta idem præstant.
- 8 Sternumenta vero vel albo veratro vel struthio collecto in nares excitantur, vel his mixtis: pipæris, veratri albi, singulorum P. ♀ =; castorei P. ♀ 2; spumæ nitri P. ♀ I; struthi P. ♀ III.
- 9 Gargarizationes autem aut levandi causa sunt aut

There is also the compound of Herus which contains myrrh and copper ore, 8 grms. each, lign-alum, frankincense, split alum, 16 grms., aristolochia and immature oak-galls, 32 grms. each, pomegranate rind powdered 40 grms.

The compound of Iudæus contains lime two parts; the reddest soda one part, mixed with the urine of a young boy to the consistency of strigil scrapings.^a But the place on which it is smeared should from time to time be moistened.

Then the compound of Iolus consists of burnt papyrus and of sandarach, 4 grms. each, lime 5 grms., mixed with the same quantity of oilment.

But if there is hæmorrhage from the membrane covering the brain, a yolk of egg which has been charred and then pounded should be scattered on; for hæmorrhage elsewhere orpiment and copper scales, 4 grms. each, sandarach 8 grms., calcined marble 16 grms., should be dusted on. The same also checks canker. To induce scarifying, copper scales and frankincense soot, 6 grms. each, lime 16 grms. The same also counters fungous flesh.

Also Timæus used the following for ignis sacer and for canker: myrrh 5 grms., frankincense and blacking, 12 grms. each, sandarach, orpiment, copper scales, 16 grms. each, oak-galls 24 grms., burnt white-lead 32 grms. This is either scattered on dry or has the same effect when taken up in honey.

Snoring too is excited by putting up the nose either white veratrum or soapwort; or the following mixture: pepper and white veratrum, 0.86 grm. each, castoreum 1 grm., soda-scum 4 grms., soapwort 16 grms.

Now gargles are used as emollients or as repres-

reprimendi aut evocandi. Levant lac, cremor vel tisanae vel furfurum: reprimunt aquae, in qua vel lenticula vel rosa vel rubus vel Cotoneum malum vel palmarum decoctae sunt. Evocant sinapi, piper.

28. Antidota raro sed praecipue interdum necessaria sunt, quae gravissimis casibus opitulantur. Ea recte quidem dantur conlisis corporibus, vel per ictus, vel ubi ex alio deciderunt, vel in viscerum, laterum, faucium, interiorumque partium doloribus. Maxime autem desideranda sunt adversus venena, vel per morsus vel per cibos aut potiones nostris corporibus inserta.

B. Unum est, quod habet lacrimae papaveris P. * — ; acori, anisabathri P. * V ; iridis Illyricae, cumini, singulorum P. * II ; anisi P. * III ; nardi Gallici, foliorum rosae aridorum, cardamomi, singulorum P. * III ; petroselinis P. * III = (vel folii P. * V) ; casiae nigrae, silis, bdelli, balsami seminis, piperis albi, singulorum P. * V = ; styracis P. * V — ; murræ, opopanax, nardi Syri, curis masculi, hypocistidis suci, singulorum P. * VI ; castorei P. * VI ; costi, piperis albi, galbani, resinae terbenithinae, croci, floris iunci rotundi, singulorum P. * VI — ; dulcis radicis P. * VIII — ; quae vel melle vel passo excipiuntur.

2. Alterum, quod Zopyrus regi Ptolemaeus dicitur composuisse atque ambrosian nominasse, ex his constat: costi, turis masculi, singulorum P. * — = ; piperis albi P. * — — ; floris iunci rotundi P. * II ;

* Stimulant and aromatic substances mixed with honey and wine. Celsus mentions three only, with 20, 10, and 5 ingredients respectively. These ingredients would comfort patients suffering from the conditions described, and the

draws or to draw out humour. As emollients, milk, pearl-barley or bran gruel; as repressants, a decoction of lentils or rose-leaves or blackberries or quinces or of dates. Mustard and pepper draw out humour.

23. Antidotes* are seldom needed, but are at times important because they bring aid to the gravest cases. They are appropriately administered for bodily contusions, either from blows or in cases of a fall from a height, or for pain in the viscera, sides, fauces, or internal parts.² But they are chiefly necessary against poisons introduced into our bodies through bites or food or drink.

One consists of poppy-seeds 0.867 grm., sweet flag and orislabathrum, 20 grms. each, Illyrian iris and gum. 8 grms. each, anise 12 grms., Gallic nard, dried rose-leaves and cardamoms, 16 grms. each, parsley 15.66 grms. (or trifolium 20 grms.), black cista, seseli, bdellium, balsam seed, white pepper, 20.68 grms. each, staxas 20.68 grms., myrrh, opopanax, Syrian nard, male frankincense and lyposistis juice, 24 grms. each, castoreum 24 grms., costmary, white pepper, galbanum, turpentine, resin, crocus, flowers of round rush 25 grms., liquorice root 33 grms., which are taken up in honey or in raisin wine.

Alternatively there is that which Zophrus³ is said to have composed for a King Ptolemy, and to have called it ambrosia, consisting of the following: costmary and male frankincense, 1.33 grms. each, white pepper 1 grm., flowers of round rush 8 grms.,

remedy could be administered repeatedly in small doses. The first and third include a small quantity of poppy juice. There is no other narcotic or poisonous ingredient.

* V. 26. 24 C.

² Galen, *Antidotes*, II. 17. XIV. 205.

cinamomum P. * III; casine nigrae P. * III; croci Cilici P. * III = —; murræ, quam statem nominant, P. * V; nardi Indici P. * V = —. Quae singula contrita melle costo excipiuntur; deinde ubi utendum est, id quod Aegyptiae fabae magnitudinem impleat, in portione vini diluitur.

- 3 Nobilissimum autem est Mithridatis, quod cottidie sumendo rex ille dicitur adversus venenorum pericula tutum corpus suum reddidisse. In quo haec sunt: croci P. * — = —; acori P. * V; hyperici, cummi, sagpeni, scaciae suet, iridis Illyricae, cardamomi, singulorum P. * II; anisi P. * III; nardi Gallici, gentianae radicis, aridorum rosae foliorum, singulorum P. * III; papaveris lacrimae, petroselinæ, singulorum P. * III = —; castae, alis, loli, piperis longi, singulorum P. * V = —; styracis P. * V = —; B caustorei, luris, hypocistidis suet, murræ, opopanaxis, singulorum P. * VI; malabathi folii P. * VI; floris iunci rotundi, resinae terebenthinae, galbani, clausi Cretici seminis, singulorum P. * VI = —; nardi, opobalsami, singulorum P. * VI = —; thlaspi P. * VI = —; radicis Ponticae P. * VII; croci, zingiberis, cinnamomi, singulorum P. * VII = —. Haec contrita melle excipiuntur, et adversus venenum, quod magnitudinem nucis Graecae impleat, ex vino datur. In ceteris autem adfectibus corporis pro modo eorum vel quod Aegyptiae fabae vel quod ervi magnitudinem impleat, satis est.

24. Acopa quoque utilia nervis sunt. Quale est, quod habet floris iunci rotundi P. * II = —; croci, iunci quadrati, lauri bacarum, Hammoniaci, cardamomi, singulorum P. * III = —; murræ, aeris combusti, singulorum P. * VII; iridis Illyricae, cerae, singulorum P. * XIII; Alexandrini calami,

cinnamon 12 grms., black casia 16 grms., Cilician saffron 17 grms., myrrh called stacte 27 grms., Indian nard 31 grms. Each ingredient is ground up separately, and they are taken up in boiled honey; then at the time of using, a quantity the size of an Egyptian bean is dissolved in a draught of wine.

Not the most famous antidote is that of Mithridates,* which that king is said to have taken daily and by it to have rendered his body safe against danger from poison. It contains costmary 1.66 grms., sweet flag 20 grms., hypericum, green, sagapenum, mecon juice, Illyrian iris, cardamon, 8 grms. each, spice 12 grms., Gallic nard, gentian root and dried rose-leaves, 18 grms. each, poppy-tears and parsley, 17 grms. each, casia, saxifrage, daniel, long pepper, 20.66 grms. each, storax 31 grms., castoreum, frankincense, hypocistis juice, myrrh and opopanax, 24 grms. each, malabathrum leaves 24 grms., flower of round rush, turpentine-resin, galbanum, Cretan carrot seeds, 24.66 grms. each, nard and opobalsam, 25 grms. each, shepherd's purse 25 grms., rhubarb root 28 grms., saffron, ginger, cinnamon, 29 grms. each. These are pounded and taken up in honey. Against poisoning, a piece the size of an almond is given in wine. In other affections an amount corresponding in size to an Egyptian bean is sufficient.

24. Acopa[†] again are useful for neuralgia. Of these there is one which consists of the flower of the round rush, 9.33 grms. each, costmary, square rush, laurel berries, ammoniacum, cardamoms, 17 grms. each, myrrh and calcined copper 23 grms., Illyrian iris and wax 56 grms., Alexandrian flag,

* *Græc. Antidosis*, [I. l. XIV. 106.

† *Græc. Acopæ*. *Apodynealvos*, [V. 21. 6 (vol. I. p. 440).

fructus rotundi, aspalathi, xylobalsami, singulorum P. * XXVIII: sibi P. * I; unguenti olei cyathi.

- 2 Alterum, quod eundem vocant, hoc modo fit: ceræ P. = —; olei tantundem; resinae terebenthinae ad modum iuglandis magnitudinem simul incocuntur; deinde infusa in mortario teruntur, instillaturque subinde quam optumæ mellis acetabulum, tum infol unguenti et rosæ terni cyathi.

- 3 Emolumenta autem Graeci vocant liquida, quæ influantur. Quale est, quod fit ad ulcera purganda et implenda, maxime inter nervos, partibus portionibus inter se mixtis: butyri, medullæ vitulinae, sebo vitulini, adipis alserinae, ceræ, mellis, resinae terebenthinae, rosæ, olei cicini. Quæ separatim omnia liquantur, deinde liquida miscentur, et tum simpli teruntur. Et hoc quidem magis purgat: magis vero emollit, si pro rosa cyprus infunditur.

- 4 Et ad sacrum ignem: spumæ argenti P. * VI; cornu bubuli combusti P. * XII conteruntur, adieci- turque invicem vinum et id quod specialiter sibi vocatur, et urtucum, donec utriusque terni cyathi coelegantur.

25. Cataplasma quoque multa sunt, variisque de causis fiunt. Anodyna vocant, quæ somno dolorem levant; quibus uti, nisi nimis necessitas urget, alienum est: sunt enim ex vehementibus medicamentis et stomacho alienis. Potest tamen etiam ad concoquendum, quod habet papaveris lactinae, galbani, singulorum P. * I; castorei, castorei, piperis, singulorum P. * II. Ex quibus, quod erui magnitudinem habet, satis est deversum.

* Symplicia odonata, linimenta.

† Cf. V. 28. 4.

round rush, aspalathus and balsam wood, 132 grms. each, suet 4 grms., iris ointment 42 ccm.

Another called *enodes* is prepared as follows: wax 24 grms., oil the same quantity, and turpentine-resin, the size of a walnut, are boiled together, then pounded in a mortar, and into this is gradually dropped 68 ccm. of the best honey, and then iris ointment and rose-oil, 125 ccm. of each.

Now *enchrasts* is the Greek name for liquid applications.* Of these one is used for cleaning and filling up ulcers, especially those about sinews. It is composed of a mixture of equal parts of butter, calf's marrow, calf's suet, goose-fat, wax, honey, turpentine-resin, rose-oil and castor-oil. These are all liquefied separately, then the liquids are mixed and stirred up together. And the above is more for cleaning up wounds; it is more of an emollient if instead of the rose-oil, cyprus-oil is poured in.

And for *ignis sacer*† take litharge 24 grms., horn; ox-horn 48 grms., are rubbed up together, adding by turns wine, especially that which is called *sily* and myrtle-oil until 125 ccm. of each is mixed in.

25. Pills are also numerous, and are made for various purposes. Those which relieve pain through sleep are called *anodynes*; unless there is overwhelming necessity, it is improper to use them; for they are composed of medicaments which are very active and alien to the stomach. There is one, however, which actually promotes digestion; it is composed of poppy-seeds and galbanum, 4 grms. each, myrrh, castory, and pepper, 8 grms. each. Of this it is enough to swallow an amount the size of a vetch.

* *Vinum plantarum* (vol. I. p. 496) flavoured with small meadow saffrage.

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- 2 Alterum stomacho pelius, ad somnum valentius, ex his fit: mandragorae P. * = —; apii seminis, item hyoscyami seminis, singulorum P. * IIII; quae ex vino teruntur. Cuius aulem eiusdem magnitudinis, quae supra (1) posita est, abunde est sumpsisse.
- 3 Sive autem capitis dolores sive ulcera sive liypitudo sive dentes . . . sive spiritus difficultas sive intestinorum torpenta sive inflammatio vulvae est. sive coxa sive iecur aut lienis aut latus torquet, sive vtro locorum aliqua prelabitur et commutescit, occurrat
- B dolori per quietem eiusmodi catapellum: silis, acori, rutae silvestris seminis, singulorum P. * I; castorei, cinnamomi, singulorum P. * II; papaveris lacrymae, panacis radicis, mandragorae malorum aridorum,¹ iunci rotundi floris, singulorum P. * II = —; piperis grana LVI. Haec per se contrita, rursus instillato subinde passis, simul omnia teruntur, donec crassitudo sordium fiat. Ex eo paululum aut devoratur, aut aqua diluitur et potui datur.
- 4 Quia etiam silvestris papaveris, cum iam ad excoquendum lacrymam maturum est, manipellus qui manu comprehendi potest, in vas demittitur, et superinfunditur aqua, quae id contogat, atque ita coquitur. Ubi iam bene manipellus is coctus est ibidem² expressus proelutur; et cum eo unguere passi per mensura miscetur, infervescitque, donec crassitudinem
- B sordium habeat. Cum infixit, catapellus ex eo sunt ad nostrae fabae magnitudinem, habentque usum multiplex. Nam ei somnum faciunt vel per se

¹ *Marr. supplants male habent after dentes, and this is translated.*

² *Marr. punctures mandragorae, malorum aridorum but cf. vol. I. p. 246 (II. 18, 12) mandragorae mala.*

³ *Marr. thinks there is a lacuna here and (referring to Benbow's Larynx, Comp. Med. 78) supplants unprimus ut*
60

Another, worse for the stomach, but more specific, consists of mandragora 1 grm., celery-seed and hyoscyamus seed, 16 grms. each, which are rubbed up after soaking in wine. One of the same size mentioned above is quite enough to take.

But whether there is headache or ulceration or ophthalmia or toothache or difficulty in breathing or intestinal gripings or inflammation of the womb or pain in the hips or liver or spleen or ribs, or, whether owing to genital trouble, a woman collapses speechless, a pill of the following kind counteracts pain by producing sleep: saxifrage, sweet flag, wild rue seed, 4 grms. each, castory and cinnamon 8 grms., poppy-tears, paxax root, dried mandrake apples, flowers of the round rush, 8 grms. each, and 56 pepper-corns. These are first powdered separately, then rubbed up all together, whilst gradually adding raisin wine until the mixture is of the consistency of sordes.* A small quantity is either swallowed or dissolved in water and taken as a draught.

Or take a good handful of wild poppy-heads when just ripe for collecting the juice and put into a vessel and boil with water sufficient to cover it. When this handful has been well boiled there, after being squeezed out it is thrown away: and with its juice is mixed an equal quantity of raisin wine, and beaten until of the consistency of sordes. When the mixture has cooled, pills are formed, the size of our beans; they are used in many ways. For they procure sleep

* Cf. p. 10, note a.

in blind rage even after fevers, it is squeezed out and its juice poured into another vessel. Other editors (including Dursander) leave the text as it stands.

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adsumpta vel ex aqua data, et aurium dolores levant, adiectis exiguo modo sutae succo¹ ac passo, et termina supprimunt ex vino liquata, et inflammationem vulvae coercent iuxta cerato ex rosa facto, cum paulum his croni quaque accessit; et ex aqua fronti inducta pituitam in oculos decurrentem tenent.

- 6 Itero si vulva dolens sanum prohibet, croci P. ♀ = —; anisi, murræ, singulorum P. ♀ I; papaveris lacrimæ P. ♀ III; cicutæ seminis P. ♀ VIII miscentur excipiunturque vino vetere, et quod lapini magnitudinem habet in tribus cyathis aquæ diluitur. Id tamen in febre periculose datur.

- 8 Ad iocur sanandum nili P. ♀ = —; croci, murræ, nardi Gallici, singulorum P. ♀ I melle excipiuntur, daturque quod Aegyptiæ fabæ magnitudinem habeat.

- † Ad lateris dolores finiendus piperis, aristolochiæ, nardi, murræ pares portiones.

- 9 Ad thoracis nardi P. ♀ I; turis, casiae, singulorum P. ♀ III; murræ, cinnamomi, singulorum P. ♀ VI; croci P. ♀ VIII; resinae terebinthinae P. ♀ = —; mellis heminae tres.

- 9 Ad tussim Achenionis: murræ, piperis, singulorum P. ♀ =; castorei, papaveris lacrimæ, singulorum P. ♀ I. Quæ separatim contusa postea unguuntur, et ad magnitudinem fabæ nostræ bina catapotia mane, bina noctu dormituri dantur.

- 10 Si tussis sanum prohibet, ad utrumque Heraclidis Tarentini: croci P. ♀ =; murræ, piperis longi, costi, galbani, singulorum P. ♀ = —; cinnamomi, castorei, papaveris lacrimæ, singulorum P. ♀ I.

¹ So v. d. Linden. Marx keeps the *Alk. succo* as passed; one #5, has *succo*.

whether taken as they are or in water; they relieve earache when a little rose-june and raisin wine are added; when dissolved in wine they relieve gripings, and when mixed with cerate of rose-oil with the addition of a little saffron they relieve inflammation of the womb; also when smeared upon the forehead mixed with water they check the flow of phlegm into the eyes.

Again, if inflammation of the womb prevents sleep take saffron 1.33 grms., anise and myrrh, $\frac{1}{2}$ grms. each, poppy-tears 32 grms., hemlock seed 32 grms. These are mixed together, and taken up in old wine, and a pill the size of a lupin is dissolved in 125 ccm. of water. It is dangerous, however, to give it when there is fever.

For the relief of pain in the liver take 1 grm., saffron, myrrh, Gallic nard, 4 grms. each, are taken up in honey, and a pill the size of an Egyptian bean administered.

A pill to stop pain in the side is made of pepper, aristolochin, nard, and myrrh in equal parts.

A pill for pain in the chest is made from nard 4 grms., frankincense and casia, 12 grms. each, myrrh and cinnamon, 24 grms. each, saffron 32 grms., turpentine-resin 1 grm., honey three-quarters of a litre.

The pill of Athenion for cough contains myrrh and pepper, 0.85 grm. each, castory and poppy-tears, 4 grms. each; these are rubbed down separately, then together, and two pills, the size of our bean, are given in the morning and two at bed-time.

If cough prevents sleep the pill of Heracleides of Tarentum relieves both; it contains saffron 0.85 grm., myrrh, long pepper, castmary, galbanum, 3 grm. each, cinnamon, castory and poppy-tears, $\frac{1}{2}$ grms. each.

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- 11 Quod si purganda ulcera in faucibus tussientibus sunt, panacis, murræ, resinæ terebinthinæ, singulorum P. ꝑ. uncia; galbani P. ꝑ. ʒ; hyssopi P. ꝑ. = — conterenda sunt, hisque hemina mellis adicienda, et quod digito excipi potest, devorandum est.
- 12 Colicæ vero Cassi ex his constat: croci, anisi, castorei, singulorum P. ꝑ. III; petrosolini P. ꝑ. IIII; piperis et longi et rotundi, singulorum P. ꝑ. V; papaveris lacrimæ, iunci rotundi, murræ, nardi, singulorum P. ꝑ. VI; quæ recte excipiuntur. Id autem et devorari potest et ex aqua valida sumi.
- 13 Infantem vero mortuum aut secundas expellit aquæ patlo, cui^a salis Hammoniaci P. ꝑ. I, aut cui dictamni Cretici P. ꝑ. I adiectum est.
- 14 Ex partu laboranti erysimum ex vino cepido ieiunæ dari debet.
- 15 Vocem adjuvat turis P. ꝑ. I in duobus cyathis vini datum.
- 16 Adversus urinae difficultatem piperis longi, castorei, murræ, galbani, papaveris lacrimæ, croci, costi unciæ singulae; styracis, resinæ terebinthinæ pondo sextantes, melabsinthii cyathus. Ex quibus ad magnitudinem fabæ Aegyptiæ et mane et cenato dari debet.
- 17 Asteriace vero hoc modo fit: casiae, iridis, cinnamoni, nardi, murræ, turis, singulorum P. ꝑ. I; croci P. ꝑ. I = —; piperis grana XXX ex passis tribus sextariis decoquantur, donec mellis crassitudo his fiat. Aut croci, murræ, turis, singulorum P. ꝑ. I coquantur in passis eodem modo, eodemque modo decoquantur. Aut eiusdem passis heminae tres usque eo

^a Cf. Galen, De Comp. Med., IX. 4, XIII. 276.

But if ulcers of the throat causing cough are to be cleansed, panax, myrrh and turpentine-resin, 28 grms. each, galbanum 0.65 grm., hyssop 3 grm. are rubbed together, and 250 c.cm. of honey added to them and as much swallowed as can be taken up on the finger.

The pill* of Cassius for colic contains saffron, anise, castory, 12 grms. each, parsley 15 grms., pepper both long and round, 20 grms. each, poppy-seeds, roundish, myrrh, nard, 24 grms. each; these are taken up in honey. It may be either swallowed as it is or dissolved in hot water.

A draught for the expulsion of a dead foetus or placenta consists of ammoniac salt 4 grms., or of Cretan dittany 4 grms. in water.

In difficult labour hedge mustard in tepid wine should be administered on an empty stomach.

The voice is strengthened by frankincense 4 grms. in two cups of wine.

For difficult micturition long pepper, castory, myrrh, galbanum, poppy-seeds, saffron, costmary, 28 grms. each; storax and turpentine-resin, 55 grms. each, honey with absinth 42 c.cm. Of this an amount the size of an Egyptian bean should be taken in the morning and after dinner.

A medicine[†] for the windpipe is prepared as follows: cassia, iris, cinnamon, nard, myrrh, frankincense, 4 grms. each; saffron 1 grm.; and 30 pepper-corns boiled in a litre and a half of raisin wine until of the consistency of honey. Or, saffron, myrrh, frankincense, 4 grms. each, similarly boiled in raisin wine to the same consistency. Or 750 c.cm. of raisin

* *de pyrolyti*, sc. *terpola*, of. Pliny, *N.H.* XXII. 7, 71.

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coquantur, donec extracta inde gutta indurescat; eo addeitur tritae casiae P. § I.

26. Cum facultates medicamentorum proposuerim, genera, in quibus noxa corpori est, proponam. Ea quinque sunt: cum quid extrinsecus laesit, ut in vulneribus (cap. xvi, xvii); cum quid intra se ipsum corruptum est, ut in cancro (cap. xxviii); cum quid innatum est, ut in vesica calculus; cum quid increvit, ut vena, quae intumescens in varicem convertitur; cum quid deest, ut cum curta pars aliqua est.

B Ex his alia sunt, in quibus plus medicamenta, alia, in quibus plus manus proficit. Ego dilatis iis, quae praecipue scalpellum et manum postulant (lib. VII, VIII), nunc de iis dicam, quae maxime medicamenti egent. Dividam autem hanc quoque curandi partem sicut priorem (III. 1, 3; l. 4, 1) et ante dicam de iis, quae in quolibet partem corporis incidunt, tum de iis, quae certas partes infestant (VI. 1 seqq.). Incipiam a vulneribus.

C In his autem ante omnia scire medicus debet, quae insanabilia sunt, quae difficilem curationem habeant, quae promptiorem. Est enim prudentia hominis primum eum, qui servari non potest, non attingere, nec subire speciem . . .¹ eius, ut occidat, quoniam sors ipsius interemit; deinde ubi gravis metus sine certa

¹ *More suggests: 'speciem <laetatoris sed regem fieri posse curationem>'* 'not to risk the appearance of a doctor, but to say there is no hope of saving one.'

• V 28, 27.
• VII. 26, 27.

• V. 28, 2.
• VII 28.

wine are boiled until a drop, if taken out, solidifies; thereupon pounded cassia & gins. is added.

25. Now that I have set out the properties of the medicaments, I will explain the classes of lesions harmful to the body: there are five; when something from without causes the lesion, as in the case of wounds;^a when some internal part has become corrupted, as in the case of cancer;^b when some new formation has occurred, such as a stone in the bladder;^c when something has grown bigger, as when a vein swells up and is converted into a varix;^d when there is some defect, as when some part has been mutilated.^e

In some of these medicaments are more effectual, in others surgery. Postponing those conditions which demand in particular the scalpel and surgical treatment,^f I will speak now of those which chiefly require medicaments. As I have done before,^g I shall divide this part of treatment, and speak first of those lesions which may occur in any part of the body;^h then of those which attack particular parts.ⁱ I shall begin with wounds.

In this connexion, however, a practitioner should know above all which wounds are incurable, which may be cured with difficulty, and which more readily. For it is the part of a prudent man first not to touch a case he cannot save, and not to risk the appearance of having killed one whose lot is but to die;^j next, when there is grave fear without, however, absolute

^a VII. 9. 1.

^b Cf. Books VII, VIII.

^c I. & I. III. 1. 3.

^d V. 22-23.

^e VI. 1-10.

^f The text as it stands cannot be translated, but the general sense is as given above. For a suggested reconstruction see critical note.^g

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tamen desperatione est, indicare necessaria pereli-
tantis in difficili spem esse, ne, si victa ars malo fuerit,
D vel ignorasse vel sefellisse videatur. Sed ut haec pru-
denti viro conveniant, sic rursus hystrionis est parvam
rem ad tollere, quo plus praestitisse videatur. Obli-
garique aetum est confessione promptae rei, quo
curiosus etiam circumspiciat, ne, quod per se exi-
guum est, maius curantis negligentia fiat.

2 Servari non potest, cui basis cerebri, cui cor, cui
stomachus, cui loci motus portae, cui in spina medulla
percutta est, cuique aut pulmo medius aut latus
aut tenuis intestinum aut ventriculus aut renes
vulnerati sunt; cuive circa fauces grandes venae vel
arteriae praecisae sunt.

3 Vix autem ad sanitatem perveniunt, quibus ulla
parte aut pulmo aut loci motus ursum aut membrana,
quae continet cerebrum, aut lienis aut vulva aut
vesica aut ullum intestinum aut saeptum trans-
versum vulneratum est. Ii quoque in praecipiti
sunt, in quibus usque ad grandes intusque conditas
venas in alis vel poplitibus mucro descendit. Peri-
culosa etiam vulnera sunt, ubicumque venae maiores
sunt, quoniam exhaustire hominem profusione san-

B guinis possunt. Idque evenit non in alis tantum
atque poplitibus, sed etiam in iis venis, quae ad anum
testiculosque perveniunt. Praeter haec malum
vulnus est, quodcumque in alis vel feminibus vel
inanibus locis vel in articulis vel inter digitos est;
item quodcumque musculum aut nervum aut

despair, to point out to the patient's relatives that hope is surrounded by difficulty, for then if the art is overcome by the malady, he may not seem to have been ignorant or mistaken. But while such steps become a prudent practitioner, it is like a mountebank to exaggerate a small matter in order to enhance his own achievement. It is right to commit himself to a statement that a case is simple in order that he may examine it with even more care for fear a case slight in itself may become worse by negligence on the doctor's part.

It is impossible to save a patient when the base of the brain, the heart, the gullet, the porta of the liver, or the spinal marrow has been pierced; when the middle of the lung, or the jejunum, or the small intestine, or the stomach, or kidneys have been wounded; or when the large blood-vessels and arteries in the region of the throat have been cut.

Again, there is hardly ever recovery when either the lung or the thick part of the liver or the membrane enclosing the brain, or the spleen, womb, bladder, any of the intestines or diaphragm has been wounded in any part. There is also grave danger when the point of a weapon has gone down to the large blood-vessels deeply seated in the armpits or hams. Also wounds are dangerous wherever the blood-vessels are larger, because they may exhaust the patient by profuse bleeding. This occurs not only in the armpits and hams, but also in those blood-vessels which go to the anus and testicles. Moreover, a wound is a bad one whenever it is in the armpits or in the thighs or in hollow places or in joints or between the fingers; also whenever a muscle

arteriam aut membranam aut os aut cartilagineam
laesit. Tutissimum omnium, quod in carne est.

- 4 Et haec quidem loca vel peiora vel mitiora sunt.
Modo vero periculum facit, quodcumque magnum est.
- 6 Aliquid etiam in vulnere genere signaque est.
Nam peius est, quod etiam continem quam quod
tantum discissum est, adeo ut acuto quoque quam
retuso telo vulnerari commodius sit. Peius etiam
vulnus est, ex quo aliquid excisum est, ex quo vero
alia parte abscissa alia dependet. Pessimaque plaga
curva est: tutissima quae lineae modo recta est;
quo deinde propius huius illius figurae vulnus est, eo
vel deterius vel fletibilius est.
- 8 Quin etiam confert aetatis et aetas et corpus et
vitae propositura et anni tempus; quia facillius
sanescit puer vel adolescens quam senior, valens
quam infirmus; neque nimis tenuis neque nimis
plenus, quam si alterum ex his est; integri habitus
quam corrupti, exercitatus quam incra, sobrius et
temperans quam vino venerique deditus. Opportunis-
simumque curationi tempus verum est, aut certe
neque fervens neque frigidum, siquidem vulnera
et nimis calor et nimium frigus infestant, maxime
tamen horum varietas; ideoque perniciosissimus
autumnus est.
- 7 Sed pleraque ex vulneribus oculis subiecta sunt;
quorundam ipsae sedes indices sunt, quas alio loco (IV,
I, 1 seqq.) demonstravimus, cum postus interiorum
partium ostendimus. Verum tamen quia quaedam
vicina sunt, interestque vulnus in summa parte sit

* e.g. if the wound is in the intestine, though it cannot be
seen, the escape of faeces indicates its position. For the
description of the internal organs, cf. vol. I, p. 354.

or sinew or artery or membrane or bone or cartilage is injured. The safest of all is a wound in the flesh.

The above wounds are severer or slighter according to their situations. Still, whenever it is large, a wound makes for danger.

The class of wound and its shape are also important. For a contused wound is worse than one simply incised, hence it is better to be wounded by a sharp weapon than by a blunt one. A wound is worse also if a piece is cut out, or if the flesh is cut away in one part and hanging free in another. A curved wound is worst, a straight linear one safest; hence a wound is more or less serious, according as it approximates to the former or to the latter shape.

Again, both age and constitution and mode of life and the season have also some influence; for a boy or young adult heals more readily than does an old man; one who is strong than a weak man; a man who is not too thin or too fat than one who is either of these; one of sound habit than of unsound; one who takes exercise than a sluggard; one who is sober and temperate than one addicted to wine and venery. And the most opportune time for healing is the spring, or at any rate when the weather is neither cold nor hot, for wounds are harmed by excessive heat and excessive cold, but most of all by variations of these; hence autumn is the most pernicious season.

Now most wounds are open to view; some are inferred from their situation,² which we have pointed out elsewhere when indicating the positions of the internal parts. Since, however, some of these wounds are near at hand, and it is of importance whether the wound is superficial or has penetrated inwards,

an penitus penetraverit, necessarium est notas subicere, per quas, quid intus actum sit, scire possimus, et ex quibus vel spes vel desperatio oriatur.

- 8 Igitur corde percusso sanguis multus fertur, venae elanguescunt, color pallidissimus, sudores frigidi malique odoris tamquam inruento corpore oriuntur, extremisque partibus frigidis mortua mota sequitur.
- 9 Pulmone vero icto spirandi difficultas est; sanguis ex ore spumans, ex plaga ruber; simulque etiam spiritus cum sono fertur; in vulnus inclinari iuvat; quidam sine ratione consurgunt. Multi si in ipsum vulnus inclinati sunt, loquuntur, si in aliam partem, obmutescunt.
- 10 Incineris autem vulnerati notae sunt multus sub dextra parte praecordiorum profusus sanguis; ad spinam reducta praecordia; in ventrem enandi dolo; punctiones doloresque aeque ad ingulum funeturque ei latum scapularum os intenti; quibus communiquam etiam, bilis vomitus accedit.
- 11 Renibus vero percussis dolor ad inguina testiculorumque descendit; difficulter urina redditur, eaque aut haec eruenta aut cruor fertur.
- 12 At liene icto sanguis niger a sinistra parte pro-rumpit; praecordia cum ventriculo ab eadem parte indureantur; stis ingens oritur; dolor ad ingulum sicut incinere vulnerato venit.
- 13 At cum vulva percussa est, dolor inguinibus et

* Proemium 75. Vol. I. p. 40.

† For the various meanings of *praecordia*, cf. vol. I. p. 100, note a, and index.

It is necessary to state the signs by which it is possible to recognize what has happened inside, and from which follow either hope or despair.^a

Now when the heart is penetrated, much blood issues, the pulse fades away, the colour is extremely pallid, cold and malodorous sweats burst out as if the body had been wetted by dew, the extremities become cold and death quickly follows.

But when the lung is pierced there is difficulty in breathing; frothy blood escapes from the mouth, red blood from the wound; and at the same time breath is drawn with a noise; to lie upon the wound affords relief; some stand up without any reason. Many speak if they have been laid upon the wound; if upon the opposite side they become speechless.

Symptoms that the liver has been wounded are that considerable hæmorrhage occurs from under the right part of the hypochondria;^b the hypochondria are retracted towards the spine; the patient is eased by lying on his belly; stabbing pains spread upwards as high as the clavicle and its junction with the scapula; to which, not infrequently, also bilious vomiting is added.

When the kidneys have been penetrated, pain spreads down to the groin and testicles; urine is passed with difficulty, and it is either bloodstained or actual blood clot is passed.

But when the spleen has been pierced, black blood flows out from the left side; the hypochondria on that side together with the stomach become hard; great thirst comes on; pain extends to the clavicle as when the liver has been wounded.

But when the womb has been penetrated, there is

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coxis et feminibus est; sanguinis pars per vulnus, pars per naturale descendit; vomitus bilis insequitur. Quaedam obmutescunt, quaedam mente labuntur, quaedam sui compotes nervorum oculorumque dolore urgeri se confitentur, morientesque eadem, quae corde vulnerato, patiuntur.

- 14 Si cerebrum membranave eius vulnus accepit, sanguis per nares, quibusdam etiam per aures exit; fereque bilis vomitus insequitur. Quorundam sensus obtunduntur, appellatique ignorant; quorundam trux vultus est; quorundam oculi quasi reserui huc atque illuc moventur; fereque tertio vel quinto die delirium accedit; multorum etiam nervi distenduntur. Ante mortem autem plerique fascias, quibus caput deligatum est, lacerant ac audum vulnus frigori obiciunt.
- 15 Ubi stomachus autem percussus est, singultus et bilis vomitus insequitur; si quid cibi vel potionis adsumptum est, ea redditur cito. Venarum motus elanquescunt, sudores tenues uruntur, per quos extremas partes frigescent.
- 16 Communes vero ieiuni intestini et ventriculi vulnerati notae sunt: nam cibus et potio per vulnus exennt; praecordia indurescunt; nonnumquam bilis per os redditur. Intestino tantum sedes inferior est. Cetera intestina intacta vel stercus vel odorem eius exhibent.
- 17 Medulla vero, quae in spina est, discussa nervi resolvantur aut distenduntur; sensus intercedit; interposito tempore aliquo sine voluntate inferiores

pain in the groins and hips and thighs; blood passes downwards in part through the wound, in part by the vagina; bilious vomiting follows. Some become speechless, some are mentally disturbed, others whilst composed in mind complain of pain in their sinews and eyeballs, and when dying they suffer like those wounded in the heart.

When the brain or its membrane has been wounded, blood escapes through the nostrils, in some also through the ears; and generally bilious vomiting follows. Some lose their senses and take no notice when spoken to; some have a wild look; in some the eyes move from side to side as if they were out of control; generally on the third or fifth day delirium supervenes; many have also spasm of sinews. Again, before death many tear off the bandages with which their head has been bound up, and expose the bared wound to cold.

But when the gullet has been penetrated, hiccough and bilious vomiting follow; if any food or drink is swallowed, it is returned at once; pulsation of the blood-vessels fades away; thin sweat breaks out, following which the extremities become cold.

The signs when the small intestine and the stomach have been wounded are the same; for food and drink come out through the wound; the hypochondria become hard, sometimes bile is regurgitated through the mouth. Only in the case of the intestine the situation of the wound is lower down. All other intestinal wounds cause the emission of faeces or a faecal odour.

When the marrow which is within the spine has been crushed, there is either paralysis or spasm of sinews; sensation is interrupted; after some time there is

partes vel semen vel urinam vel etiam sterqus exerunt.

18 At si asseptum transversum percussum est, præcordia solum contrahuntur; splen dolet; spiritus rarus est; sanguis spumans fertur.

19 Vesica vero vulnerata dolent inguina: quod super pubem est, intenditur; pro urina sanguis, et ex ipso vulnere urina descendit. Stomachus adficitur: itaque aut bilem vomunt, aut singultunt; frigus et ex eo mors sequitur.

20 His congruè etiamnum quædam alia notanda ad omnia vulnera ulceraque, de quibus dicturi sumus, pertinentia. Ex his autem exit sanguis, sanies, pus. Sanguis omnibus notus est: sanies est tenuior hoc, varie crassa et glutinosa et colorata. Pus crassissimum albidissimumque, glutinosius et sanguine et sanie. Exit autem sanguis ex vulnere recenti aut iam sanescente, sanies [est] inter utrumque tempus.

B pus ex ulcere iam ad sanitatem spectante. Rursus et sanies et pus quædam species Græcis nominibus distinctas habent. Est enim quædam sanies, quæ vel hidros vel melitera nominatur; est pus, quod elæodes appellatur. Hidros tenuis, subalbidus ex malo ulcere exit, maximeque ubi nervo læso inflammatione secuta est. Melitera crassior et glutinosior, subalbida, mellique albo subsimilis. Porro hæc quoque ex malis ulceribus, ubi nervi circa articulos læsi sunt, et inter hæc loca maxime ex genibus. Elæodes tenuis, subalbidum, quasi unctum, colore atque pinguitudine oleo albo non dis-

* *ἰσός*, *isós*, but other editors read *ἰσίο* = *isurus*, cf. Hipp. III. 64 (*Hord. corporis* XLX.).

¹ *μυρρῶδες* honey-like.

² Like olive oil (*ἰσίο*).

involuntarily evacuation from the parts below of either semen or urine or even faeces.

But if the diaphragm has been penetrated, the præcordia are contracted upwards; the spine is painful; breathing is laboured; frothy blood escapes.

When the bladder has been wounded, the groins are painful; the hypogastrium becomes tense; blood is passed, instead of urine, the urine being discharged from the actual wound. The gullet is affected, and so the patients either vomit bile or blood, or both. Coldness and after that death follows.

Even when these facts are known, there are still some other things to be learnt about wounds and ulcerations in general, of which we will now speak. From wounds, then, there issues out blood, or sanies, or pus. Blood everybody knows; sanies is thinner than blood, varying both in thickness and stickiness and colour. Pus is the thickest and whitest, more sticky than either sanies or blood. Now blood comes out from a fresh wound or from one which is already healing, sanies between these two periods, pus from an ulceration already beginning to heal. Again, the Greeks distinguish by name different kinds of sanies and pus. For there is a kind of sanies which is named either *hidros*^a or *melitera*;^b there is pus which is called *elaeodes*.^c *Hidros* is thin, whitish, and comes from a bad ulceration, especially when inflammation has followed upon a wound of a sinew. *Melitera* is thicker, stickier and whitish, something like honey. It is likewise discharged from bad ulcerations, when sinews near to joints have been wounded, and among such places especially from the knees. *Elaeodes* is thin, whitish, fatty, in colour and fastness not unlike white olive-oil; it appears

simile; apparet in magnis ulceribus sanescentibus. Malus autem est sanguis nimium aut tenuis aut crassus, colore vel lividus vel niger, aut pituita mixtus aut varius: optimus calidus, ruber, modice

D crassus, non glutinosus. Itaque protinus eius vulneris expedita magis curatio est, ex qua sanguis bonus fluxit. Itemque pascua spes in his maior est, ex quibus melioris generis quaeque proveniunt. Saeclis igitur mala est multa, nimis tempis, livida aut pallida aut nigra aut glutinosa aut mali odoris, aut quae ipsum ulcus et suppetum necentem erodit: melior est non multa, modice crassa, subrubicunda aut subalbida.

E Hydros autem peior est multus, crassus, sublividus aut subpallidus, glutinosus, ater, calidus, mali odoris: tolerabilior est subalbidus, qui ceteris omnia contraria prioribus habet. Melitera autem mala est multa et percrassa: melior, quae tenuior et minus copiosa est. Pus inter haec optimum est; sed id quoque peius est multum, tenue, dilutum, magisque si ab initio tale est; itemque si colore sero simile, si pallidum, si lividum, si faeculentum est; praeter haec, si male

F olet, nisi tamen locus hanc odorem excitat. Melius est, quo minus est, quo crassius, quo albidus; itemque si leve est, si nihil olet, si aequale est: modo tamen convenire et magnitudini vulneris et tempori debet. Nam plus ex maiore, plus pondus solutis inflammationibus naturaliter fertur. Elaeodes quoque peius est multum, et parum pingue: quo minus eius, quoque id ipsum pinguius, eo melius est.

In large ulcerations when they are healing. Blood is bad when it is too thin or too thick, livid or black in colour, or mixed with plegm or variable; it is best when hot, red, moderately thick, and not sticky. Consequently from the first the treatment is more expeditious in the case of a wound from which good blood has flowed. Also later there is more hope in the case of wounds from which all the discharges are of the better kind. Thus sanies is bad when profuse, too thin, livid, or pallid or black or sticky or malodorous or when it erodes either the ulceration itself or the skin adjoining it; it is better when not profuse, moderately thick, reddish or whitish. But hŕma is worse when it is profuse, thick, somewhat livid or pallid, sticky, black, hot, malodorous; it is less serious when whitish, and when all the rest of its characteristics are the opposite of the foregoing. Meliterya again is bad when profuse and very thick; better for being thinner and less odorous. Amongst these discharges pus is the best; but it is likewise worse when profuse, thin, watery, and the more so if it is such from the beginning; and also if it is in colour like whey, if pallid, or livid, or like wine-lees; if, besides, it is malodorous, unless, however, it is the part which causes this odour. It is better, the smaller the quantity, the thicker and whiter; also if it is bland, odourless, uniform; none the less it should correspond in quantity with the size and age of the wound. For naturally there is more discharge, the larger the wound, still more when inflammation has not yet subsided. Rheodes also is worse when large in quantity and but little fatty, the less in quantity and the more fatty the better.

21 Quibus exploratis, ubi aliquis ictus est qui servari potest, protinus prospicienda duo sunt: ne sanguinis profusio neve inflammatio intereat. Si profusionem timeamus, quod ex sede vulneris et ex magnitudine eius et ex impetu rucntis sanguinis intellegi potest, siccis illicamentis vulnus implendum est, atque imponenda spongia ex aqua frigida expressa ac manu super comprimens. Si parum sic sanguis coquiescit, saepius linamenta mutanda sunt, et si sicca parum valent, aceto madefacienda sunt. Id vehemens ad sanguinem subprimendum est; idemque quidam id volueri infundunt. Sed alius rursus metus subest, ne nimis valenter ibi retenta materia magno inflammationem postea moveat. Quae res efficit, ut neque rodentibus medicamentis neque adurentibus et ob id ipsum inducentibus crustam sit utendum, quamvis pleraque ex his sanguinem supprimunt; sed, si semel ad ea decurritur, his potius, quae mitius Cidem efficiunt. Quod si illa quoque profluvia vincuntur, venae quae sanguinem fundunt apprehendendae, circaque id quod ictum est duobus locis deligendae intercidendaeque sunt, ut et in se ipsae coeant, et nihilo minus ora praeclosa habeant. Ubi ne id quidem res patitur, possunt ferro candenti aduri. Sed etiam satis multo sanguine effuso ex eo loco, quo neque nervus neque musculus est, ut puta in fronte vel superiore capitis parte, commodissimum tamen est cucurbitulam admoveere a diversa parte, ut illuc sanguinis cursus revocetur.

After these matters have been investigated, when a man has been wounded who can be saved, there are in the first place two things to be kept in mind: that he should not die from hæmorrhage or inflammation. If we are afraid of hæmorrhage which can be judged both from the position and size of the wound and from the force of the flowing blood, the wound is to be filled with dry lint, and over that a sponge applied, squeezed out of cold water, and pressed down by the hand. If the bleeding is not checked thus, the lint must be changed several times, and if it is not effective when dry, it is to be soaked in vinegar. Vinegar is powerful in suppressing a flow of blood; and some, therefore, pour it into wounds. But then there is an underlying fear of another kind, that if too much diseased matter is forcibly retained in the wound it will afterwards cause great inflammation. It is on this account that no use is made, either of cauteratives or of caustics, owing to the crust they induce, although most of these medicaments suppress bleeding; but if for once recourse is had to them, choose those which have a milder action. But if even these are powerless against the profuse bleeding, the blood-vessels which are pouring out blood are to be seized, and round the wounded spot they are to be tied in two places and cut across between so that the two ends coalesce each on itself and yet have their orifices closed. When circumstances do not even admit of this, the blood-vessels can be burnt with a red-hot iron. But even when there has been considerable bleeding from a place where there is neither sinew nor muscle, such as the forehead or top of the head, it is perhaps best to apply a cup to a distant part, in order to divert thither the course of the blood.

- 22 Et adversus profusionem quidem in his auxilium est: adversus inflammationem autem in ipso sanguinis curam. Ea timeri potest, ubi laesum est vel os vel nervus vel cartilago vel musculus, aut ubi parum sanguinis pro modo vulneris fluxit. Ergo quotiens quid tale erit, sanguinem mature subprimere non oportebit, sed pati fluere, dum tatum erit; adeo ut, si parum fluxisse videbitur, nulli quoque ex brachio debeat; utique si corpus juvenile et robustum et exercitatum est, multoque magis si id vulnus ebrietas praecessit. Quod si musculus laesus videbitur, praecidendus erit: nam percussus mortiferus est, praecius sanitatem recipit.
- 23 Sanguine autem vel subpresso, si nimis erumpit, vel exhausto, si per se parum fluxit, longe optimum est vulnus glutinari. Potest autem id, quod vel in cute vel etiam in carne est, si nihil ei praeterea mali accedit. Potest vero alia parte dependens, alia insuacrens, si tamen etiamnum integra est et conlunctione corporis fovetur. In his vero, quae glutinantur, duplex curatio est. Nam si plaga in molli parte est, qui debet, maximeque si discissa auris ima est vel imus nasus vel frons vel bucca vel palpebra vel labrum vel circa guttur cutis vel venter. Si vero in carnis vulnus est huiusque neque in unum orae facile adtrahuntur, sutura quidem aliena est: inponendae vero fibulae sunt (ancleras Graeci nominant), quae

* Because this exposes the depth of the wound and permits of discharge and of application.

¹ i.e. sucked out by cupping, cf. vol. I, 166.

² See vol. II. Introduction, p. lxi, fibula.

Against bleeding there is help in the foregoing measures, but against inflammation it lies simply in the bleeding itself. Inflammation is to be feared when a bone is injured or sinew or cartilage or muscle, or whenever there is little outflow of blood compared to the wound. Therefore, in such cases, it will not be desirable to suppress the bleeding early, but to let blood flow as long as it is safe; so that if there seems too little bleeding, blood should be let from the arm as well, at any rate when the patient is young and robust and used to exercise, and much more so when a drinking bout has preceded the wound. But if a muscle is seen to be wounded, it will be best to cut it right through; for when stabbed it causes death, when cut through it admits of cure.^a

Now, when bleeding has been suppressed if excessive, or encouraged^b when not enough has escaped of itself, then by far the best thing is for the wound to become agglutinated. But this is possible for a wound in the skin, or even in the flesh, if nothing else has occurred to do it harm. Agglutination is possible if flesh is hanging free at one part, whilst attached at another, provided, however, that the flesh is still sound, and has a connexion with the body to feed it. But with wounds which are being agglutinated, there are two treatments. For if the wound is in a soft part, it should be stitched up, and particularly when the cut is in the tip of the ear or the point of the nose or forehead or cheek or eyelid or lip or the skin over the throat or abdomen. But if the wound is in the flesh, and gapes, and its margins are not easily drawn together, then stitching is unsuitable; *fibulae*^c (the Greeks call them *ancteres*) are then to be

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oras, paululum tenses, contrahunt, quo minus lata postea cicatrix sit. Ex his autem colligi potest, id quoque, quod alia parte dependens alia inhaerebat, si alienatum adhuc non est, suturam ut fibulam postulet. Ex quibus neutra ante debet imponi, quam intus vulnus purgatum est, ne quid ibi concreti sanguinis relinquatur. Id enim et in pus vertitur, et inflammationem movet, et glutinari vulnus prohibet. Ne linamentum quidem, quod subprimendi sanguinis causa inditum est, ibi relinquendum est: nam id quoque inflammat. Comprehendi vero sutura vel fibula non cutem tantum sed etiam aliquid ex carne, ubi adherit haec, oportebit, quo valentius haereat neque cutem abrumpat. Utraque optima est ex acie molli non nimis torta, quo citius corpori insidat, utraque neque nimis rara neque nimis crebra. **U**lcerienda est. Si nimis rara est, non continet; si nimis crebra est, vehementer adhaeret, quia quo saepius acus corpus transiit quoque plura loca infectum vinculum cernit, eo maiores inflammationes oriuntur magisque aestate. Neutra etiam vim ullam desiderat, sed eatenus utilis est, qua cutis ducentem quasi sua sponte subsequitur. Fere tamen fibulae latius vulnus esse patiuntur, sutura oras iungit, quas ne ipsae quidem inter se contingere ex toto debent, ut, si quid intus umoris concreverit, sit qua emanet. **E**t si quod vulnus neutrum horum recipit, id tamen purgari debet. Deinde omni vulnere primo im-

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inserted, which draw together the margins to some extent and so render the subsequent scar less broad. Now from the above it can be gathered also whether flesh which is hanging free at one part and attached at another, if it is still capable of junction, demands suture or fibula. But neither of these should be inserted until the interior of the wound has been cleansed, lest some blood-clot be left in it. For blood clot turns into pus, and excites inflammation, and prevents agglutination of the wound. Not even lint which has been inserted to arrest bleeding should be left in, for this also inflames the wound. The suture or fibula should take up, not only skin but also some of the underlying flesh, where there is any, that it may hold more firmly, and not tear through the skin. And both are best used with a strand of a soft wool not too closely twisted that it may cause less irritation to the body, and both should be inserted at intervals not too distant or too close. For if the intervals are too distant, the wound is not held together; if too close, it is very hurtful, for the more often the needle transfixes the tissues, and the more places are wounded by the inserted stitches, the worse is the inflammation set up, especially in summer. Neither procedure needs any force, but is useful just so far as the skin follows that which draws it as if of its own accord. Generally, however, fibulae leave the wound wider open, a suture joins the margins together, but these should not be brought actually into contact throughout the whole length of the wound, in order that there may be an outlet for any humour collecting within. If any wound admits of neither of these, it should none the less be cleaned. Hence, upon every

nenda est spongia ex aceto expressa: si sustinere aliquis aceti vim non potest, vino utendum est. Levis plaga iuvatur etiam, si ex aqua frigida expressa spongia imponitur. Sed ea quocumque modo inposita est, dum madet, prodest; itaque ut inarescat, non est committendum. Licetque sine peregrinis et conquisitis et compositis medicamentis vulnus curare. Sed si quis huius parum confidit, imponere medicamentum debet, quod sine sebo compositum est ex iis, quae cruentis vulneribus apta esse proposui (19, 3); maximeque, si caro est, barbarum; si nervi vel cartilago vel aliquid ex eminentibus, quales aures vel labra sunt, Polyidi sphragidem: Alexandrinum quoque viride nervis idoneum est; eminentibusque partibus ea, quam Graeci rhapsasem vocant. Solet etiam colliso corpore exigua parte findi cutis. Quod ubi incidit, non alienum est scalpello latius aperire, nisi muscoli nervique iuxta sunt; quae incidit non expedit. Ubi satis diductum est, medicamentum imponendum est. At si id, quod collisum est, quovis parum diductum est, latius tamen aperiri propter nervos aut musculos non licet, adhibenda sunt ea, quae umorem leniter extrahant, praecipueque ex his id, quod rhyppodes vocari proposui (19, 15).

H Non alienum est etiam, ubi vulnus grave est, inposito quo laevetur, hisuper circumdare laeam mundam ex aceto et oleo; vel cataplasma, si mollis is

* V. 19, 1.
* V. 19, 17.

* V. 19, 12.
* V. 19, 8.

* V. 20, 2.

wound there is to be applied, first a sponge squeezed out of vinegar; or out of wine if the patient cannot bear the strength of vinegar. A slight wound is even benefited if a sponge is applied wrung out of cold water. But in whatever way it is put on, it is only of service whilst moist; and so it must not be allowed to become dry. And a wound can be treated without foreign and far-fetched and complicated medicaments. But if any one has not confidence in this treatment, a medicament should be put on, which has no scent in its composition, chosen from those which I have stated to be suitable for bleeding wounds;^a and especially, if it is a flesh wound, the composition called barnarum;^b if a wound of sinews or of cartilage or of some projecting part, such as the ears or lips, the seal of Polydes;^c the green composition called Alexandrian^d is also suitable for sinews; and that which the Greeks call rhyptousa^e for parts which project. When the body is bruised it is usual also for the skin to be broken to a small extent. When this occurs, it is not improper to lay it open more widely with a scalpel, unless there are muscles and sinews near, as it is inexpedient to cut into these. When it has been sufficiently opened, a medicament is to be put on. But if the skin over the contusion, although broken too little, yet must not be laid open more widely on account of sinews or muscles, then such applications should be made as gently extract humour, especially that which I have said is called rhyptousa. It is also not inappropriate, when the wound is severe, after putting on what is beneficial, to lay on over this, wool saturated with vinegar and oil; or a poultice,

locus est, quod leniter reprimat; si nervosus aut musculosus, quod emolliat.

- 24 Fascia vero ad vulnus deligendum lietea aptissima est eaque lata esse debet, ut semel iniecta non vulnus tantum sed paululum utrimque etiam oras eius comprehendat. Si ab altera parte caro magis recessit, ab ea melius adstrahitur; si aeque ab utraque, transversa comprehendere oras debet; aut si id volueris ratio non patitur, media primum inscenda est, ut tum in utramque partem ducatur. Sic autem deliganda est, ut et contineat neque adstringat. Quod non continetur, elabitur: quod nimis adstrictum est, eamem periclitabitur. Hieme saepius fascia circumiri debet, aestate quotiens necesse est; tum extrema pars eius inferioribus non adhaerenda est: nam nodus ulcus laedit, nisi tamen longe est.
- C Illo neminem decipi decet, ut propriam viscerum curationem requirat: de quibus supra (IV. 14 seqq.) posui. Nam plaga ipsa curanda extrinsecus vel sutura vel alio medicinae genere est: in visceribus nihil movendum est, nisi ut, si quid ex iocinere aut liene aut pulmone duntaxat extremo dependet, praecidatur. Alioqui vulnus interius ea victus ratio eaque medicamenta sanabunt, quae cuique visceri convenire superiore libro (IV. 14 seqq.) posui.
- 25 His ita primo die ordinatis, homo lecto conlo-

* VIII. 10. † F. Hippocrates III. 108 (Synopsis IV.).

+ V. 28. B-19; for viscera see vol. I. p. 356.

* IV. 14.-V. 28, 1 A, 28. B. 7.

gently repassant if to a soft part; or emollient to a part where there are sinews or muscles.

The bandage too for binding up a wound is best made of linen, and it should be so wide as to cover in a single turn, not the wound alone but somewhat of its edges on either side. If the flesh has receded more from one edge, the traction is better made from that side. If equally from both, the bandage, put crosswise, should press the margins together: or if the character of the wound does not admit of that, the middle of the bandage is to be applied first, so that it may then be drawn to either side.^a Moreover, the wound is to be bandaged so that it is held together, yet not constricted. When it is not so held, it gapes; if it is constricted too much, there is a risk of canker. In winter there should be more turns of the bandage, in summer just those necessary; finally, the end of the bandage is to be stitched by means of a needle to the deeper turns; for a knot hurts the wound, unless, indeed, it is at a distance from it.

On the following point no practitioner should be ignorant so that he has to enquire as to the special treatment required for the internal organs, which I have spoken of above.^b For whilst an external wound is to be treated either by suture, or by some sort of medicine; in the case of the internal organs, nothing is to be moved, unless it be to cut away some bit of liver or spleen or lung which hangs outside. Otherwise internal wounds will be cured by the regulation of diet, and by those medicaments which I have stated in the preceding book to suit each individual organ.^c

So then, after this has been done on the first day,

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candus est; isque, si grave vulnus est, abstinere, quantum vires patiuntur, ante inflammationem cibo debet: bibere, donec sitim finite, aequam calidam; vel, si aestas est ac neque febris neque dolor est, **B** etiam frigidam. Adeo tamen nihil perpetuum est, sed semper pro vi corporis aestimandum, ut imbecillitas etiam cibum protinus facere necessarium possit, tenuem scilicet et exiguum, qui tantum sustineat; multique etiam ex profuvio sanguinis intermorientes ante ullam curationem viri reficiendi sunt, quod alioqui inaccessabile vulnere est.

- 26 Nivis vero intumescere vulnus periculosum; nihil intumescere periculosissimum est: Illud indicium est magnae inflammationis, hoc emortui corporis. Protinusque, si mors homini consistit, si nulla febris accessit, scire licet mature vulnus sanum fore. Ac ne febris quidem terrere debet, si in magno vulnere, dum inflammatio est, permanet. Illa pernicioea est, quae vel levi vulnere supervenit, vel ultra tempus inflammationis durat, vel delirium movet; vel, si nervorum rigor aut distentio, quae ex vulnere orta **B** est, eam non finit. Vomitus quoque bilis non voluntarius, vel protinus ut percussus est aliquis, vel dum inflammatio manet, malum signum est in iis dumtaxat, quorum vel nervi, vel etiam nervos loci vulnerati sunt. Sponte tamen vomere non alienum est, praecipue iis, quibus in consuetudine fuit: sed neque protinus post cibum, neque iam inflammatione

the patient is to be put to bed; if the wound is severe, before inflammation sets in, he should abstain from food, as far as his strength permits: he should drink warm water until his thirst is quenched; or, if it is summer and he has neither fever nor pain, even cold water. There is, however, in this no standing order, for always account has to be taken of the bodily strength, since weakness may render it necessary for him to take food even from the first, light of course and scanty, just enough to sustain him; and many who are actually fainting from loss of blood must, before any treatment, be resuscitated by wine, which in other cases is most injurious to a wound.

It is dangerous when a wound swells overmuch; no swelling at all is the worst danger: the former is an indication of severe inflammation; the latter that the part is dead. And from the first if the patient retains his senses, if no fever follows, we may recognize that the wound will soon heal. And even fever should not cause alarm in the case of a large wound, if it persists whilst there is inflammation. That fever is harmful which either supervenes upon a slight wound, or lasts beyond the inflammatory period, or excites delirium; or which does not put an end to the rigor or spasm of sinews which has originated from the wound. Also involuntary bilious vomiting either immediately after the injury, or during the inflammatory period, is a bad sign only when sinews or even the neighbourhood of sinews have been wounded. The induction of a vomit, however, is not inappropriate, especially in those habituated to it; provided that this is not done immediately after food, or just when inflammation has arisen, or

CELSUS

orta, neque enim in superioribus partibus plaga est.

- 27 **B**læuo sic vulnere habito, tertio die id aperiendum, detergendaque sanies ex aqua frigida est, eademque rursus inicienda. Quinto iam die, quanta inflammatio futura est, se ostendit. Quo die rursus detectu vulnere considerandus color est. Qui si lividus aut pallidus aut varius aut niger est, scire licet malum vulnus esse; idque quancumque animadversum est, terrere nos potest. Album aut rubicundum esse oleus commodissimum est: item **E** cutis dura, crassa, dolens periculum ostendit. Bona signa sunt, ubi hæc sine dolore tenuis et mollis est. Sed si glutinatur vulnus aut leviter intumuit, eadem sunt imponenda, quæ primo fuerant: si gravis inflammatio est neque glutinandi spes est, ea, quæ pus moveant. Iamque aquæ quoque calidæ necessarius usus est, ut et materiam digerat et duritiam emolliat et pus eicit. Ea sic temperanda est, ut manu contingenti iucunda sit, usque adeo adhibenda, donec aliquid ex tumore minuisse coloremque ulcers **C** magis naturalem reddidisse videatur. Post id fomentum, si late plaga non patet, imponi protinus emplastrum debet, maximeque si grande vulnus est, tetræpharmacum; si in articulis, digitis, locis cartilagineis, rhypodes: et si latius liat, idem illud emplastrum liquari ex oleo unguento oportet eoque iuncta linamenta disponi per plagam; deinde emplastrum supra dari, et super id suadentem lenam.

* V. 18. 9.

* V. 18. 15.

when the wound is situated in the upper part of the body.

When the wound has been so treated for two days, on the third it should be uncovered, series washed away with cold water, and then the same dressing applied again. By the fifth day the extent of inflammation in prospect is apparent. And on that day, when the wound has been uncovered again, its colour must be considered. If it is livid or pallid or patchy or dusky, it can be recognized that the wound is a bad one, and whenever this is observed, it should alarm us. It is best for the wound to be white or rubicund; also if the skin is hardened, thickened, or painful, danger is indicated. Good signs are for the skin to be thin and soft without pain. But if the wound is agglutinating or swollen slightly, the same dressings as at first are to be applied; if there is severe inflammation and no hope of agglutination, then such applications are to be made as promote suppuration. And now the use of hot water as well is a necessity, in order to disperse diseased matter and to soften hardening and bring out pus. The temperature of the water must be pleasant to the hand when put into it, and the effusion is to be continued until the swelling is seen to have diminished and a more natural colour to have returned to the wound. After this fomentation, if the wound is not gaping widely, a plaster should be put on at once, particularly the tetrastichum if it is a large wound;* in the case of wounds of joints, fingers, cartilaginous places, the plaster rhytodes;† if the wound gapes more widely, that same plaster should be liquefied by its oignent, and lint smeared with this laid all over the wound; upon this put the plaster, and above that greasy wool.

Minusque etiam quam primo fasciæ adstringendæ sunt.

- 28 Proprie quædam in articulis visenda sunt, in quibus, si præcisi nervi sunt, qui continebant, debilitas eius partis sequitur. Si id dubium est, et ex acuto telo plaga est, ea transversa commodior est; si recto et gravi, nullum in figura discrimen est. Sed videndum est, pus supra articulum an infra nascatur. Si sub eo nascitur alburnusque et crassus diu fertur, nervum præcisum credibile est, magisque quo maiores dolores inflammationesque et quo maturius excitatæ sunt. Quamvis autem non abscissus nervus est, tamen si circa tumor durus diu permanet, accessio est et diuturnum ulcus esse et sano quoque eo tumorem permanere; futurumque est ut tarde membrum id vel extendatur vel contrahatur. Maior tamen in extendendo mora est, ubi recurvata curatio adhibita est, quam in recurvando eo, quod rectum continuerimus. Conlocari quoque membrum quod ictum est ratione certa debet. Si glutinandum est, ut superius sit: si in inflammationibus est, ut in neutram partem inclinatam sit: si iam pus profuit, ut deversum sit. Optimum etiam medicamentum quies est: moveri, ambulare nisi sanis aliterum est. Minus tamen id periculosum, qui in capite vel brachiis quam qui in inferioribus partibus vulnerati sunt. Minimeque ambolatio convenit femine aut crure aut pede laborante. Locus, in quo cubabit, tepidus esse

The bandages are to be even less tight than at first.

As to joints, there are certain special points to be noticed, as, if the controlling sinews have been divided, weakness of the part concerned follows. If this is in doubt, and the wound has been made by a sharp weapon, a transverse wound is the more favourable; if by a blunt and heavy weapon, the shape of the wound makes no difference. But it is to be observed whether pus is being formed above the joint or beneath. If it is produced underneath, and thick and white discharge continues for some time, it is probable that a sinew has been cut, and the more so the greater the pains and inflammation, and the earlier these occur. But even though no sinew is divided, yet, if a hard swelling persists for a long while round about, the wound will last a long time and even after healing a swelling will persist; and in future that limb will be bent or stretched out slowly. There is, however, more delay in extending a limb which has been kept bent while treated, than in bending a limb which has been kept straight. Also there should be a definite rule as to position for a limb which has been wounded. If the wound is to be agglutinated, the limb is kept raised; it must not be bent either way if there is still inflammation; if pus is already being discharged it should be hanging down. The best medicament too is rest; movement and walking before healing are adverse. The danger, however, from movement is less for wounds of the head and arms than for the lower limbs. Walking about is least of all suited to an injured thigh or leg or foot. The patient's room should be kept warm.

debebit. Balneum quoque, dum parum vulnus parum est, inter res infestissimas est: nam id et unidum et sordidum reddit, ex quibus ad cancerum transitus esse consuevit. Levis frictio recte adhibetur, sed in partibus, quæ longius absunt a vulnere.

- 29 Inflammatione finita vulnus purgandum est. Et id optime faciunt tincta in melle linamenta, supraque idem emplastrum vel encepharmacum dandum est. Tum demum vero parum ulcus est, cum rubet, ac videntur neque siccum neque unidum est. At quodcumque sensu caret, quod non naturaliter sentit, quod nimium aut aridum aut unidum est, quod aut albidum aut pallidum aut lividum aut nigrum est, id parum non est.

- 30 Purgato, sequitur ut impleatur; lamque calida aqua eatenus necessaria est, ut sapies removeatur. Læne unidæ supervacuus usus est: lota melius circumdatur. Ad implendum autem vulnus proficiunt quidam etiam medicamenta aliqua: itaque ea adhiberi non alienum est, ut butyrum cum rosa et exigua mellis parte; aut cum eadem rosa tetrapharmacum; aut ex rosa linamenta. Plus tamen proficit balneum rarum, sibi boni succi, vitatis omnibus acerbis, sed iam plentiores: nam et avis et venatio et nulla elixa dari potest. Vinum omnibus, dum febris, inflammatio inest, alienum est: itaque usque escatricem, si nervi musculive vulnerati sunt; etiam, si ante caro. At si plaga in summa cute generis

* V. 10. 8, 10.

† infra, par. 31 B.

~ = V. 14.

Bathing, too, while the wound is not yet clean, is one of the worst things to do; for this makes the wound both wet and dirty, and then there is a tendency for gangrene to occur. It is advantageous to apply light rubbing, but in those parts which are rather far away from the wound.

When the inflammation has ended, the wound must be cleaned. And that is best done by putting on lint soaked in honey, and over it the plaster called tetrapharmacum or that called enneapharmacum.^a Then at length the wound is really clean when it is red, and neither too dry nor too moist. But a wound is not clean when it lacks sensation, when there is sensation which is not natural, when it is either too dry or too wet, when it is either whitish or pallid or livid or blackish.^b

When the wound is clean, there follows the growth of new flesh; and now warm water is necessary in order to remove scabs. The use of un-scoured wool is superfluous; scoured wool is the better wrapping. But for filling up a wound certain medications also are useful;^c therefore it is not inappropriate to make use of such things as butter with rose-oil and a little honey; or the tetrapharmacum with the said rose-oil, or lint soaked in rose-oil. More beneficial, however, is an occasional bath, a nourishing diet, while avoiding everything acid, but now somewhat fuller, for both poultry and venison and balled pork can be given. In all cases, while fever and inflammation are present, wine is inappropriate; also, until the scar is formed, if either sinews or muscles have been wounded; or even if there is a deep flesh wound. But when the wound is of the safer kind, only skin deep, wine if

tutioris est, potest non parvitas, modice tamen datum, ad implendum quoque proficere. Si quid molliendum est, quod in nervosis locis musculosisque necessarium est, cerato quoque super vulnus utendum est. At si caro supererit, modice reprimit siccum linamentum, vehementius squama aeris. Si plus est, quod tolli opus est, adhibenda sunt etiamnum vehementiora, quae corpus exedunt. Coactricem post omnia haec commodè inducit Lycium ex passio aut lacte dilutum, vel etiam per se impositum siccum linamentum.

31. Hic ordo felicia eruptionis est. Sed quaedam tamen periculosa incidere consueverunt: interdum enim vetustas ulcus occupat, induciturque ei callus, et circum græe crassae livens; post quæ quicquid medicamentorum ingeritur, parum proficit; quod fere negligenter curato ulcere supervenit. Interdum vel ex nimia inflammatione, vel ob aestus immodicos, vel ob nimia frigora, vel quia nimis vulnus adstrictum est, vel quia corpus aut senile aut mali habitus est, cancer occupat. Id genus a Graecis adductum in species est, nostris vocabulis non est.

Omnis autem cancer non solum id corrumpit, quod occupavit, sed etiam serpit; deinde aliis aliisque signis discernitur. Nam modo super inflammationem rubor ulcus ambit, isque cum dolore procedit (erysipelæ Graeci nominant); modo ulcus nigrum est, quia caro eius corrupta est, idque vehementius etiam putrescendo intenditur ubi vulnus umidum

* V. 5-8.

¹ For the diseases referred to in sections 31 B-34, see Appendix, pp. 588 ff.

not too old, given in moderation, can even aid the growth of flesh. If any part is to be softened, which is necessary in the region of sinews and muscles, cerate also is to be used upon the wound. But if flesh fungates, dry lint is a moderate repressant, copper scales a more active one. If more fungation needs to be removed the still more active corrosives are to be employed.* After all such applications, lycium dissolved in raisin wine or in milk, or even only an application of dry lint, is useful in inducing a scar.

Such is the procedure of a successful treatment; dangerous complications, however, are wont to occur. Sometimes the wound becomes the seat of chronic ulceration, and it becomes hardened, and the thickened margins are a livid colour; after which whatever medicament is applied is of little service; and this commonly occurs when the wound has been carelessly treated. At times, whether owing to excess of inflammation, or to unusually hot weather, or to excessively cold weather, or because the wound has been bandaged too tightly, or on account of old age, or of a bad habit of body, canker sets in. The Greeks divided this genus into species for which there are no terms in our language.

Now canker,* whatever its species, corrupts not only the part it attacks, but it also spreads; next it is distinguished by differing signs. For sometimes a redness, over and above the inflammation, surrounds the wound, and this spreads with pain (the Greeks term it erysipelas); at times the wound is black because its flesh has become corrupted, and this is still more intensified by putrefaction when the wound is moist, and from the black wound is discharged a

- est et ex nigro ulcere umor pallidus fertur malique coloris [est] carunculaeque corruptae: interdum etiam nervi ac membranae resolvuntur, specillumque demissum descendit aut in latus aut deorsum, eoque vitio nonnunquam os quoque afficitur; modo oritur ea, quam Graeci gangrenam appellant. Priora in qualibet parte corporis sunt; hoc in prociueulibus membris, id est, inter ungues et alas vel inguina, fereque in senibus vel in is, quorum corpus mali habitus est. Caro in ulcere vel nigra vel livida est, sed sicca et arida; proximaque cutis plerumque subulgris pustulis impletur; deinde ei proxima vel pallida vel livida, fereque rugosa, sine sensu est;
- D. ulterior in inflammatione est. Omnesque ea simul serpsint; ulcus in locum pustulosam, pustulae in eum, qui palleat aut livet, pallor aut livor in id, quod inflammatum est, inflammatio in id, quod integrum est, transit. Inter haec deinde febris acuta oritur ingensque sitis: quibusdam etiam delirium; alii, quamvis mentis suae compotes sunt, balbutiendo tamen vix sensus suos explicunt; incipit adflicto stomachus; fit foetidi spiritus ipse odoris. Atque initium quidem eius mali recipit curationem: ubi vero penitus incedit, insanabile est; plurimique sub frigido sudore moriuntur.
82. Ac pericula quidem vulnorum haec sunt. Vetus autem ulcus scalpello incidendum est, excidendaeque eius oras, et, quicquid super eas livet, neque incidendum. Si varicula intus est, quae id sanari prohibet, ea quoque excidenda. Deinde, ubi sanguis

* For varicula cf. II. 7. 28. This condition would now be termed "wound aneurism" and is sometimes met with in war wounds.

pallid humour, which has a foul odour, and the granulations break down: at times also sinews and membranes undergo dissolution, and when a probe is introduced it passes to the side or downwards, and this lesion not infrequently affects the bone too; sometimes there arises what the Greeks call gangrene. The former varieties occur in any part of the body; gangrene in the extremities, that is, in the nails, armpits or groins, and generally in aged people or in those of a bad habit of body. The flesh in the wound becomes either black or livid, but dry and shrivelled; the skin near it is for the most part occupied by dusky pustules; then the skin around these becomes either pallid or livid, and usually wrinkled, deficient in sensation: farther away from the wound the skin is inflamed. All these things spread simultaneously, the ulceration into the pustules, the pustules into the pallid or livid part, that into the inflamed part, and that again into the sound flesh. Now together with the above an acute fever arises and great thirst: in some also delirium: others, although in their right minds, nevertheless stammer so that they can scarcely explain their feelings; the stomach begins to be affected: even the breath gets a foul odour. This disorder at its commencement admits of treatment; but when thoroughly established it is incurable, and most patients die in a cold sweat.

And such are the dangers following upon wounds. Now a wound when of long standing should be cut with a scalpel, its margins excised, and incisions made at the same time into any livid area surrounding the margins. If there is a small varix inside the wound which hinders healing, it also is to be excised.

emissus novatumque vulnus est, eadem curatio adhibenda, quae in recentibus vulnerebus (§ 23 A) exposita est. Si scalpello aliquis uti non vult, potest sanare id emplastrum, quod ex ladæeo fit, et cum oleus sub eo exesum est, id, quo cicatrix inducitur.

- 58 Id autem, quod erysipelas vocari dixi (§ 31 B), non solum vulnere supervenire sed sine hoc quoque oriri consuevit, atque interdum periculum magis adfert, utique si circa cervicem aut caput constitit. —Oportet, si vires patiuntur, sanguinem mittere; deinde imponere simul reprimentia et refrigerantia, maximeque cerussam solani succo, aut Cimoniam cretam aqua pluviali exceptam; aut ex eadem aqua subactam farinam compresso adlecta aut, si tenerius corpus est, lenticulam. Quicquid inpositum est, betae folio contegendum et super lintenum frigida aqua madens imponendum. Si per se refrigerantia parum proderunt, miscenda erunt hoc modo: sulphuris P. ꝯ I; cerussae, croci singulorum P. ꝯ XII S.; eaque cum vino conterenda sunt, et id his insinandum: aut si durior locus est, solani folia contrita nullae adipis miscenda sunt et multa linteolo superinsidenda.

- C At si nigrities est nequedum script, imponenda sunt, quae carnem putrem lenius edunt, repurgatumque ulcus sic ut cetera nutriendum est. Si magis putre est, iamque procedit ac script, opus est vehementius erodentibus. Si ne haec quidem evincunt, aduri

Then when the blood has been let out and the wound made like a new one, the same treatment is to be adopted as that described for recent wounds. If any one does not want to use the scalpel, healing may be secured by using the plaster made up with Iodanum,^a and, when that has eaten away the ulcer, by the one which induces a scab.^b

But what I have said is called erysipelas, not only follows upon a wound, but is wont also to arise without a wound, and sometimes brings with it some danger, especially when it acts in about the neck or head. If strength permits, blood should be let; then repressives and refrigerants applied together, particularly white-lead with nightshade juice, or Cimonian chalk with rain-water as an excipient; or flour made into a paste with the same, with cyprus shoots added, or lentil meal if the skin is more delicate. Whatever is put on is to be covered over with beet leaves, and over that with lint wetted with cold water. If refrigerants by themselves have little effect, they are to be combined with the following: sulphur 4 grms., white-lead and saffron, 50 grms. each; and these are pounded up with wine and the place smeared with them; or when the skin is more hardened, nightshade leaves are pounded, mixed with lard, and applied spread on lint.

But if there is a blackening which is not yet spreading, the milder corrosives of putrid flesh are to be put on, and the wound having been thus cleaned out, is cared for like other wounds. If there is more corruption, and it is already spreading, stronger corrosives are needed. If even these are not effective,

^a V. 14; 10. 21-26.

locus debet, donec ex eo nullus humor feratur: nam
 D quod sanum est, sicrum est, cum aduritur. Post
 unctionem putres ulceris superponenda sunt, quae
 crustas a vivo resolvant: eas esclaras Graeci
 nominant. Ubi esse exsiederant, purgandum ulcus
 maxime melle et resina est: sed aliis quique purgari
 potest, quibus purulenta evanitur: eodemque modo
 ad sanflatam perducendum est.

- 34 Gangrenam vero, si nondum plase tenet, sed
 adhuc incipit, curare non difficillimum est, utique in
 corpore juvenili; et magis etiam si muscoli integri
 sunt, si nervi vel laesi non sunt vel leviter adfecti
 sunt, neque ullus magnus articulus notatus est, aut
 carnis in eo loco paulum est, ideoque non multum,
 quod putresceret, fuit, consistitque eo loco vilium;
 B quod maxime fieri in digito potest.—In eiusmodi
 casu primum est, si vires patiuntur, sanguinem
 mittere; deinde quicquid aridum est et intentione
 quadam proximum quoque locum male habet, usque
 eo [sanum corpus] concidere. Medicamenta vero,
 dum malum serpit, adhibenda nulla sunt, quae pos-
 sunt movere consuerant; ideoque ne aquae quidem calidae.
 Craria quaque, quamvis reprimentia, aliena sunt;
 sed his quam levissima opus est; superque ea, quae
 C iussu maxime sunt, utendum est refrigerantibus. Si
 nihil magis malum constitit, uri, quod est inter
 integrum ac vitiatum locum, debet: praecipueque in
 hoc casu petendum non a medicamentis solum sed
 etiam a victus ratione praesidium est: neque enim
 id malum nisi corrupti vitiosique corporis est. Ergo
 primo, nisi inbecillitas prohibet, abstinentia utendum;

the place should be burnt by a caustery until no more humour escapes from it; for sound flesh is dry when it is burnt. After the cauterizing of a putrid wound, such drugs are to be applied as will loosen from the living flesh the crusts^a which the Greeks call eschara. When these have fallen off, the wound is to be cleaned by honey and resin in particular; but it can also be cleaned by the other materials with which suppurating wounds are treated^b and in the same way brought to healing.

But gangrene, when not yet widespread, but only beginning, is not very difficult to cure, at any rate in a young subject; and even more so if muscles are intact, sinews uninjured or but slightly affected, and no large joint opened, or if there is little flesh in the part, and so not much to putrefy, and if the lesion is limited to one place; and this mostly happens in a finger. In such a case the first thing to be done, when strength permits, is to let blood; then whatever has become dry, and by stretching out, as it were, is injuring also what is next to it, is cut away up to this point [the sound tissue]. Whilst the gangrene is spreading, medicaments which tend to promote suppuration are not to be applied; and therefore not even hot water. Weighty dressings also, although repressant, are unsuitable; but the lightest are needed; and over the parts which are inflamed refrigerants are to be used. If the malady is still not checked, the part between what is sound and diseased ought to be cauterized; and in such a case especially assistance is to be sought, not only from medicaments, but also from a system of diet; for this malady only occurs in a corrupt and diseased body. Therefore at first, unless weakness prohibits

deinde danda quae per cibum potionemque alvum
ideoque etiam corpus adstringant, sed ea levia.
Postea si vitium constitit, imponi super vulnus eadem
debent, quae in putri ulcere praescripta sunt (§ 33 C).

- D Ac tum quoque ut plenioribus cibis uti licebit ex
media materia, sic tamen non nisi alvum corpusque
siccantibus; aqua vero pluvia[t]i frigida. Balneum,
nisi iam certa fiducia redditae sanitatis est, alienum
est: siquidem emollium in eo vulnus cito rursus
eodem malo adficitur. Solent vero nonnumquam
nihil omnia auxilia proficere ac nihilo minus scerpere
in cancer. Inter quae, miserum sed unicum
auxilium est, ut cetera pars corporis tuta sit, mem-
brum, quod paulatim emoritur, abscidere.

- 35 Hae gravissimorum vulnerum curationes sunt.
Sed et illa quidem negligenda, ubi integra cute
interior pars conlisa est; aut ubi detersum adtri-
tumeve aliquid est; aut ubi surculus corpori infixus
est; aut ubi tenax sed altum vulnus inaequit.

In primo casu commodissimum est melicerium ex
vino coquere, interioremque eius partem conterere
et cerato miscere ex roseo facto, idque superponere:
deinde, ubi cutis ipsa exasperata est, inducere leno
medicamentum, quale lipara est.

- B Deterso vero detrimentoque imponendum est em-
plastrum tetracharmacum, minuendusque cibus et
vinum subtrahendum. Neque id, quia non habebit
altiores ictus, contemnendum erit: siquidem ex

* VII. 38.

* VII. 1.

* VII. 8-11.

* *ἀσπρά & γράσσι σκόνειον*, cf. V. 18. 28.

It, the patient should fast; after that he should be given light food and drink to tone up the bowels, and so also the body in general. Later if the lesion has been checked, the same things should be put on the wound which were prescribed for putrid ulceration. And it is now also permissible to make use of a fuller diet—foods of the middle class, but only such as dry up the bowels and the body generally; and cold rain-water to drink. The bath is harmful until it is quite certain that soundness has returned; for a wound, if softened in the bath, is quickly again affected by the same malady. But it still happens sometimes that none of these remedies is effectual, and in spite of everything this cancer spreads. In such circumstances there is one sad but solitary remedy to secure the safety of the rest of the body, that is to cut away the limb which is gradually dying.^a

Such are the treatments of the gravest wounds. But there should be no neglect of those in which the skin is intact, but some inner part has been contused; or where something has been scraped or rubbed off;^b or where a splinter has become fixed in the body, or where the wound is small but deep.^c

In the first case the best thing is to cook the rind of a pomegranate in wine, and pound up its interior and mix with rose-oil cerate, and so apply it: next, when the skin has been actually abraded, to lay on a soothing medicament such as lipara.^d

When the skin has been scraped and rubbed off, the plaster tetrapharmacum is to be applied, the food reduced and wine withdrawn. Such wounds are not to be disregarded because deeper structures are uninjured; for often from injuries of this kind

eiusmodi casibus saepe caneri fiunt. Quod si levius id erit et in parte exigua, contenti esse poterimus eodem leni medicamento.

Surculum vero, si fieri potest, oportet vel manu vel etiam ferramento eicere. Si vel praefractus est vel altius descendit, quam ut id ita fieri possit, medicamento evocandus est. Optime autem educit superimposita harundinis radix, si tenera est, pectinus contrita; si iam durior, ante in mulso decocta; cui semper mel adiciendum est aut aristolochia cum eodem melle. Pessima ex surculis harundo est, quia aspera est: eademque offensa etiam in filice est. Sed non cognitum est utrumque adversus alteram medicamentum esse, si contrita superimposita est. Facit autem idem in omnibus surculis, quodcumque medicamentum extrahendi vim habet.

Idem altis tenuibusque vulneribus aptissimum est. Priori rei Philocratis, huius Heecataei emplastrum maxime convenit.

- 58 Ubi vero in qualibet vulnere ventum ad inducendam cicatricem est, quod perpurgatis iam repletisque ulceribus necessarium est, primum ex aqua frigida linamentum, dum caro alitur; deinde iam, cum continenda est, secum imponendum est, donec cicatrix inducatur. Tum deligari super album plumbum oportet quo et reprimitur cicatrix et colore maxime corpori sano similem accipit. Idem radix silvestris cucumeris praestat, idem compositio, quas habet: elateri P. $\frac{1}{2}$ I; spumae

* Cf. p. 39.

¹ It is not certain what this was. Perhaps plumbum album or candidum—white lead, a common ingredient of nail polish. White lead (basic lead acetate) was called by Celsus cerussa (Gr. *λευκή*). See vol. II., Introduction, p. xlviii, plumbum.

canker develops. But if the hurt is trifling, and of small extent, we may be content with the same soothing application.

A splinter too, whenever possible, should be extracted either by the hand or even by the help of an instrument. But if the splinter has been broken off or has penetrated too deeply for this to be done, it must be drawn towards the surface by a medicament. The best thing to draw it out is an application of pole-reed root pounded up straight away if soft, but if already rather hard, boiled first in honey wine; to which honey should always be added, or birthwort also with honey. * Of splinters the pole-reed is the worst because it is rough; there is the same harmfulness in fern. But by experience it has been learnt that either, when pounded up and applied, serves as a medicament against the other. Any medicament which has an extractive property has the same effect on splinters of all kinds.

The same treatment is best for deep and narrow wounds. The plaster of Philocrates is especially good for the former, that of Hierataeus for the latter.²

Whatever the kind of wound, when the time has come for inducing the scar, which must be after the wound has cleaned and filled with new flesh, first lint is applied, wetted by cold water while the flesh is being nourished; afterwards, when it has to be checked, dry lint must be applied until the scar is induced. Then plumbum album³ should be bandaged on in order to keep down the scar, and to give it a colour as much as possible like sound skin. Wild cucumber root has the same property, so has the prescription containing: elaterium⁴ 4 grms., litharge

* A preparation made from the juice of wild cucumber.

argenti P. 4 II; unguenti pondo 4 IIII. Quae excipiuntur resina terebenthina, donec emplastri crassitudo ex omnibus fiat. Ac nigras quoque cicatrices leniter purgant paribus portionalibus mixta serugo, plumbum elutum, eademque rosa coacta; sive unguntur cicatrix, quod in facie fieri potest; sive id ut emplastrum imponitur, quod in aliis partibus Commodius est. At si vel exerevit cicatrix vel concava est, stultum est decoris causa rursus et dolorem et medicinam sustinere. Alioqui res utrique succurri patitur, siquidem utraque cicatrix exulcerari scalpello potest. Si medicamentum aliquis mavult, idem efficiunt compositiones eae, quae corpus exedunt. Cui exulcerata super eminentem carnem exedentia medicamenta conicienda sunt, super concavam implentia, donec utrumque ulcus saepe cuti sequetur; et tunc cicatrix inducatur.

27. Dixi de iis vulneribus, quae maxime per teia inferuntur. Sequitur, ut de his dicam, quae morsu fiunt, interdum hominis, interdum viperae, saepe canis, nonnumquam ferorum animalium aut serpentium. Omnis autem fere morsus habet quoddam virus: itaque si vehementis vulnus est, cucurbitula admovenda est; si levius, prothius B emplastrum iniiciendum, praecipueque Diogeni. Si id non est, quodlibet ex is, quae adversus morsus propositae (19, 20 seqq.): si ea non sunt, viride Alexandrinum: si ne id quidem est, quodlibet non pingue ex iis, quae recentibus vulneribus accommodantur. Sed quoque his, praecipueque ei, quod canis fecit, medicamentum est, si manus vulnere imponitur

* This oilment is perhaps myrobalemon, cf. IV. 16. 4 (vol. I. p. 416), and vol. II, *Introd.* p. 221, *Balanoe*.
 † V. 19. 20-22. * V. 19. 17.

8 grms., unguent 16 grms.* These are taken up in turpentine until the whole is of the consistency of a plaster. Further, equal parts of verdigris and washed lead mixed together with rose-oil gently clean black scurs; either the scur may be anointed, as can be done on the face; or the above may be applied as a plaster, which is more convenient for other parts of the body. But if the scur is either elevated or depressed, it is foolish, just for the sake of appearance, to submit again to pain and medicinal applications. Else both conditions can be remedied, since either scur can be made into a wound by the use of a scalpel. Or if a medicament is preferred, corrosive compositions have the same effect. After the skin has been wounded, to an elevated cicatrix corrosives are applied, to a depressed one medicaments which make flesh, until the wound, in each case, is on a level with the sound skin; and then the scur is induced.

27. I have spoken of those wounds which are mostly inflicted by weapons. My next task is to speak of those which are caused by the bite, at times of a man, at times of an ape, often of a dog, not infrequently of wild animals or of snakes. For almost every bite has in it poison of some sort. Therefore if the wound is severe, a cup should be applied straightway over it; if slighter a plaster, especially that of Diogenes. If that is not at hand, then one of the others I have recommended against bites;^b failing such, the green plaster called Alexandrian;^c if not even that is to be had, then any one which suits recent wounds, so long as it is not greasy. Salt is also a remedy for bites, especially dog-bites, if a hand is then placed over the bite and struck by two

superque id duobus digitis verberatur: exstiat enim; ac salamentum quoque recte super id vulnus deligatur.

- 2 Utique autem si rabiosus canis fuit, cucurbitula virus eius extrahendum est; deinde si locus neque nervosus neque musculosus est, vulnus id adurendum est: si ulla non potest, sanguinem hominis nulli non alienum est. Tum uto quidem vulneri superimponenda quae ceteris utilis sunt: ei vero, quod expectum ignem non est, ea medicamenta, quae vehementer exedunt. Post quae nullo novo magisterio, sed iam supra (28, 30, 36) posito ulcus erit

B implendum et ad sanitatem perducendum. Quidam post rabiosi canis morsum protinus in balneum mittunt ibique patiuntur desudare, dum vires corporis sinunt, ulcere adaperto, quo magis ex eo quicunque virus destillet; deinde multo meraciusque vino accipiunt, quod omnibus venenis contrarium est. Idque cum ita per triduum factum est, tutus esse homo a periculo videtur.

- C Solet autem ex eo vulnere, ubi parum occursum est, aquae timor nasci (hydrophobus Graeci appellant), miserum genus morbi, in quo simul aeger et siti et aquae metu cruciatur; quo oppressis in angusto spes est. Sed unicuique tamen remedium est, neque opinantem in piscinam non ante ei proleptam proleptare. Et si natandi scientiam non habet, modomersum bibere pati, modo attollere: si habet, interdum deprimere, ut invitus quoque aqua satiatur: sic enim simul et sitis et aquae metus

fingers of the other hand; for this brings out venies; and brine-pickle may also be appropriately bandaged upon such a wound.

But especially if the dog was mad, the poison must be drawn out by a cup; next, if the wound is not among sinews and muscles, it must be cauterized; if it cannot be cauterized, it is not amiss to bleed the man. After cauterizing, applications are to be put on as for other burns; if the wound is not cauterised, such medicaments as are powerful corrosives. After this the wound should be filled in and brought to healing, not by any new method, but as already described above.* After the bite of a mad dog some send the patients at once to the bath, and there let them sweat as much as their bodily strength allows, the wound being kept open in order that the poison may drop out freely from it; then follows the administration of much wine, undiluted, which is an antidote to all poisons. And when this has been carried out for three days, the patient is deemed to be out of danger.

But when too little has been done for such a wound, it usually give rise to a fear of water which the Greeks call hydrophobia, a most distressing disease, in which the patient is tortured simultaneously by thirst and by dread of water. In these cases there is very little hope for the sufferer. But still there is just one remedy, to throw the patient unawares into a water tank which he has not seen beforehand. If he cannot swim, let him sink under and drink, then lift him out; if he can swim, push him under at intervals so that he drinks his fill of water even against his will; for so his thirst and dread of water are removed at the same time. Yet this

D tollitur. Sed aliud periculum excipit, ac infirmum corpus in aqua frigida vexatum nervorum distentio absorbat. Id ne incidat, a piscina protinus in oleum calidum demittendus est. Antidotum autem precipue id, quod primo loco (23, 1 B) posui, ubi id non est, aliud, si nondum aeger aqua horret, potui ex aqua dandum est; et si amaritudine offendit, mel adiciendum est: si iam is morbus occupavit, per castapota sanari potest.

3 Serpentium quoque morsus non nimium distantem curationem desiderant, quamvis in ea multum antiqui varierent, ut in singula anguium genera singula medendi genera precipereut allique alla: sed in omnibus eadem maxime proficiunt. — Igitur in primis super vulnus id membrum diligendum est, non tamen nimium vehementer, ne torpeat; deinde venenum extrahendum est. Id cucurbitula optime facit. Neque alienum est ante scalpello circa vulnus incidere, quo plus vitii iam sanguinis extrahatur.

B Si cucurbitula non est, quod tamen vix incidere potest, tum quodlibet simile vas, quod idem possit; si ne id quidem est, homo adhibendus est, qui id vulnus exsugat. Neque Heracles scientiam precipuam habent ii, qui Psylli nominantur, sed audaciam usu ipso confirmatam. Nam venenum serpentis, ut quaedam etiam venatoria venena, quibus Galli precipue utuntur, non gustu, sed in vulnere nocent. Ideoque colubra ipsa toto estur, ictus eius occidit; et si stupente ea, quod per quaedam medi-

* Pro antidoto see V. 23. 1 B-3.

¹ An African people celebrated as snake-charmers. Cf. Lucan IX. 693, gens unica terras; faciliis a saevo serpentibus immota torenti; Marmarides Psylli; and Sarcocolla, Ag. 17.

procedure incurs a further danger, that a spasm of sinews, provoked by the cold water, may carry off a weakened body. Lest this should happen, he must be taken straight from the tank and plunged into a bath of hot oil. But as an antidote we should give especially the one which I put first,² when that is not at hand, another; it is to be given in a draught of water, if the patient does not dread water yet; and if the bitterness is objected to, honey is to be added; if dread of water has already seized him, the antidote can be swallowed as a pill.

Serpents' bites again need a not very different treatment, although in this the ancients had very various methods so that for each kind of snake some prescribed one special kind of remedy, some another; but in all it is the same measures which are the most efficacious. Therefore first the limb is to be constricted above this kind of wound, but not too tightly, lest it become numbed; next, the poison is to be drawn out. A cup does this best. But it is not amiss beforehand to make incisions with a scalpel around the wound, in order that more of the vitiated blood may be extracted. If there is no cup at hand, although this can hardly happen, use any similar vessel which can do what you want; if there is not even this, a man must be got to suck the wound. I declare there is no particular science in those people who are called *Pythi*,³ but a boldness confirmed by experience. For serpent's poison, like certain hunter's poisons, such as the Gauls in particular use, does no harm when swallowed, but only in a wound. Hence the snake itself may be safely eaten, whilst its stroke kills; and if one is stupefied, which mountebanks effect

camenta circulatores faciant, in ea digitum quis indidit neque percussus est, nulla in ea saliva noxa est. Ergo quisquis exemplum Psylli secutus id vulnus exsuxerit, et ipse tutus erit et tutum hominem praestabit. Illud [de Interest] ante debet adtendere, ne quod in gingivis palatove aliave parte
Doris ulcus habeat. Post haec is homo loco calido collocandus est, sic ut id quod percussum erit, in inferiorem partem inclinetur. Si neque qui exaugat neque cucurbitula est, sorbere oportet ius asserinum vel orillum vel vitulinum et vomere, verum autem gallinaceum pulum per medium dividere et protinus calidum super vulnus imponere, sic ut pars interior corpori iungatur. Facit id etiam haedus agnusve discissus, et calida eius caro statim super vulnus imposita. Empiastrea quoque si qua . . .¹ supra (12, 20 *seqq.*) comprehensa sunt; aptissimumque est vel Ephesium vel id, quod ei subiectum est (19, 22).

E Praesensque in aliquo antidoto praesidium est: si id non est, necessarium est exorberere potionem meri vini cum pipere, vel quidlibet aliud quod calori movendo est, ne umorem intus coire patiatur: nam maxima pars venenorum frigore interemit. Omnia etiam urinam moventia, quia materiam extenuant, utilis sunt.

4 Haec adversus omnes ictus communis sunt. Usus tamen ipse docuit eum, quera aspis percussit, acclium

¹ *More suggests that the following words have fallen out after al qua (curanti praesto sunt adhibenda quae): the sentence would then run, "plasters too, if the physician has any of them at hand, should be applied," etc. Durenborg substitutes quae for al qua.*

² The text as it stands cannot be translated, though the general sense is given.

by certain medicaments, and if anyone puts his finger into its mouth and is not bitten, its saliva is harmless. Anyone, therefore, who follows the example of the Psylli and sucks out the wound, will himself be safe, and will promote the safety of the patient. He must see to it, however, beforehand that he has no sore place on his gums or palate or other parts of the mouth. After the suction, the patient should be put into a warm room, in such a position that the part bitten is inclined downwards. If there is no one at hand to suck out the wound, or to cup it, the patient should sip goose or mutton or veal broth and provoke a vomit; further a live chicken should be cut through the middle, and whilst warm applied forthwith over the wound so that its inner part is in contact with the patient's body. It will also do to slaughter a kid or lamb, and immediately to put the hot flesh upon the wound. The plasters also should be applied which have been mentioned above;^a the most suitable is the Ephesian plaster,^b or that noted next after it. There is ready help in one of the antidotes; if none is at hand, it is necessary to take in sips a draught of strong wine with pepper, or anything else which will stir up heat, to prevent humour from coagulating internally; for most poisons cause death by cold. All diuretics also are useful, because they dilute the diseased matter.

Such are the general remedies against bites of any kind. Experience has taught, however, that anyone bitten by an asp^c should in particular drink

^a V. 19. 21.

^b Coluber aspis. See Galen XIV, 236. His account of Cleopatra's death is closely followed by Shakespeare.

potius bibere debere. Quod demonstrasse dicitur casus cuiusdam pueri, qui cum ab hac letus esset et partim ubi ipsum volnus partim ab immodico aestus siti premeretur ac lacis siccis alium amorem non reperiret, acetum, quod forte secum habebat, exhibit et liberatus est, credo, quoniam id, quamvis refrigerandi vim habet, tamen habet etiam dissuipandi; quo fit, ut terra resperna eo spumat. Eadem ergo vel verisimile est spissescentem quoque intus umorem hominis ab eo discuti et sic dari sanitatem.

- 6 In quibusdam etiam aliis serpentibus quaedam auxilia certa satis nota sunt. Nam scorpio sibi ipse pulcherrimum medicamentum est. Quidam contritum cum vino bibunt: quidam eodem modo contritum super volnus imponunt: quidam super prunam eo imposito volnus suffumigant, undique veste circumdata, ne la fumus dilabatur; tum A carbonem eius super volnus deligant. Bibere autem oportet herbae solaris, quam heliotropion Graeci vocant, semen vel certe folia ex vino. Super volnus vero etiam furfures ex aceto vel ruta silvatica recte imponitur vel cum melle sal tostus. Cognovi tamen medicos, qui a scorpione letis nihil aliud quam ex brachio sanguinem miserunt.

- 6 Et ad scorpione autem et aranei letum altura cum ruta recte miscentur, ex oleoque contritum superinponitur.

- 7 At si cerastes aut dipsas aut haemorrhoidis percussit,

* (Cf. Pliny, *N.H.* XXII. 1, 27.

¹ Coluber cerastes (*xydropis*), the horned viper of the desert. Aristotle, *H.A.* II. 1.

² Coluber viperæ, called dipsas because the bite produced great thirst (*δίψα*).

³ Haemorrhoidis (*αιμορροΐς*). This word is unidentified; the

vinegar. The case of a certain boy is said to demonstrate this, for having been thus bitten, partly on account of the bite, and partly owing to excessively hot weather, he was tormented by thirst, and being in a dry place found no other fluid, so he drank the vinegar he chanced to have with him, and was saved. I believe this happened because although vinegar is a refrigerant, it has also the faculty of dissipating. Hence it is that earth sprinkled with it froths.^a Therefore it is likely that by the same faculty humour which is condensing inside a patient is dissipated by it, and so health is restored.

There are also against certain other reptiles remedies which are well enough known. For the scorpion is itself the best remedy against itself. Some pound up a scorpion and swallow it in wine; some pound it up in the same way and put it upon the wound; some put it upon a brazier and fumigate the wound with it, putting a cloth all round to prevent the escape of the fumes, afterwards they bandage its ash upon the wound. The patient should also drink wine in which have been steeped the seeds, or at any rate the leaves, of the *herba solaris*, which the Greeks call *heliotropion*. It is good also to apply to the wound bran soaked in vinegar, or wild rue, or roasted salt with honey. I have known, however, practitioners who merely let blood from the arm of those stung by a scorpion, that and nothing more.

For the sting of a scorpion also, or for that of a spider, it is good to put on garlic mixed with rue and pounded up with oil.

But when cerastes,^b or dipsas,^c or hæmorrhoidis^d has blood of a man bitten by it loses its coagulability and becomes widely extravasated.

poli quod Aegyptiae fabae magnitudinem aequet, arfactum ut in duas portiones dividendum est, sic ut ei rutae papulum adiciatur. Trifolium quoque et mentastrum et cum aceto panaces aequè proficiunt. Costumque et casia et cinnamomum recte per potionem adsumuntur.

8 Adversus chelydri vero letum panaces aut laser, quod sit scrip. III S.¹ [¶ I], vel parri sucus cum hennina vini sumendus est, et edenda multa saturata. Imponendum autem super vulnus stercus caprinum ex aceto coctum, aut ex eodem hordiacia farina, aut ruta vel nepeta cum sale contrita melle adlecto. Quod in eo quoque vulnere, quod cerastes fecit, aequè valet.

9 Ubi vero phalangium nocuit, praeter eam curationem, quae manu redditur, saepe homo demittendus in solum est; dandusque ei murræ et uvæ taminiae per modum ex passi hennina; vel radioniae semen aut lobii radix ex vino; et super vulnus fursures ex aceto coctae; Imperandumque, ut is conquiescat.

10 Verum haec genera serpentium et peregrina et aliquanto magis pestifera sunt, maximeque Aestoniae locis gignantur. Italia frigidioresque regiones hac quoque parte salubritatem habent, quod minus terribiles angues edunt. Adversus quos satia proficit herba Vettunica vel Cantabrica vel centaurios vel argimonda vel trixago vel personina vel marinae pastinacae, vel ungulae binneve tritae et cum vino potui datae . . .² sunt et super vulnus impositae. Illud ignorari non oportet, omnis serpentis letum et letum et letano magis nocere; ideoque perniciosior.

¹ *Mura drachmæ* ¶ I [one denarius, i.e. 3½ scrupula, or 4 grammes] as a plate; *Terra rejecta* the waste surfaces of soil
. . . ¶ I

² *Mura inerta*: datae <vel eodem modo contritae potius et terra utalae>, 'or pounded in the same way as soon as they have been dug out of the ground.'

bitten a man, poley-germander roasted, equal in amount to an Egyptian bean, is divided into two draughts, a little rue being added. Trefoil also and wild mint and allheal-julce, with vinegar, are equally efficacious. Costmary, casia, and cinnamon may appropriately be taken in draughts.

For the bite of a chelydru,* allheal-juice or laser 4 grms., or leek-juice in 250 c.c.m. of wine, may be taken, and a quantity of savory eaten. Over the bite either goat's dung, or barley-meal boiled with vinegar should be applied, or rue, or catnip pounded with salt, with honey added. This last is equally efficacious for the bite of a cerastes.

But when a venomous spider has done the harm, in addition to the surgical treatment, the patient should be plunged often into the hot bath; and take equal quantities of myrrh and bryony berries in 250 c.c.m. of raisin wine; or radish seeds or darnel root in wine; bean boiled in vinegar is to be put on the wound, and the patient is kept in bed.

But the foregoing classes of reptiles belong to foreign countries, and are especially poisonous, and they are mostly generated in hot countries. Italy and colder countries are healthier in this respect too, for the reptiles they produce are less dangerous. Against them sufficient remedies are betony or convolvulus or centaurry or agrimony or germander or hyndock or sea parsnip; any one or two of these is pounded up and taken in wine . . . and applied to the bite. It must be remembered that all snake-bites are more harmful when either the reptile or the man is hungry. Hence snakes are most injurious when

* *Coluber natrix* (χελιδνός), the marsh snake.

simae sunt cum igneant, utilissimumque est, ubi ex anguibus metus est, non ante procedi quam quis aliquid adsumpserit.

- 11 Non tam ex facili is opitulari est, qui venenum vel in cibo vel in potione sumpserunt, primum quia non protinus sentiunt, ut ab angue icti; ita ne succurrere quidem statim sibi possunt; deinde quia noxa non a cute sed ab interioribus partibus insipit. Commodissimum est tamen, ubi primum sensit, aliquis, protinus oleum multum epota vomere; deinde qui praecordia exhausit, bibere antidotum: si id non est, vel merum vinum.

- 12 Sunt tamen quaedam remedia propria adversus quaedam venena, maximeque leviora. Nam si cantharidas aliquis exhibet, panacea cum . . .¹ contusa vel galbanum vino adiecto dari, vel lac per se debet.

- B Si cleutam, vinum merum calidum cum ruta quam plurimum ingerendum est; deinde is vomere cogendus; posteaque laser ex vino dandum: laque, si febre vacat, in calidum balneum mittendus; si non vacat, unguendus ex calfacientibus est. Post quae quae ei necessaria est.

Si hyoscyamum, ferreas mulsum bibendum est, aut quodlibet lac, maxime tamen asinum.

Si cerussam, ius malvae vel ius glandis ex vino contritae maxime prosunt.

- C Si sanguinea epota est, acetum cum sale bibendum est. Si lac intus coit, aut passum aut coagulum aut cum aceto laser.

Si fungos inutiles quis adsumpserit, radice aut²

¹ cum lacte supplied by Edd.

² The text is corrupt. Marx suggests: radice aut (portulaca aut per se) aut cum sale, etc., and this is translated. Dorenberg, comparing Pliny, N.H. XX. 80. 81 + radice aut o posca, aut cum sale et aceto, edenda est.

brooding, and it is of the greatest importance when there is danger from snakes not to go out before taking some food.

It is not so easy to render assistance when poison has been taken in food or drink, first because patients do not perceive it at once as when bitten by a snake; and so are unable to afford themselves any help immediately. Moreover, the mischief starts, not from the skin, but from within. But the best thing, as soon as any one has perceived it, is to swallow a quantity of oil at once and vomit; then, when the præcordia have been emptied, to drink an antidote; or failing that undiluted wine.

There are, nevertheless, certain remedies proper for particular poisons, especially for the milder ones. If a potion of cantharides has been swallowed, all-beal pounded in milk should be given or galbanum with the addition of wine, or milk by itself.

If it be hemlock, but undiluted wine with rue should be taken in a large quantity, then the patient should be made to vomit; and after that laser is given in wine; and if free from fever he should be put into a hot bath; if not free, he should be anointed with heating remedies. After this, rest is necessary.

If it be hyoscyamus, honey wine should be drunk hot, or milk of any kind, especially asses' milk.

If it be white-lead, mallow or walnut juice rubbed up in wine is best.

If a leech has been swallowed,² vinegar with salt is to be drunk. When milk has curdled inside, either raisin wine or rennet or laser with vinegar.

If any one has eaten fungi that are not used, a

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ſpota aut cum ſale et aceto edenda eſt. Iſpi vero hi et ſpocie quidem diſcerni poſſunt ab utilibus et cocturae genere idonei fieri. Nam ſive ex oleo inferverant, ſive piri ſurculus cum hiſ infervit, omni noxa vacant.

- 19 Aduſtis quoque locis extrinſecus viſ inferitur: itaque ſequi videtur, ut de hiſ dicam. Haec autem optime curantur folio aut lilii aut linguae caninae aut betae in veteri vino oleoque decoctis; quorum quilibet protinus impoſitum ad ſanitatē perducit. Sed dividi quoque curatio potest in ea, quae mediocriter exedentia reprimendaeque primo et puſulas prohibeant et ſummam pelliculam exasperent; deinde ea, quae lenia ad ſanitatē perducant. Ex prioribus eſt lenticulae cum melle farina vel myrra cum vino vel creta Cimulia cum turis cortice contrita et aqua coacta atque, ubi uſus neceſſitas incidit, B aceto diluta. Ex inſequentibus quaelibet lipara: ſed klonea maxime eſt, quae vel plumbi roſeramentum vel vitellos habet. Eſt etiam illa aduſtorum curatio, dum inflammatio eſt, impoſitare habere cum melle lenticulam: ubi ea declinavit, farinam cum ruta vel porro vel marrubio, donec cruſtae cedant; tum cryum cum melle aut irum aut reſinam terebinthinam, donec ulcus purum ſit; novissime ſiccum linamentum.

22. Ab hiſ, quae extrinſecus incidunt, ad ea vendendum eſt, quae internus corrupta aliqua corporum parte nascentur. Ex quibus non aliud carbunculo peius eſt. Eius haec notae ſunt: rubor eſt, ſuperque eum non nimium puſulae eminent,

* V. 16. 25-28; eſpecially 25 and 28.

radish or purslane is to be eaten alone or with a draught of salt and vinegar. Such fungi may be distinguished from the roots in use by their appearance, and may be rendered safe by suitable cooking; for when boiled in oil, or along with a pear-tree twig, they lose all their noxious property.

Burns are likewise the product of external violence, and so it seems to follow that I should speak of them here. Now they are best treated by leaves either of lily or of hound's tongue or of beet, boiled in old wine and oil; any one of the above applied at once brings healing. But the treatment can also be divided into: first, a stage of moderately exsiccant and repressant applications both to check bilaters and to roughen the skin; next, a stage of soothing applications for healing. Among the former is lentil meal with honey, or myrrh with wine, or Cimolian chalk pounded up with frankincense bark and mixed with water, and when it has to be used, diluted with vinegar. Subsequent applications include anything that is greasy; but the most suitable is that containing lead slag or yolk of egg.² There is also another treatment of burns, namely, while the inflammation lasts, to keep lentil meal and honey on the wound; next, when the inflammation has subsided, flour with rue or with leek or with hore-bound, until the crusts fall off; then vetch meal with honey, or iris ointment or turpentine-resin, until the ulceration is clean, and finally dry blot.

28. From those lesions which are due to something from without we come to those which originate from within, when some bodily part has become corrupted. Of these none are worse than carbuncles, the signs of which are: redness, with a few pustules projecting

- maxime nigrae, interdum sublividae aut pallidae: in his sanies esse videtur. Infra color niger est; ipsum corpus aridum et durius quam naturaliter oportet; circaque quasi crusta est, eaque inflammatione cingitur: neque in eo loco levare cutis potest, sed inferiori cuti quasi adfixa est. Somnus urguet, nonnunquam horroz aut febris oritur, aut utrumque. Idque vitium subteractis quasi quibusdam radicibus serpit, interdum celerius, interdum tardius: supra quoque procedens insalvescit, dein lividum fit, circumque exiguae pustulae oriuntur; et si circa stomachum faucesve incidit, subito spiritum saepe elidit. — Nihil melius est quam protinus adurere; neque id grave est: nam non sentit, quoniam ea caro mortua est; finisque adurendi est, dum ex omni parte sensus doloris est. Tum deinde vulnus sicut cetera adurata curandum est: sequitur enim sub medicamentis erodentibus crusta undique a viva carne diducta, quae trahit secum quicquid corruptum erat; purusque iam sinus curari potest implentibus. At si in summa cute vitium est, possunt succurrere quaedam vel exedentia tantum vel etiam adurentia. Vis pro magnitudine adhibenda est. Quodcumque vero medicamentum impositum est, si satis proficit, protinus a vivo corruptam partem resolvit; certaque esse fiducia potest fore, ut undique vitiosa caro excidat, quae [huiusce rei medicamen] exest. Si [id non fit] medicamentum malo vincitur, atque ad

* Cf. *crustum pelliculum* (V. 27. 13). *Colony* appears to distinguish the *epidermis* from the *dermis*.

a little, mostly black, sometimes livid or pallid; their contents seems to be sanies; the colour underneath is black; the actual tissue is dry, and harder than it should be naturally; and round them there is a sort of crust, and outside that an inflammatory ring; and there the skin cannot be pinched up, but is as it were fixed in the underlying flesh. The patient is somnolent; sometimes there is shivering or fever or both. And this lesion spreads, sometimes quickly, sometimes slowly, pushing out a sort of root underneath: on the surface too as it spreads the skin gets paler, then becomes livid, and a ring of small pustoles arises: and if this occurs in the region of the gullet or fauces, often it suddenly stops the patient's breathing. The best thing is to apply a cauterj at once; this is not a severe procedure, because the patient does not feel it, since the flesh is dead; and the cauterizing is stopped when pain is felt all over the lesion. After that the wound is to be treated like other burns; for under erudent medicaments it follows that the crust becomes separated on all sides from the living flesh, and takes off with it whatever has become corrupted; and the cavity when clean can be dressed with some preparation to make flesh. But when the lesion is on the surface of the skin,^o it is possible to cure it simply by exsiccants or at any rate by caustics. The strength of the remedy adopted is to be proportionate to the lesion. But whatever the medicament is, if it is sufficiently effectual, it forthwith detaches the corrupted part from the living; we may be confident that wherever the application works, the diseased flesh everywhere sloughs off. If the medicament is being mastered by the disease, certainly there must be no delay in

astionem propterandum est. Sed in eiusmodi casu abstinendum a cibo, a vino est; aquam liberaliter bibere expedit. Magisque ea servanda sunt, si febricula quoque accessit.

- 2 Non idem periculum carcinoma adfert, nisi imprudentia curantis agitata est. Id vitium fit maxime in superioribus partibus, circa faciem, nares, aures, labra, mammas feminarum: † et in ulcere¹ autem aut splene hoc nascitur. Circa locum aliqua quasi puncta sentiuntur; laque immobilis, inaequalis tumet, interdum etiam torpet. Circa eum inflatae venae quasi recurvantur, haecque pallent aut fiunt, nonnunquam etiam in quibusdam delitescunt; tactusque is locus aliis dolorem adfert, in aliis sensum non habet. Et nonnunquam sine ulcere durior aut mollior est quam esse naturaliter debet: nonnunquam idem granthos ulcus accedit. Intenduntque nullam habet proprietatem, interdum simile is est, quae vocant Graeci condylomata asperitudine quadam et magnitudine; colorque eius ruber est aut lentleulae similis. Neque tuto feritur: nam protinus aut resolutio nervorum aut distentio insequitur. Saepe homo ictus ommutescit, atque eius anima deficit: quibusdam etiam, si id ipsum pressum est, quae circa sunt, intenduntur et intumescunt. Ob quae pessimum id genus est. Foreque primum id fit, quod cacorthes a Graecis nominatur; deinde ex

¹ This passage is corrupt: some M.S. has source for ulcers, Marx restores it as follows: etiam in utero autem aut here hoc nascitur. * This phrase also in the words of the spleen.

* See Appendix, pp. 591-2

² The name seems to require the mention of some other internal organ, for a suggested emendation see critical note

applying the caustery. But in such a case there should be abstinence from food and from wine; it is a good thing to drink water freely. And this should be done all the more when there is feverishness as well.

A carcinoma¹ does not give rise to the same danger unless it is irritated by imprudent treatment. This disease occurs mostly in the upper parts of the body, in the region of the face, nose, ears, lips, and in the breasts of women, but it may also arise in an ulceration,² or in the spleen. Around the spot is felt a sort of pricking; there is a fixed, irregular swelling, sometimes there is also numbness. Around it are dilated tortuous veins, pallid or livid in hue; sometimes in certain cases they are even hidden from view; and in some the part is painful to the touch, in others there is no feeling. And at times the part becomes harder or softer than natural, yet without ulcerating; and sometimes ulceration supervenes on all the above signs. The ulceration at times has no special characteristic; at times it resembles what the Greeks call condylomata,³ both in a sort of roughness and in size; its colour is either red or like that of lentils. It is not safe to give it a blow; for either paralysis or spasm of the sinews follows at once. Often from a blow on it a man loses speech and faints; in some also, if the place is pressed, the parts around become tense and swollen. Then it is the worst kind. And generally the first stage is what the Greeks call *cacoethes*;⁴

Targa followed by Darschburg deletes the whole sentence as a gloss, pointing out that the spleen is not in "the upper part."

¹ Knuckle-shaped swellings, VI. 16, 24, 47; VII. 20, 2.

² *κακοῦθος* is used by Hippocrates to mean malignant, e.g. *Corc.* 114, 110, 224, etc.; the word is not found in Galen except in this chapter.

en id carcinoma, quod sine ulcere est; deinde ulcus, ex eo thyalum. Tolli nihil nisi caecethes potest: reliqua curationibus irritantur; et quo maior vis adhibita est, eo magis. Quidam usi sunt medicamentis adurentibus, quidam ferro adusserunt, quidam scalpello exciderunt: neque ulla unquam medicina profecit, sed adusta protinus concitata sunt
D et increverunt, donec occiderent. Excisa, etiam post inductam cicatricem, tamen reverterunt et causam mortis adtulerunt: cum interea plerique nullam vim adhibendo, qua tollere id malum temptent, sed imponendo tantum lenia medicamenta, quae quasi blandiantur, quominus ad ultimum senectutem perveniant, non prohibentur. Discernere autem caecethes, quod curationem recipit, a catatonate, quod non recipit, nemo scite¹ potest sed
E tempore et experimento. — Ergo ubi primum id vitium notatum est, imponi debent medicamenta adurentia. Si levatur malum, minuuntur eius indicia, procedere curatio potest et ad scalpellum, et ad ustionem. Si protinus irritatum est, scire licet iam carcinoma esse, removendaque sunt omnia acris, omnia vehementia. Sed si sine ulcere is locus durus est, imponi sicuti quam pinguissem aut rhyppodes
F emplastrum satis est. Si ulcus aequale est, ceratum ex rosa incindendum est, adiciendusque ei pulvis ex contrita testa, ex qua faber ferrarius tingere caudam ferrum solitus est. Si id nimium supererit, temptanda aqua acris est, quae lenissima ex adurentibus est, eatenus ne quid emicare patiatur;

¹ So Durembury for the MSS. scire.

* For thyalum (meaning thyme-flowers) see V. 88. 14 B-E.

¹ V. 18. 16.

then from that follows a carcinoma without ulceration; then ulceration, and from that a kind of wart.² It is only the caecoths which can be removed; the other stages are irritated by treatment; and the more so the more vigorous it is. Some have used caustic medicaments, some the cautery, some excision with a scalpel; but no medicament has ever given relief; the parts cauterized are excited immediately to an increase until they cause death. After excision, even when a scar has formed, none the less the disease has returned, and caused death; while at the same time the majority of patients, though no violent measures are applied in the attempt to remove the tumour, but only mild applications in order to soothe it, attain to a ripe old age in spite of it. No one, however, except by time and experiment, can have the skill to distinguish a caecoths which admits of being treated from a carcinoma which does not. Therefore, as soon as the lesion is first noted, caustic medicaments should be applied. If the disease is relieved, if its indications are lessened, the treatment can be advanced to the use of the knife and of the cautery. If it is irritated at once, we may recognize that it is already a carcinoma, and that all acrid and severe remedies are to be avoided. But if the place is hardened without ulceration, it is enough to put on a fig of the fattest sort or the plaster called *rhypodes*.¹ If there is an ulceration level with the skin, the rose ocerate is to be applied, to which must be added powder from a crueted earthenware pot, into which a blacksmith has been accustomed to dip red-hot iron. If there is a considerable growth upon it, copper scales, which are the mildest of the caustics, are to be used, until they check the tendency to

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sed ita, si alibi exacerbat: si minus, eodem cerato contenti esse debemus.

- 3 Est etiam ulcus, quod *ἄγριον* Græci vocant. Id et per se nascitur et interdum ulcervi ex alia causa facto supervenit. Color est vel lividus vel niger, odor foedus, multus et mucris similis visor. Ipsum ulcus neque tactum neque medicamentum sentit: pruriginē tantum movetur. At circa dolor est et inflammatio; interdum etiam febris oritur, nonnunquam ex ulcere sanguis erumpit. Atque id quoque malum serpit. Quæ omnia sæpe intenduntur fitque ex his ulcus, quod *plagedainam* Græci vocant, quia celeriter serpendo penetrandoque usque ossa corpus vorat. Id ulcus inaequale est, caeno simile; inestque multus umor glutinosus; odor intolerabilis, maiorque quam pro modo ulceris inflammatio. Utrunque, sicut omnis cancer, sit maxime in senibus vel iis, quorum corpora molli habitus sunt.—Curatio utriusque eadem est, sed in maiore C. curatio magis necessaria. Ac primum a victus ratione ordinandus est, ut quiescat in lectulo, ut primis diebus a cibo abstineat, aquam quam plurimam adsumat; alvus quoque ei docatur; dein post inflammationem cibum boni succi capiat, vitæ omnibus aeribus; potionis quantum volet, sic ut interdum quidem aqua contentus sit, in æva vero etiam vini austeri aliquid bibat. Non neque tamen fame in iis, quos *φειδῶνα* urget, atque iis, qui

* This word is first found in Celsus. Hippocrates (*Coac.* 469) uses *ἄγριον*. Both words are derived from *ἄγρις* (wild beast; and denote the character of the ulceration.

* An 'eating' sore *φειδῶνα* (*φειδῶν*).

growth; but only so if it is in no wise made worse; when the growth is less prominent we ought to rest content with the rose cerate.

There is also an ulceration which the Greeks call *therioma*.^a This may arise spontaneously, and at times it may supervene upon ulceration from another cause. It has either a red or black colour, a foul odour, and an abundant mucus-like discharge. The ulcer itself is insensitive to touch and applications; there is just disturbance by itching. But around there is pain and inflammation; sometimes even fever is set up, occasionally blood is discharged from the ulceration. This also is a spreading disease. And all these signs often extend, and there results from them an ulcer which the Greeks call *phagedaena*,^b because it spreads rapidly and penetrates down to the bones and so devours the flesh. This ulceration is uneven, bog-like; there is a large amount of glutinous discharge; the stench is intolerable, and the inflammation is greater than accords with the extent of the ulceration. Both *therioma* and *phagedaena*, like all canker, occur for the most part in the aged or those of a bad habit of body. Both are treated in the same way, but treatment is more necessary in the severer form. Firstly, a regimen must be enforced, so that the patient rests in bed, abstains from food for the first days, drinks very freely of water; also has the bowels moved by a clyster; then, on the subsidence of the inflammation, takes digestible food, avoiding everything acid; drinks as much as he likes, but for the time being contents himself with water, except that at dinner he may drink a little dry wine. But fasting is not to be used for patients with *phagedaena*

therioma adhuc habebunt, utendum erit. Et victus
 D quidem talis necessarius est. Super uerus vero
 inspergenda arida aloë . . .¹ oenanthe est, et, si
 parum proficiet, chalcitis. Ac si quis nervus exesa
 carne nudatus est, contegendus ante Unteolo est,
 ne sub eo medicamento aduratur. Si validioribus
 etiamnum remediis opus est, ad eas compositiones
 vendendum est, quae vehementius adurunt. Quic-
 quid autem inspergitur, averso specillo infundi debet.
 F. Superdanda cum melle sunt vel linamenta vel oleae
 folia ex vino decocta vel inarrubium; eaque linteolo
 contegenda in aqua frigida madefacto dein bene
 expresso; circaque, qua tumor ex inflammatione est,
 imponenda quae reprimant cataplasmata. Si sub his
 nihil proficitur, ferro locus aduri debet, diligenter
 nervis, si qui apparent, ante contactis. Adustum vel
 medicamentis vel ferro corpus primum purgandum,
 deinde implendum esse apparere cuilibet ex prioribus
 potest.

4. Sacris quoque ignis malis ulceribus adnumerari
 debet. Flux duae species sunt: alterum est subhy-
 bicundum aut mixtum rubore atque pallore exasper-
 atumque per pusulas continuus, quarum nulla
 † alteri² maior est, sed plurimae perexiguae: in his
 semper fere pus et saepe rubor cum calore est.
 Serpitque id nonnunquam saescente eo, quod
 primum vitiatum est, nonnunquam etiam exulcerato,
 ubi ruptis pusulis ulcus continuatur umorque exit,
 qui esse inter sandera et pus videri potest. Fit max-
 ime in pectore aut lateribus aut eminentibus partibus,

¹ *Moss made:* aloë <contrita vel> oenanthe and this is translated.

² *Aloni altior ad:* altera.

to the same extent as for those with *thierionna*. Over the ulceration too should be dusted dry lichen-*aloes* pounded up or vine-flower, and if this does no good, copper ore; and if by erosion of flesh a sinew has become exposed, it must first be covered by lint, to prevent the medicament from burning it. If still stronger remedies are required, then recourse must be had to more active caustics. But whatever the medicament to be sprinkled on, it ought to be applied by means of the flat end of a probe. Over this should be put either lint soaked in honey or olive-leaves boiled in wine or horehound; and this is to be covered over by lint well wrung out of cold water; the inflammatory swelling around is to be covered with repressant poultices. If there is no benefit from these measures, the place should be burnt with the cautery, exposed sinews being first carefully covered over. The tissue burnt, whether by caustic or by the cautery, is first to be cleaned, then to be filled up with new flesh, as is clear to anyone from what has been stated before.

*Ignis sacer** should be counted also among the bad ulcerations. Of this there are two kinds; one is reddish or partly red, partly pale and roughened by a chronic pustulation, the pustules all of about equal size, but mostly very small: in them there is nearly always pus and often there is redness with heat. And sometimes the disease spreads while the first part attacked is healing; sometimes even after this is ulcerated, when the pustules have ruptured and the ulcer continues and a humour is discharged which appears to be something between *sarles* and pus. It attacks chiefly the chest or flanks or

* See Appendix, p. 390.

- B praeclipueque in plantis. Alterum autem est in summae cutis exulceratione, sed sine altitudine, latum, sublividum, inaequaliter tamen; mediocriter sanescit extremis procedentibus. Ac saepe id, quod iam sanum videbatur, iterum exulceratur. At circa proxima cutis, quae vitium receptura est, tumidior et durior est coloremque habet ex rubro subnigrum. Atque hoc quoque malo fere corpora seniores lempantur aut quae mali habitus sunt, sed in exaribus
- C maxime.—Omnis autem sacer ignis, ut minimum periculum habet ex illo, quae serpunt, sic prope difficillime tollitur. Medicamentum eius fortuitum est una die febri, quae unorem noxium absumat. Pus quo crassius et albidius est, eo periculi minus est. Prodest etiam infra os vulnere . . . laedi,¹ quo plus puris exeat et id, quod ibi corruptum corpus est, extrahatur. Sed tamen si febricula accessit, abstinentia, lectulo alvi ductione opus est. In omni vero sacro igni neque lenibus et glutinosis [cibis], neque calidis et acerbis utendum est, sed iis, quae inter utrumque sunt, qualls est panis sive fermento, piscis, haedus, aves, exceptoque apro orons fere venatio. Si non est febricula, et gestatio utilis est et ambulatio et vinum austere et balneum. Atque in hoc quoque genere potio magis liberalis esse quam cibis debet. Ipsa autem ulcera si mediocriter serpunt, aqua calida, si vehementius, vino calido fovenda sunt; deinde acui pusulae, quaecunque sunt, aperiendae; tum imponenda ea, quae putrem carnem

¹ The text is corrupt: one MS. reads *laedum* for *vulnere*: Marx would insert *sculpello* before *laedi* and this is translated; other emendations are: *infra ulcera locum caedi* (P. d. Linder), and *infra ulcera incidere* (Torre).

² See vol. i. pp. 181, 183 note c; but the meaning here may be only riding (i.e. being carried about) as opposed to walking.

extremities, particularly the soles of the feet. The second form, again, consists of a superficial ulceration, not going deep, but wide, somewhat livid, yet puffy; while it heals at the centre, it extends at the margins. And often the part which apparently had healed again ulcerates. But the skin around, which is about to be invaded by the disease, becomes more swollen and harder and of a dusky red colour. And it is the aged who are mostly afflicted by this malady too or those with a bad habit of body, but chiefly in the legs. Now all cases of erysipelas, although the least dangerous of the ulcerations which spread, are the most difficult to relieve. A chance remedy for it is a one-day fever which carries off noxious humour. The thicker and the whiter the pus, the less the danger. It is also beneficial to make incisions below the openings of the sores, to let a larger amount of pus escape, and to extract it because the body there is corrupt. If, however, slight fever supervenes, abstinence, rest in bed and a clyster are needed. In erysipelas of all kinds, neither mild and glutinous nor salted and acrid foods should be used, but material of the middle class, such as unleavened bread, fish, kid, poultry and all kinds of game, except wild boar's meat. When there is no feverishness, both rocking¹ and walking are of service, and dry wine and the bath. And in this class of cases drink should be taken more freely than food. But if the ulceration spreads slowly it should be fomented with hot water; if rapidly, with hot wine; then whatever pustules there are, must be opened with a needle; afterwards applications are to be made which corrode

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Exerunt. Ubi inflammatio sublata ulcusque purgatum est, imponi lena medicamentum debet. In altero autem genere possunt proficere maia. Cotonea in vino cocta atque contrita, potest emplastrum vel Heræ vel tetrapharmacum, cui quinta pars turis adiecta sit, potest nigra hedera ex vino austero cocta; ac, si celeriter malum serpit, non aliud magis proficit. Purgato ulcere, quod in summa cute esse proposui (B), satis ad sanitatem eodem lenia medicamenta proficiunt.

6 Chironæum autem ulcus appellatur, quod et magnum est et habet oras duras, callosas, tumentes. Exit sanies non multa sed tenuis. Odor malus neque in ulcere neque in eius umore est; nulla inflammatio, dolor modicus est; nihil serpit, ideoque nullum periculum affert, sed non facile sanescit. Interdum tenula cicatrix inducitur, deinde iterum rumpitur ulcusque renovatur. Fit maxime in pedibus et cruribus. Super id imponi debet, quod et lena aliquid et vehemens et reprimens habeat. Quale eius rei causa sit ex his: aquarum aeris, plumbi eloti combusti, singulorum P. * III; eademine, ceræ, singulorum P. * VIII; rosæ quantum satis est ad ceram simul cum eis molliendam.

7 Fiunt etiam ex frigore ulcera hierna, maxime in pueris, et præcipue pedibus digitisque eorum, nonnunquam etiam in manibus. Rubor cum inflammatione modicus est; interdum pusulae oriuntur, deinde exulceratio: dolor autem modicus.

* V. 22. 7.

* V. 24. 4.

* Vol. I. 484.

* V. 22. 2.

* V. 19. 9.

† A chronic ulcer which was so called in reference to the story of the centaur Chiron who received a wound which would not heal and therefore gave up his immortality.

putrid flesh.* When the inflammation is relieved and the ulcer cleaned, soothing ointment should be applied.⁶ But in the former kind,⁷ quinces, boiled in wine and pounded, may prove beneficial, as also a plaster, either that of Heras⁸ or the tetrapharmacum,⁹ with a fifth part of frankincense added, or black ivy boiled in dry wine; and if the disease is spreading rapidly there is nothing better. When the ulceration has been cleaned, the same soothing remedies which I prescribed above for the superficial variety are sufficient to induce healing.

Again, the ulcer called *chimæan*¹ is large and has hard, callous, swollen margins. A sanies exudes, which is not copious, but thin. There is no bad odour, either in the ulcer or in its discharge; no inflammation; pain is moderate; it does not spread, so it brings no danger, but it does not heal readily. At times a thin scab is produced, then in turn it is broken down and the ulceration is renewed. It occurs chiefly on the feet and legs. On it should be applied something which is at once soothing, and active and repressant, such as the following: copper scales, washed lead calcined, 16 grains, each, cadmia and wax, 32 grains, each, along with enough rose-oil to give the wax together with the other materials a soft consistence.

Ulcers are also produced in winter by the cold,² mostly in children, and particularly on their feet and toes, sometimes also on the hands. There is redness with moderate inflammation; sometimes pustules arise followed by ulceration; the pain is

¹ *Chimæan*, *ulcus hiemæum*, Greek *χίμαρον*. *Chimæans* were also called *perionæ* (Pliny, *N.H.* 23. 8. 37, § 74).

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Prurigo maior est: nonnunquam ulcus exit, sed non multus, qui referre vel pus vel saniem videtur.— In primis multa calida aqua fovendum est, in qua rapa decocta, aut si ea non sunt, aliquae verbenae ex
B reprimentibus. Si nondum adaperitum ulcus, aes, quam maxime calidum quis pati potest, admoveendum est. Si iam exulceratio est, imponi debet alumen aequa portione cum tere contritum vino adiecto, aut malicorium in aqua coctum deinde contritum. Si summa detracta pellicula est, hic quoque melius lenia medicamenta proficiunt.

7 Struma quoque est tumor, in quo subter concreta quaedam ex pure et sanguine quasi glandulae oriuntur; quae vel praecipue fatigare medicos solent, quoniam et febres movent nec unquam facile maturascunt; et si ve ferro si ve medicamentis curantur, plerumque iterum iuxta cicatrices ipsas resurgunt multoque post medicamenta saepius; quibus id quoque addidit, quod longo spatio detinent. Nasuntur maxime in cervice, sed etiam in alis et inguinibus . . .¹ lateribus: in manibus quoque feminarum se reperisse [chirurgicus] Megethion auctor est.

B Propter hanc et alburna veratrum recte datur, atque etiam saepias, donec ea digerantur, et medicamenta imponuntur, quae umorem vel educant vel dissipent, quorum supra (cap. xviii, 1-7 A, 13 seqq.) mentio facta est. Adurentibus quoque quidam utuntur,

¹ Some words have fallen out; Marx suggests including in which is translated.

* Celsum is here describing swellings of the lymphatic glands of the neck, axilla and groin often tuberculous (scrophulous) in origin and leading to the formation of a cold abscess. Cf. II. I. 19 and V. 18. 5-31. The word struma

moderate. The itching is greater; at times humor exudes, but not much; it seems to resemble either pus or sanies. In the first place, the ulcers are to be fomented freely with a hot decoction of turnips, or, if these are not to be had, some kind of repressant vervain. If there is not yet an open ulcer, copper series as hot as can be borne are to be applied. If there is already an ulceration, then apply equal parts of alum and frankincense pounded together with the addition of wine, or pomegranate-rind boiled in water and then pounded. If the skin has become detached, in that case also soothing medicaments do good.

Struma,* again, is a swelling, in which there occur underneath certain concretions of pus and blood like little glands; they are specially embarrassing to medical men, for they set up fever and yet do not quickly come to a head; and whether they are treated by incision or by medicaments, they are generally prone to recur in the neighbourhood of their scars, and this happens much more often after the application of medicaments; and in addition to all this, they are of long duration. These swellings arise particularly in the neck, but also in the armpits and groins and in the flanks. [The surgeon, Megec stated that he had met with them also in the breasts of women.

For these white hellebore is an appropriate remedy, and this must be taken frequently until they are dispersed; and also the medicaments which have been mentioned above are applied in order to draw out or disperse the humor. Some also use caustics[†]

formerly used to describe the condition by English writers is now generally applied especially to goitre. [†] V. 2.

quae exedunt crustaque eam locum astringant; tunc vero ut ulcus curant. Quaecunque autem ratio curandi est, corpus puro ulcere exercendum atque alendum est, donec ad cicatricem perveniat. Quae cum medici doceant, quorundam rusticorum experimento cognitum, quem struma male habet, si [eum] anguem edit, liberari.

- 8 Furunculus vero est tuberculum acutum cum inflammatione et dolore, maximeque ubi iam in pus vertit. Qui ubi adaperitus est, et exit pus, apparet pars carnis in pus versa, pars corrupta subalbida, subruba, quem ventriculum quidam furunculi nominant. In eo nullum periculum est, etiam ut nulla curatio adhibeatur: maturascit enī per se atque erumpit; sed dolor efficit, ut potior medicina sit, quae maturius liberet.—Proprium eius medicamentum galbanum est: sed alia quoque quae supra (cap. xviii) comprehensa sunt. Si cetera desunt, imponi debet primum non pingue emplastrum, ut id reprimat; deinde, si non repressit, quodlibet puri movendo accommodatum; si ne id quidem est, vel resina vel fermentum. Expresso pure nulla ultra curatio necessaria est.

- 9 Phyma vero nominatur tuberculum furunculo simile, sed rotundius et planius, saepe etiam natus. Nam furunculus ovi disūdii magnitudinem raro explet, nunquam excedit: phyma etiam latius patere consuevit, sed inflammatio dolorque sub eo minores sunt. Ubi divisum est, pus eodem modo apparet; ventriculum, ut in furunculo, non invenitur,

which eat away, and by forming a scab harden the place; after which they dress it like an ulceration. Whatever the mode of treatment, however, after the ulcer has cleaned, the patient is to have exercise and nourishment until the scar is formed. Although these are the doctrines of the physicians; it has been found out by the experience of some country folk, that anyone with a bad struma may be freed from it by eating a snake.

The boil, again, is a pointed swelling attended by inflammation and pain, and especially so when it is being converted into pus. When it has opened and the pus gone out, it is seen that part of the flesh has been turned into pus, part into a greyish-reddish core which some call the *ear* of the boil. There is no danger in it, even although no treatment is adopted; for it ripens of itself, and bursts; but the pain renders treatment preferable in order to afford earlier relief. The special medicine for this is *galbanum*;* but there are others also which have been mentioned above. If none of these are available a plaster that is not greasy should first be applied to disperse it; next, if this is not effective, something adapted to promote suppuration; if even that is not to be had, either raisin wine or yeast. When the pus has been squeezed out, no further treatment is needed.

A *phyma* is a swelling which resembles a boil, but is milder and flatter, often also larger. For a boil rarely reaches the size of half an egg, and never exceeds it; a *phyma* commonly extends even over a wider area, but the pain and the inflammation in it are less. When it has been opened, pus appears in the same way; no core is found as in a

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verum omnis corrupte caro in pus vertitur. Id autem in pueris et saepius nascitur et facilius tollitur; in iuvenibus rarius oritur et difficilius curatur. Ubi aetas luxuravit, ne nascitur quidem. Quibus vero medicamentis discederet, supra (18, 16-20) propositum est.

- 10 Phlegmon autem est tumor non altus, latus, in quo quiddam pusulae simile est. Dolor distentique vehemens est, et maior quam pro magnitudine tumoris, interdum etiam febricula. Idque tarde maturescit neque magnopere in pus convertitur. Fit maxime aut in vertice aut in alis aut inguinibus. Panum a similitudine figurae nostri vocant. Atque id ipsum quo medicamento tolleretur, supra (18, 12) demonstravi.

- 11 Sed cum omnes hi nihil nisi minuti abscessus sint, generale nomen trahit lacus vitium ad suppurationem spectans; idque fere fit aut post febres aut post dolores parva alicuius maximeque eos, qui ventrem infestant. Saepiusque oculis expositum est, si quidem lacus aliquid intumescit ad similitudinem cili, quod phyma vocari proposui (§ 9), rubetque cum calore et paulo post etiam cum duritia, magisque ² innocentem ³ indolescit et sitim vigiliamque exprimit: interdum tamen nihil horum in cute deprehendi potest, maximeque ubi altius pus movetur, sed cum siti vigiliisque sentiuntur intus aliquae

² This word must be corrupt. One MS. reads *inde venter*. Tergo suggests *id nocenter*. *Mora conjectures innocenter* for *innocenter* and *idm* is *various*.

* V. 18, 18, 20, 23.

* V. 18, 15.

boil, in fact all the corrupted flesh is turned into pus. Now in children this occurs more often and is more readily relieved; in young adults it is more rare and more difficult to treat. Where age has hardened the body, the disease does not even occur. By what medicaments it should be dispersed has been stated above.⁴

Phygetron, again, is a wide swelling, not much raised up, in which there is a certain resemblance to a pustule.⁵ The pain and tension is severe, and more than would be expected from the size of the swelling; at times there is also feverishness. The ripening takes place slowly, and not much pus is formed. It occurs particularly on the top of the head, or in the armpits or groins. Our people call it *panus*, from its spindle-shape. And I have pointed out above by what medicament this should be relieved.⁶

But although all these diseases are really only minute abscesses, that name implies in general a more extensive lesion, tending to suppuration; and it occurs usually either after fevers or after pains in some part, and particularly after those which have attacked the abdomen. And generally it is visible, since there is some rather widespread swelling, like that which I have previously described as called *phyma*, and it grows red and hot and shortly afterwards hard as well, and becomes more painful as it increases and occasions both thirst and insomnia: sometimes, however, there may be none of these signs to note in the skin, and especially when pus is forming more deeply; but along with the thirst and insomnia some stabbing pains are felt internally.

⁴ V. 18. 18.

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- B punctiones. Et quod desubito durius non est, melius² est et quamvis non rubet, coloris tamen aliter mutati est. Quae aliqua laevi parte oriente nascuntur: tumor ruborque multo ante incipiunt. Sed si locus mollis est, advertendus is materiae aditus est per cataplasmata, quae simul et reprimunt et refrigerant; quasia et alias (II. 33, 2; V. 18, 21) et paulo ante in erysipelate (V. 26, 33) proposui: si iam durior est, ad ea veniendum est, quae digerant et resolvant; qualis est ficus arida contusa, aut faex mixta cum cerato, quod ex adipis nulla coactum sit, aut cucumeris radix, cui ex farina duae partes C adiectae sint anteq. ex melle decoctae. Licet etiam miscere nequis portionibus Hammoniacum, galbanum, propolim, viscum, pondusque adicere myrrae dimidio minus quam in prioribus singulis erit. Atque emplastra quoque et malagmata idem efficiunt, quae supra (18, 7-20; 19, 9-17) explicui. Quod per haec discussum non est, necesse est matureseat; idque quo celerius fiat, imponenda est farina hordeacea ex aqua cocta . . .³ recte miscetur. Eadem autem haec in minoribus quoque abscessibus, quorum nomina proprietatesque supra (§ 1-10) reddidi, recte sunt; eademque omnium curatio, tantum modum distat.
- D Crudum est autem, in quo magis quasi . . .⁴ venarum motus est, et gravitas et ardor et distentio et dolor et rubor et durities et, si maior abscessus est, horror aut etiam febricula permanet; penitusque

² Reading melius with one MS. Mure recipio mollis.

³ Constantinus inserit: cui et aliquid aliquid.

⁴ Mure inserta ferventium and this is translated.

⁵ II. 33, 2; V. 18, 21-22, 33.

⁶ V. 18, 7-20—19, 9-17.

And (it is more favourable) when it does not become harder on a sudden, and although it does not redden, nevertheless changes somewhat in colour. Such are the signs which arise when pus is already forming; the swelling and redness begin long before. But if the place is soft, the gathering of the diseased matter is to be diverted by poultices which are at the same time repressant and cooling; such as I have mentioned elsewhere, and just above under erysipelas;* if it has become already hard, recourse must be had to poultices for dispersing and resolving; such as a dried and crushed fig, or violets mixed with cerate, made up with hog's lard, or cucumber-root to which has been added twice the quantity of flour, previously boiled in honey wine. Again, we may mix equal part by weight of ammoniacum, galbanum, propolis, mistletoe-juice, and of myrrh half as much by weight as of the other ingredients. And the plasters and emollients which I have described above^b have the same effect. A swelling which has not been dispersed by such measures must needs mature; that it may do so more quickly, barley-meal should be put on boiled in water (with which also some herb) should be mixed. The same applications are appropriate also for the smaller abscesses, the names and peculiarities of which I have referred to above; treatment is the same for all, only differing in degree.^c

Now a swelling is immature when the blood-vessels throb more as if they were bubbling and there is weight and heat and tension and pain and redness and hardening and, if the abscess is larger, shivering or even persistent feverishness; and a

* V. 28. 1-10.

condita suppuratio est, si pro luis, quae alibi cutis ostendit, punctiones sunt. Ubi ista se remiserunt, sanique is locus prurit et aut sublividus aut subalbidus est, matura suppuratio est; eaque ubi vel per ipsa medicamenta vel etiam ferro aperta est, pus debet emitti. Tum si qua in aëis vel inguinibus sunt, sine linamento nutrienda sunt. In ceteris quoque partibus, si una plaga exigua est, si medicinis suppuratio fuit, si non alte penetravit, si febris non est, si valet corpus, neque linamenta supervacua sunt. In reliquis, parces tamen, nec nisi . . .¹ plaga est, imponi debent. Commode vero vel super linamenta vel sine his imponitur leucitula ex melle aut malicorium ex vino coctum; quae et per se et mixta fidonea sunt. Si qua citra duriora sunt, ad ea mollienda vel malva contrita vel faeni (iracei) linive semen ex passio coctum superdandum est. Quicquid deinde impositum est, non astringi sed modice deligari debet. Illo neminem decipi decet, ut in hoc genere cerato utatur. Cetera quae pertinent ad purgandum ulcus, ad implendum, ad cicatricem inducendam, conveniuntque, in vulneribus (26, 27) exposita sunt.

- 12 Nonnunquam autem et ex eiusmodi abscessibus et ex aliis ulcerum generibus fistulae oriuntur. Id nomen est ulceri alto, augusto, calloso. Fit in omni fere parte corporis, habetque quaedam in singulis locis propria. Prius de communibus dicam. Genera igitur plura fistularum sunt, siquidem aliae breves sunt, aliae altius penetrant; aliae rectae

¹ Constantinus imperator magnus.

suppuration is completely concealed, if, instead of the signs presented by the skin in other cases, there are stabbing pains. When these signs subside, and the place begins to itch, and is either bluish or greyish, the suppuration has matured: and when it has been opened by means of these medicaments or even by the knife, the pus must be let out. Then if there are any abscesses in the armpits or groins, they must be dressed without inserting lint. In other parts also, if there is one small opening, if there has been moderate suppuration, if it has not penetrated deeply, if there is no fever, if the patient is strong, lint is equally superfluous. In other cases lint should be applied, but sparingly, and only if the opening is (large). It is beneficial, whether lint is used or not, to apply lentil meal with honey, or pomegranate rind boiled in wine; these are suitable alone or mixed together. If the parts are hard, they should be softened by applying either pounded mallow or fenugreek or flax seed boiled in raisin wine. Whatever dressing is afterwards applied should not be tight but bandaged on lightly. No one should be misled into applying a cerate in this sort of case. All the other directions for clearing the ulceration, forming flesh, and inducing a scar have been described in treating of wounds.^a

Sometimes, again, fistulae arise, both from abscesses of this kind and from other sorts of ulceration. That is the name for a deep, narrow, hardened ulcer. A fistula occurs in almost any part of the body, but in each place it has some peculiarities. I shall speak first of its general characteristics. There are many kinds of fistulae, then, and whilst some are short, others penetrate deeper; some run straight

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intus feruntur, aliae multoque plures transversae; aliae simplices sunt, aliae duplices triplicesve ab uno ore intus usque quae sunt; aut etiam in plures sinus dividuntur; aliae rectae, aliae flexae et tortuosae sunt. Aliae intra carnem desinunt, aliae ad ossa aut cartilagineam penetrant aut, ubi centrum horum adest, ad interiora perveniunt; aliae deinde facile, aliae cum difficultate curantur; atque etiam quaedam insanabiles reperiuntur.—Expedita curatio in fistula simplici recenti intra carnem, adjuvatque ipsum corpus, si invenit, si firmum est: inimica contraria his sunt; itemque si fistula os vel cartilagineam vel nervum vel musculos laesit; si articulum occupavit; si vel ad vesicam vel ad pulmonem vel ad vulvam vel ad grandes venas arteriasve vel ad iuniora, ut guttur, C stomachum, thoracem, penetravit. Ad interiora quoque eam tendere semper periculosum, saepe pestiferum est. Quibus multum mali accedit, si corpus vel aegrum vel senile vel mali habitus est. Ante omnia autem demitti specillum in fistulam convenit, ut quo tendat et quam alto perveniat, scire possimus, simul etiam protius unde an sloclor sit; quod extracto specillo patet. Si vero os in vicino est, id quoque disci potest, iam necne eo fistula pervenerit; . . .¹ penetravit, quatenus noc-
D erit. Nam si molle est, quod ultimo specillo contingitur, intra carnem adhuc vitium est: si magis id resistit, ad os ventum est. Ibi deinde si labitur specillum, nondum caries est: si non labitur, sed aequali innititur, caries quidem, verum adhuc

¹ *Mora insertis et ad os*

Inwards, others, and by far the most numerous, crosswise; some are simple, others beginning by one opening form two or three branches inside or even divide into several passages; some go straight, others are curved and tortuous. Some end in the flesh, others penetrate to bone or to cartilage, or, when neither of these is underneath, reach to the inner parts; some, therefore, are treated easily, others with difficulty; and some are even found to be incurable. The treatment is speedy when the fistula is simple, recent and only involving the flesh, and the body itself helps, when it is youthful and sound; contrary conditions are inimical; also if the fistula has damaged bone or cartilage or sinew or muscles; if it has involved a joint; or if it has penetrated either to the bladder or lung or womb or to large veins or arteries or to hollow regions, such as the throat, gullet or thorax. When one the fistula goes towards the intestines it is always dangerous, often deadly. When the body is either sick or aged or in bad condition, the case is much worse. First of all, however, it is proper to pass a probe into the fistula, that we may learn both its direction and depth, and at the same time whether it is moist or rather dry. This is known when the probe is withdrawn. But if there is bone in the neighbourhood, we can also learn whether the fistula has reached and penetrated the bone or not, and how far the damage has gone. For if what is touched by the end of the probe is soft, the disease is still limited to the flesh: if it meets with more resistance, the fistula has reached bone. But when the probe slides smoothly, there is not yet decay; if it does not so slide, but meets with an even surface, there is some decay although

levis est: si inaequale quonque et asperum subest, E
 vehementius os exesum est. At cartilago ubi
 subest, ipsa sedes docet perventumque esse ad carnem
 ex renu patet. Et ex his quidem colliguntur
 fistularum sedes, spatia, noxae: simplices vero esse
 sint, an in plures partes diducantur, cognosci potest
 ex modo puris; cuius si plus fertur quam quod
 simplici spatio convenit, plures sinus esse manifestum
 est; cumque fere iuxta sint caro et nervos et aliqua
 nervosa, quales fere tunicae membranaeque sunt,
 genus quoque puris docebit, num plures sinus intus
 F diversa corporis genera perosierint. Siquidem in
 carne purus leve, album, copiosius fertur; at ex nervoso
 loco coloris quidem minorem, sed tenuius et minus;
 ex nervo pingue et oleo non dissimile. Denique
 etiam corporis inclinatio docet, num in plures partes
 fistulae penetrarint, quia saepe cum quis aliter
 decubuit aliterve membrum collocavit, purus ferri quod
 iam desiderat iterum incipit; testaturque non solum
 alium sinum esse ex quo descendat, sed etiam in
 G aliam corporis partem eum tendere. Sed si et in
 carne et recens et simplex est, ac neque rugosa
 neque cava sede neque in articulo, sed in eo membro,
 quod per se immobile non nisi cum toto corpore
 movetur, satis proficiet emplastrum, quod recentibus
 vulneribus inponitur, dum habeat vel sale vel alumen
 vel squamam saris vel aeruginem vel ex metallicis

still slight; if what underlies is uneven also and rough, the bone has become more seriously eaten away. But the position of the fistula shows where there is underlying cartilage, and resistance to the probe shows when this has been reached. And from these signs we may gather the situation, extent and harmfulness of fistulae; whether too they are simple, or have several branches, can be estimated from the amount of pus; for if there is more than one opening will account for, it is clear that there are several branches; and since generally flesh and sinew and sinewy tissue such as sheaths and membranes are near the fistula, the character of the pus also will show whether the several branches have eaten into other parts of the body. For pus derived from flesh is smooth, white and fairly plentiful; from sinewy structures it is of the same colour but thinner and less in quantity; from sinews it is fatty and not unlike oil. Further also, the bending of the body indicates whether the fistulae have penetrated in several directions, because often when a patient has changed his recumbent posture, or held a limb in a different position, pus which had previously ceased, begins to discharge again; and it then becomes evident, not only that there is another branch from which pus is being discharged, but also that it is tending into another part of the body. But if the fistula is in the flesh, and is recent and simple, and is not tortuous or in a cavity or joint, but in a part which remains still unless moved with the body generally, a sufficiently effective application is a plaster such as is applied to recent wounds, so long as it is composed of either salt or of alum or of copper scales or of verdigris or some other metallic

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aliquid; exque eo collyrium fieri debet altera parte tenuius, altera parte parsu plenius; idque ea parte, qua tenuius est, antecedente demitti oportet in **H** fistulam, donec purus sanguis se ostendat. Quae in omnibus collyriis fistularum perpetua sint. Idem deinde emplastrum in lintera superinponendum, supraque iniicienda spongia est in acetum ante demissa; solvique quinto die satis est. Genusque victus adhibendum est, quo carnem alii docui (V. 14. 20, 30). Ac si longius a praenordia fistula est, ex intervallo ieiunum radiculas esse, deinde vomere necessarium est. Vetustate callosa fit fistula. Callosus autem neminem fallit, quia durus est et aut **I** albus aut pallidus. Sed tum validioribus medicamentis opus est; quale est, quod habet: papaveris lacrimae P. $\frac{1}{2}$ I; cummis P. $\frac{1}{2}$ III =; cedulae P. $\frac{1}{2}$ IIII; atramenti sutori P. $\frac{1}{2}$ VIII; ex quibus aqua coactis collyrium fit. Aut in quo sunt: gallae P. $\frac{1}{2}$ —; aeruginis, sandaracae, aluminis Aegypti, singulorum P. $\frac{1}{2}$ I; atramenti sutori combusti P. $\frac{1}{2}$ II. Aut quod constat ex chaetide et saxo calcis, nullius auripigmenti dimidio minus quam in singulis prioribus est adicitur; eaque melle cocto **K** excipiuntur. Expeditissimum autem est ex praecipto Megetis aeruginis casae P. $\frac{1}{2}$ II conterere, deinde Hammoniaci thyrsamatis P. $\frac{1}{2}$ I aceto liquare, eoque infuso aeruginem cogere; idque ex primis medicamentis est. Sed ut haec maxime

* A kind of collyrium (Low Latin *collyria*, Greek *κολύματα*) was material made up with a glutinous paste which was rolled and forced into sticks shaped like vermicelli (*collyria*). These were used to dilate a fistula, or the stercus (*stercoris*) *collyria*. Hippocrates, *Diseases of Women*, I, 51; or also pieces were broken off the stick and dissolved for use (e.g.

substances; and from this a tent⁹ should be made, thinner at one end, a little thicker at the other. This should be passed into the fistula with the pointed end forwards, and be kept until pure blood shows itself. Such are the general rules for the use of all tents for fistulae. Next, the same plaster spread on lint is put over the place, and over that is applied a sponge dipped in vinegar; it is sufficient to change the dressing on the fifth day. The class of food to be used is that which I have prescribed for making flesh.⁶ And if the fistula is at some distance from the praecordia, the patient should eat radishes at intervals on an empty stomach, and then vomit. A fistula of long standing becomes callous. Now no one can mistake callus, for it is hard and either white or pallid. But there is then need for stronger medicines: such as that which has of poppy tears 4 grms., gum 12.86 grms., cadmia 16 grms., blacking 32 grms., worked up with water to form a tent. Or else there is the composition containing galls 1 grm., verdigris, sandarach, Egyptian alum, 1.18 grm. each, roasted blacking 2.32 grms. Or that which is composed of copper ore and limestone, with half as much orpiment as of each of the other two; and these are taken up in boiled honey. But the quickest remedy is that prescribed by Meget; rub up verdigris scrapings 8 grms., then dissolve ammoniacum for incense 1.16 grm. in vinegar, and work the verdigris into this infusion; and this is one of the best remedies. But whilst the above remedies are

as eye salves, VI. 6). As lately as thirty or forty years ago such sticks were still prepared and pieces broken off and used in this way.

⁹ V. 14, 26, 80.

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effectus sunt, sic, cui ista non adsunt, facile tamen est callum quibuscumque adurentibus medicamentis erodere: satiusque est vel papyrus intortum vel aliquid ex penicillo in modum collyri adstrictum eo iniici. Scilla quoque cocta et mixta cum calce

L callum exest. Si quando vero longior sed transversa fistula est, demisso specillo contra principium huius inieci commodissimum est, et collyrium utrinque demitti. At si duplicem esse fistulam aut multiplicem existimamus, sic tamen ut brevis intraque carnem sit, collyria uti non debemus, quod unam partem curet, reliquas omittat; sed eadem medicamenta arida in calicem scriptorium concienenda sunt, isque orī fistulae aptandus, inspirandusque, ut

M ea medicamenta intus compellantur: aut eadem ex vino liquanda, vel, si sordidior fistula est, ex mulso, si callosior, ex aceto sunt idque intus infundendum. Quicquid inditum est, superponenda sunt, quae refrigerent et repriment: nam fere quae circa fistulam sunt, habent aliquid inflammationis. Neque alienum est, ubi qui solverit, antequam rursus alia medicamenta conciat, per oricularem clysterem fistulam eluere; si plus puris fertur, vino; si callus durior est, aceto; si iam purgatur, mulso vel aqua, in qua erum coctum sit, sic ut huic quoque mellis

N paulum addatur. Fere vero fit, ut ea tunica, quae inter foramen et integram carnem est, vieta medicamentis tota exeat, infraque ulcus purum sit; quod ubi contingit, imponenda glutinantia sunt, praecipueque spongia melle cocto inlita. Neque

the most efficacious, when they are not at hand it is easy to eat away the callus with any of the caustic medicaments; it is enough to smear one of them on rulled papyrus, or upon a pledget of wool twisted into the shape of a tent. Squills boiled and mixed with quicklime also eat away callus. If, however, the fistula is longer but runs crosswise, it is best to insert a probe and to cut down upon its end; then a tent is passed into each opening. But if we deem the fistula to be double or multiple, yet only short and confined to flesh, we should not make use of a tent, because it treats one part and omits the rest; but the same medicaments, dry, are put into a writing-quill, and that having been placed against the orifice of the fistula is to be blown through, in order that these medicaments may be forced in; or the same materials dissolved in wine, or, if the fistula is more foul, in honey wine, or, if more callous, in vinegar, are to be poured in. Whatever is introduced, refrigerants and repressants must be put on over the wound; for generally the parts surrounding the fistula are somewhat inflamed. It is not inappropriate, when changing the dressings and again before inserting fresh medicaments, to wash out the fistula, using an ear syringe; with wine if there is much pus; with vinegar if there is hard callus; if it is already clean, with honey wine or a decoction of vetch, to which also a little honey should be added. Thus it generally happens that that covering which is between the opening and the sound flesh is destroyed by the medicaments and comes quite away, and underneath is a clean ulceration; when this has occurred, agglutinants are applied, especially a sponge steeped in boiled honey. I am

ignoro multis placuisse linamentum in modum collyrii compositum tinctum facile demitti; sed celerius id glutinat quam impletur. Neque verendum est, ne putum corpus puro corpori iunctum non coeat: adiectis quoque medicamentis ad id efficacibus . . .¹ cum saepe exulceratio digitorum, nisi magna cura prospeximus, sanescendo in unum eos iungat.

- 13 Est etiam ulceris genus, quod a favi similitudine *εἰς φῶν* a Graecis nominatur, idque duas species habet. Alterum est subulgidum, furunculo simile, sed minus et cum dolore minore. Quod ubi maturescit, habet foramina, per quae fertur humor glutinosus et purulentus; neque, tamen ad iustam maturitatem pervenit. Si divisum est, multo plus intus corrupti quam in furunculo apparet altiusque descendit.

- B Rara fit nisi in scapulis. Alterum . . .² est minus super corpus eminens, durum, latum, subviride, subpallidum, magis exulceratum: siquidem ad singulorum pilorum radices foramina sunt, per quae fertur humor glutinosus, subpallidus, crassitudinem mellis aut visci referens, interdum olei. Si inciditur, viridis intus caro apparet. Dolor autem et inflammatio ingens est, adeo ut acutam quoque febrem movere consueverint.—Super id, quod minus crebrius foraminibus exasperatum est, recte imponitur et fovea arida et lini semen in melle coctum et emplastra ac malagmata materiam educentia, aut quae proprie huc pertinentia supra (cap. xii) posui. Super alterum et eadem medicamenta, et farina ex melle cocta, sic ut ei dimidium resine terebenthinae

¹ *Note words have fallen out; More supplies gaps; how opus esse videmus after efficacibus and this is translated.*

² *More adds: alterum <fit in capite tantum>.*

³ A follicular abscess among hairs.

⁴ V. 12.

not unaware that many favour the insertion of lint formed into a tent and dipped in honey; but this agglutinates more quickly than flesh is formed. There need be no fear that clean flesh in contact with clean flesh will fail to unite; we see that there is often no need to add medicaments as well to effect this, since often when there is ulceration of the fingers, unless we have taken careful precautions, they become joined together whilst healing.

There is besides a class of ulceration which the Greeks call *κυσίον*^a from its resemblance to honey-comb, and of this there are two kinds. One is greyish, like a boil, but larger and more painful. As it is maturing, holes appear through which is discharged a glutinous and purulent humour; yet it does not properly mature. If it is cut into, there appears much more corruption than in a boil, and it penetrates deeper. It is rare except in the scapular region. The other kind is found only in the head; it projects less above the surface, is hard, broad, greenish or greyish-green in colour, more ulcerated; there are holes at the root of each hair, through which is discharged a glutinous greenish-white humour, in consistency like honey or mistletoe-juice, or at times like olive-oil. If it is cut into, the flesh within appears green. The pain also and inflammation are so severe that they generally cause acute fever. On a case which is only irritated by a few openings, suitable applications are a dry fig and linseed boiled in honey wine or plasters or emollients which draw out diseased matter, or the medicaments noted above for such purposes.^b For the other form of this, the same medicaments are good, also flour boiled in honey wine mixed with half its quantity of turpentine-resin;

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miscentur; et siens in mulo decocta, cui paulum hyssopi contrita sit adiectum; et uvæ taminiae pars quarta sic adiecta. Quod si parum in utrolibet genere medicamenta proficiunt, totum ulcus usque ad sanam carnem excidi oportebit. Ulcere ablato super plagam medicamenta danda sunt, primum quæ pus eltent, deinde quæ purgent, tum quæ impleant.

- 14 Sunt vero quædam verronis similia, quorum diversa nomina ut vitia sunt. *Aerochondous* vocant, ubi sub cute est aliquid durius, et interdum paulo asperius, coloris eiusdem, infra tenue, ad cutem latius; idque modicum est, quia raro fabæ magnitudinem excedit. Vix unum tantum eodem tempore nascitur, sed fere plura, maximeque in pueris; eaque nonnumquam subito desinunt, nonnumquam medicoræ inflammationem excitant; sub qua etiam B in pus convertantur. At *thyridon* nominatur, quod super corpus quasi verrucula eminet, ad cutem tenue, supra lacus, subdurum et in summo perasperum. Idque summum colorem floris thymi repræsentat, unde et nomen est, ibique facile finditur et cruentatur; nonnumquam aliquantum sanguinis fundit, fereque circo magnitudinem fabæ *Ægyptiæ* est, raro maius, interdum perexiguum. Modo unum autem, modo plura nascuntur, vel in palmis vel inferioribus pedum partibus. Pessima tamen in obscenis sunt maximeque ibi sanguinem fundunt. *Myrmecis* autem C vocantur hamulosa thymis durioraque, quæ radice altius exigunt maioremque dolorem movent: infra lata, super autem tenula, minus sanguinis mittunt;

* Vol. I. 94, note.

* V. 22. 2C, note.

* *suppessus*, an anthill (cf. *Paulus Aegineta*, IV. 15), was the name given to this sort of wart because the irritation from it resembled that caused by ants (*formicæ*).

also a fig boiled in honey wine, to which a little pounded hyssop may be added; also black bryony berries, added to a fig, one part to three. If in either case medicaments are of little service, the whole ulceration ought to be cut away down to the sound flesh. When the ulceration is removed, medicaments are put on the wound, first to promote suppuration, next to clean it, and then to make flesh.

There are also certain wart-like ulcerations, different in name and in their ill-effects. They call one *acrochordon*,^a when some material which is rather hard and at times somewhat rough, collects under the skin: its colour is that of the skin; it is thin underneath, broadening nearer the skin; of moderate size, as it is seldom larger than a bean. It is rare to find one alone, but generally there are several, and they are mostly found in children; and sometimes they go suddenly, sometimes they cause slight inflammation, and under this they even turn into pus. But that which is named *thyrsion*^b projects above the surface like a little wart, narrow near the skin, wider above, harsh and at the top very rough. The top in colour is like flowers of thyme, whence its name, and there it is readily split and made to bleed; at times the bleeding is considerable; it is generally about the size of an Egyptian bean, rarely larger, sometimes quite small. Sometimes one is alone, generally several grow together, either on the palms or soles of the feet. The worst, however, are situated upon the genitals, and there they bleed the most. But those called *myrmecia*^c are less prominent and harder than the *thyrsion*, their roots are more deeply fixed and they are more painful: they are broad underneath but thin above, they bleed less.

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magnitudine vix unquam lupini modum excedunt. Nascuntur ea quoque aut in palmis, aut inferioribus pedum partibus. Clavus autem nonnumquam quidem alibi, sed in pedibus tamen maxime nascitur, præcipue ex contuso, quamvis interdum aliter; dolorem, etiamsi non alias, tamen ingredienti movet.

- D Ex his acrochordon et thymum sæpe etiam per se soluntur, et quo minora sunt, eo magis. Myrmecia et clavi sine curatione vix unquam desinunt. Acrochordon, si excisa est, nullam radiculam relinquit, ideoque ne renascitur quidem. Thymulo clavoque excisis, subter rotunda radícula nascitur, quæ pentus descendit ad carnem, eaque reietta idem rursus exigit. Myrmecia latissimis radicibus inherens, ideoque ne excidi quidem sine exulceratione magna possunt. Clavam subinde cadere commodissimum est: nam sine ulla vi sic mollescit; ac si sanguinis quoque aliquid erossum est, sæpe emoritur. Tollitur etiam, si quis eum circumpurgat, deinde imponit resinam, eul malscult pulveris paulum, quem ex lapide molari contrito facit. Cetera vero genera medicamentis adurenda sunt; aliterque id, quod ex facie vini; myrmecis id, quod ex alumine et sandaraca est, aptissimum. Sed ea, quæ circa sunt, foliis contagi debent, ne ipsa quoque exulcerentur; deinde postea lenticula imponi. Tollit thymicum etiam ficus in aqua cocta.

- 10 At pusulae maxime vernis temporibus oriuntur. Earum plura genera sunt. Nam modo circa totum corpus partemve asperitudo quaedam fit, similia iis pusulis, quæ ex urtica vel sudore nascuntur: exanthemata Graeci vocant; eaque modo rubent,

* A corn, callosity.

¹ V. 23, 2 C.

* *ἑξάνθημα* = efflorescence, blossom; cf. vol. I. p. 150; Hipp. IV. 183 (Apt), VI. 8).

and they scarcely ever exceed the size of a lupin. These also grow either on the palms or soles of the feet. The clavus,* again, though occasionally found elsewhere, occurs mostly on the feet, and especially after contusions, although sometimes from other causes; it causes pain when walking, though not at other times.

Of these the acrochordon and thymion often end of themselves, and the more so the smaller they are. The myrmecia and corns scarcely ever subside without treatment. The acrochordon, if cut off, leaves no trace of a root behind, and so does not sprout again. When the thymion and clavus have been cut off, a small rounded root is formed underneath, which penetrates right down into the flesh, and if this is left behind it sprouts up again. The myrmecia are held by very broad roots, and so cannot be excised without causing a large wound. A corn is best scraped down from time to time; for thus, without any violence, it softens, and if also a little blood is let out, it often dies away. It is also removed if we clean the part round it and then put on resin mixed with a little powdered millstone. All the other varieties are to be burnt away by medicaments: for some the ash of wine-lees is best; for myrmecia the application made of alum and sandarach. But the skin all round should be covered with leaves that it also may not become ulcerated; afterwards lentil meal is put on. Even a fig in boiled water removes a thymium.¹

Pustules arise chiefly in the spring; there are many kinds. For at times a sort of roughness comes all over the body, or a part of it, resembling the pustules which are set up by nettles or by sweating; *exanthemata*: the Greeks call them. At times

- B modo colorem cutis non excedunt. Nonnumquam plures similes varis oriuntur, nonnumquam maiores pusulae lividae aut pallidae aut nigrae, aut aliter naturalis colore mutatae; subestque hisumor. Ibi eas ruptae sunt, infra quasi exulcerata caro apparet: phlyctacnae Graece nominantur. Fiant vel ex frigore vel ex igne vel ex medicamentis. Phlyctacion autem paulo durior pusula est, subalbida, sentis, ex qua ipsa quod exprimitur umidum est. At ex pusulis vero nonnumquam etiam ulcuscula fiunt aut aridiora aut umidiora; et modo tantum cum prurigine, modo etiam cum inflammatione aut dolore; exitque aut pus aut sanies aut utrumque; maximeque id evenit in aetate puerili, raro in medio corpore, saepe in continentibus partibus.
- C Pessima pusula est, quae epinyctis vocatur: ea colore vel sublivida vel nigra vel alba esse consuevit. Circa hanc autem vehemens inflammatio est; et cum adaperita est, reperitur intus exulceratio mucosa, colore umori suo similis. Dolor ex ea supra magnitudinem eius est: neque enim ea faba maior est. Atque haec quoque oritur in eminentibus partibus et fere aetatu; unde nomen quoque a Graecis
- D ei inpositum est.—In omnium vero pusularum curatione primum est multum ambulare atque exerceri; si quid ista prohibet, gestari. Secundum est cibum minuire, abstinere ab omnibus acutis et extenuantibus: eademque nutrices facere oportet, si lactans puer ita adfectus est. Praeter haec is, qui iam robustus est, si pusulae minutae sunt, desudare in balneo debet, simulque super eas nitrum inaspergere

* *phlyctacnae* = Bubbles or blisters.

* *epinyctis*, night pustula, e.g. from a flybite.

they are red, at times no redder than the colour of the skin; sometimes a number occur resembling pimples, sometimes the pustules are larger, livid or pallid or black or otherwise changed from the natural colour; and there is humour underneath them. When these have burst the flesh below looks as if it were ulcerated; in Greek these are called *phlyctenae*.* They are produced either by cold or by heat or by medicaments. A *phlycten* is a somewhat harder pustule, whitish and pointed, from which moisture is squeezed out. But after pustules at times small ulcerations arise, either dry or moist, sometimes attended only by itching, sometimes also by inflammation and pain; the discharge is either pus or serum or both; this generally occurs in children, seldom on the trunk, often on the extremities. The worst kind of pustule is that called *epinyctis*;¹ its colour is usually livid or black or white. And there is severe inflammation round it; and when laid open a mucous ulceration is found within, of a colour like its own humour. It gives greater pain than its size would suggest; for it is no larger than a bean. And this too grows on the extremities, and generally by night, whence also the name applied to it by the Greeks. Now in all kinds of pustules, the treatment first is much walking and exercise; and if anything prevents those, then rocking. Next food must be diminished, all things acrid and thinning avoided; and the same treatment should be applied to nursing women, if the sucking baby is so affected. Moreover, the patient who is robust, if the pustules are small, ought to go to the bath and sweat, and at the same time to dust the pustules with soda and to mix wine with oil and anoint

oleoque vinum miscere et sic ungul; tum descendere in solium. Si nihil sic proficitur, aut si maius pusularum genus occupavit, imponenda lenticula est, detractaque summa pellicula ad medicamenta lenia Et transeundum est. Epiphyctis post lenticulam recte herba quoque sanguinali vel viridi coriandro curatur. Ulcera ex pusulis facta tollit spuma argenti cum semine feri Græci mixta, sic ut his lavicem rosa atque intobi succus adiciatur, donec mellis crassitudo ei fiat. Proprie ad eas pusulas, quas infantes male lubent, ispidis, quem pyriten vocant, P. 3 VIII cum quinquaginta amaris nucibus miscetur, adiciunturque olei cyathi tres. Sed prius ungui ex cerussa pusulae debent, tum hoc infini.

- 15 Scabies vero durior: cutis rubicunda, ex qua pusulas oriantur, quaedam umidiores, quaedam sicciores. Exit ex quibusdam saries, fitque ex his continuata exulceratio pruritus; serpitque in quibusdam cito. Atque in aliis quidem ex toto destruit, in aliis vero certo tempore anni revertitur. Quo asperior est quoque prurit magis, eo difficilius tollitur: itaque eam, quae talis est, agrian [id est B feram] Græci appellant. - In hoc quoque victus ratio eadem quae supra (15 D) necessaria est: medicamentum autem ad incipientem hanc idoneum est, quod sit ex spodi, croci, aeruginis, singulorum P. 3 I; piperis albi, omphaci, singulorum P. 3 I; cadmlae P. 3 VIII. At ubi iam exulceratio est, id, quod fit

* Scabies, originally a roughening or hardening of the skin. See note c.

* The *namagisa dypos* (dypos = scab), or dypos, was applied to many skin diseases, including leprosy (Lev. XXI 20, septua-

himself, after which he goes down into the hot bath. If this does no good, or if the pustules are of the larger kind, lentil meal should be applied, and after the upper skin has been detached, we must pass on to soothing medicaments. The epinyctis, after lentil meal application, is appropriately treated by means of polygonum or green coriander. Ulcerations caused by the pustules are relieved by litharge mixed with scouggreek seeds, rose-oil and endive juice being added in turn until the mixture becomes of the consistency of honey. For the pustules which affect infants apply: prite stone 9-3 grms., mixed with fifty bitter almonds, and 125 ccm. of oil added. But first the pustules should be anointed with white-lead, then smeared with the above.

But scabies* is harder: the skin is ruddy, from which the pustules grow up, some moist, some dry. From some of these scales escapes; and from them comes a persistent itching ulceration, which in some cases rapidly spreads. And whilst in some persons it vanishes completely, in others it returns at a definite time of the year. The rougher the skin, and the more the itching, the more difficult is its relief. Hence the Greeks call such scabies, *agria*^b [that is, savage]. In this case also the same regimen as that given above is necessary;^c at the beginning a suitable application is that composed of sublimed zinc oxide, saffron, verdigris 1-16 grms. each; white pepper and oppharium $\frac{1}{2}$ grms.; zinc oxide ore 9-3 grms. But when ulceration already exists that coming). The term scabies is now restricted to the pustules set up by the itch insect (*microptes scabiei*).

* V. 28. 15 D.

ex sulphuris P. 3 I; cereae P. 3 III; olei liquidae hemina: olei sextaris duobus; quae simul incoquantur, dum crassitudo mellis sit. Est etiam quod ad Praezerebum auctorem refertur. Habet farinae lupinorum S.I.; nitri cyathos IIIS.; olei liquidae heminam; resinae praedictae selibram; acetii cyathos tres. Crocum quoque, Lychnum, acraga, murra, cinis aequis portionibus recte misceantur, et ex passo cocuntur; idque omnem pituitam ubique sustinet. Ac si nihil aliud est, amara ad tertiam partem decocta vel sulphur picis liquidae mixtum, sicut in pectoribus propositum, hominibus quoque scabie laborantibus opitulantur.

- 11 Impeliginis vero species sunt quattuor. Minime mala est, quae similitudinem scabie repraesentat: nam et rubet et durior est et exulcerata est et roditur. Distat autem ab ea, quod magis exulcerata est et variis similis pusulus habet; videnturque esse in ea quasi bullulae quaedam, ex quibus interposito tempore squamulae reolvuntur; certioribusque hoc temporibus revertitur. Alterum genus pelus est, simile papulae fere, sed asperius cubicundiusque; figuras varias habet; squamulae ex summa cute discedunt; rosio maior est; celerius et latius procedit certioribusque etiamnum quam prior temporibus et fit et desinit: rubrica cognominatur. Tercia etiamnum deterior est: nam et crassior est et durior et magis tumet; in summa cute finditur et vehementius roditur. Ipsa

* V. 16. 8.

² *Celsi Agricolturae Fragmenta* Marx, p. 81 (Frag. XXXIV.).

³ *Impeligo*. The present meaning of *impeligo* is ill defined: the word is probably derived from the sudden onset (*impetus*) of some form of skin disease. Celsus here appears to be describing a form of eczema or lichen: on skin diseases see also V. 26. 29 B, C, D.

posed of sulphur 1-16 grm., wax 4-63 grms., liquid pitch 250 c.cm., oil one litre; these are heated together until they are of the consistency of honey. There is also the composition ascribed to Protharchus.⁵ It consists of half a litre of lupin meal, 190 c.cm. of soda, 250 c.cm. of liquid pitch, liquid resin 168 grms., and 125 c.cm. of vinegar. Also a suitable mixture is saffron, hyacinth, verdigris, myrrh, and charcoal in equal proportions boiled in raisin wine; this checks everywhere all discharge of pblegra. And when there is nothing else at hand, lees of olive-oil boiled down to one-third, or sulphur mixed with liquid pitch, as I have suggested for cattle⁶ is also of service for men suffering from scabies.

Impetigo,⁷ again, has four species. The least bad is that which presents a resemblance to scabies; for there is redness and some hardness and ulceration and erosion. But it is distinguished from scabies because there is more ulceration and there are pustules like pimples, and in it is seen an appearance as of small bubbles from which after a time little scales are detached; and this recurs at fixed seasons. The second kind is worse, almost like a pimple, but rougher and redder; it has various shapes; small scales are detached from the skin surface; there is more erosion; it spreads more rapidly and widely, and both comes and goes at fixed seasons even more markedly than the previous sort; it is called *rubeola*.⁸ The third kind is worse still: for it is thicker, harder and there is more swelling; there are cracks in the skin and more active erosion. This form also is scaly,

⁵ The colour of red earth or ochre (*rubeola*), was like that of the diseased area.

quoque squamosa sed nigra; proceditque et late nec tarde; et minus errat in temporibus, quibus aut oritur aut desinit neque ex toto tollitur: nigree Cognitionem est. Quantum genus est, quod curationem omnino non recipit, distans colore: nam subalbida est, et recenti cicatrici simile; squamulasque habet pallidas, quasdam subalbas, quasdam lenticulae similes, quibus demptis nonnumquam profuit sanguis. Alioqui veroumor eius albidus est, cutis dura atque fissae est; proceditque latius. Haec vero omnia genera maxime oriuntur in pedibus et manibus; atque ungues quoque infestant. Medicamentum non aliud valentius est quam quod ad scabiem quoque pertinere sub auctore Protarcho vetuli (28, 16 C). Serapion autem nitri P. 3- II, sulphuris P. 3- III excipiebat resina copiosa, eaque utebatur.

- 18 Papularum vero duo genera sunt. Alterum est in quo per minimas pusulas cutis exasperatur et rubet leviterque roditur: medium habet pauxillo levius, tarde serpit. Idque vitium maxime rotundum incipit, eademque ratione in orbem procedit. Altera autem est, quam agrilan (id est feram) Graeci appellant; in qua similiter quidem sed magis cutis exasperatur exulceraturque, ac vehementius et roditur et rubet et interdum etiam pilos remittit.
- 19 Minus rotunda est, difficilior sanescit: nisi sublata est, in impetiginem vertitur. Sed levis papula etiam, si levis saliva cotidie defricetur, sanescit: maior commodissime murai herba tollitur, si sub ea detrita est. Ut vero ad composita medicamenta veniamus, idem illud Protarchi (28, 17 C) tanto valentius in his est, quanto minus in his viti est.

* The description here given by Celsus is approximately that of *Urtica circoscirptus* and *Urtica anulosa*.

but the scales are black. It spreads widely and not slowly. It varies less in the times at which it increases or subsides, and is never quite got rid of: its name is black impetigo. The fourth kind, which is quite incurable, differs in colour, for it is whitish and like a recent scar, and has small, pallid or whitish scales; some are like lentils, and when these are removed there is sometimes bleeding. Otherwise its humour is white, the skin hard and chapped; it spreads widely. Now all these kinds occur generally on the hands and feet; they also attack the nails. There is no more efficacious remedy than that which I have mentioned above as prescribed by Protagoras for scabies. But Serapion used soda 2.32 grms., and sulphur 4.84 grms., taken up with plenty of resin.

Of papules again there are two kinds.² There is one in which the skin is roughened by very small pustules, and is reddened and slightly eroded; in the middle it is a little smoother; it spreads slowly. This disease generally has a round shape at its beginning, and in the same fashion it spreads in a circle. But the other variety is that which the Greeks call *agria* [that is, savage]; and in this there is a smaller but greater roughness of the skin with ulceration, more severe erosion, and redness; sometimes it even loosens the hair. It is less round in shape, heals with more difficulty, and unless it is got rid of, turns into an impetigo. But in fact, a slight papule heals if it is rubbed daily with spittle before eating; a more severe one is got rid of best by an application of pounded pellitory. But turning to compound medicaments, that same one of Protagoras is efficacious in these cases, when the disorder is less severe. An alterna-

Alterum ad idem Myronis: nitri rubri, turis, singulorum P. * I; cantharidum purgatarum P. * II; sulphuris ignea non experti tantundem; resinae terebinthinae liquidae P. * XX; farinae lili S. III; gittioyathos IIIS.; piscis crudae S.I.

- 18 Vitiligo quoque quamvis per se nullum periculum adfert, tamen et foeda est et ex malo corporis habitu fit. Pius tres species sunt. Alphos vocatur, ubi color albus est, fere subasper, et non continuus, ut quaedam quasi guttae dispersae esse videntur. Interdum etiam laevius et cum quibusdam intermissionibus scripiit. Melas colore ab hoc differt, quia niger est et umbræ similis; cetera eadem sunt. Leuce habet quiddam simile alphi, sed magis albida est, et altius descendit, in eaque albi pilī sunt et lanugini similes. Omnia haec serpunt, sed in aliis celerius, in aliis tardius. Alphos et melas in quibusdam variis temporibus et oriuntur et desinunt; leuce quem occupavit, non facile dimittit. Priora curationem non difficillimam recipiunt, ultimum vix unquam sanescit; ac si quid ei vitio demptum est, C tamen non ex toto sanus color redditur. Utrum autem aliquod horum sanabile sit, an non sit, experimento facile colligitur. Incidi enim cutis debet aut acu pungi: si sanguis exst, quod fere fit in duobus prioribus, remedio locus est; siumor albidus, sanari non potest; itaque ab hoc quidem abstinendum est. Super id vero, quod curationem recipit, inponenda lentacula mixta cum sulphure et ture, sic ut ea contrita

* Under the name vitiligo Celsus describes varieties of psoriasis. Alphos, named from its dull white colour which resembled that of leprosy, was probably psoriasis guttata. The different colour of melas was perhaps only due to dirt. Leuce, the bright white form, regarded as practically incur-

tive for the same affection is the composition of Myron containing red soda and frankincense, 4 grms. each, purified cantharides 8 grms., sulphur unheated, the same amount, and turpentine resin 80 grms., dandel meal a litre and a half, cumis 145 cern., and half a litre of raw pitch.

Vitiligo* also, though not dangerous in itself, is still ugly and is due to a bad habit of body. There are three species. It is called alphas when it is white in colour, generally rather rough, and not continuous, so that it looks as if drops of some sort had been sprinkled about. Sometimes also it spreads still more widely with certain gaps. That called melas differs from it in being of a black colour and like a shadow; otherwise it is similar. Leuce is somewhat like alphas, but is whiter and extends deeper; there are hairs on it, white, and like down. All these spread, but more quickly in some people than in others. The alphas and melas come and go at various seasons; the leuce, once established, is not easily got rid of. The two former are not difficult to treat, the latter is scarcely ever cured, for even if the discoloration is mitigated, the colour of health does not return altogether. But whether any one of these is curable or not is easily learnt by this test. The skin should be cut into or pricked with a needle; if blood escapes, which it usually does in the first two species, there is place for a remedy; if a whitish humour, cure is impossible, and then we should even refrain from treating it. But to the species which admits of treatment we should apply lentil meal, mixed with sulphur and frankincense, pounded

able, may have been only a more severe and intractable form of a disease which still often resists all remedies.

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ex aceto sint. Aliud ad idem, quod ad Irenaeum auctorem refertur: aleyonium, nitrum, cuminum, fici folia arida paribus portionibus contunduntur adiecto aceto. His in sole vitiligo perungitur, deinde non ita multo post, ne nimis erodatur, eluitur. Propyle quidam Myrone auctore eos, quos alphas vocari dixi, hoc medicamento perungunt: sulphuris P. $\ast = -$; aluminis acisallia P. $\ast =$; nitri P. $\ast = =$; mortis aridae contritae acetabulum miscent; deinde in balneo super vitiliginem inspergunt farinam ex faba, tum haec inducunt. Ii vero, quos melanas vocari dixi, curantur, cum simul contrita sunt aleyonium, tus, hordeum, faba; eaque sine oleo in balneo ante auctorem insperguntur; tum genus id vitiliginis defricatur.

up together in vinegar. Another application for the same purpose, ascribed to Irenaeus, is composed of coral, soda, camin and dried fig-leaves, in equal quantities, pounded up with vinegar added. The vitiligo is smeared with this in the sun, then it is soon washed off, lest it corrode too much. Some find it useful to anoint the species which I have said is called *alpheos* with the following prescription ascribed to Myron;* they mix sulphur 1 gram, split alum 0.88 gram., soda 1.53 grams. with a cupful of dried myrtle leaves; then at the bath they dust bean-meal over the vitiligo and afterwards apply the above remedy. That which I said was termed *melas* is created by pounding up together coral, frankincense, barley and bean-meal; and these are sprinkled on, using no oil in the bath before the patient sweats; then this kind of vitiligo is rubbed off.

* V. 28. 18 B.

BOOK VI.

LIBER VI

1. Dixi de iis vitiis, quae per totum corpus orientia medicamentorum auxilia desiderant (V. 26, 27, 28): nunc ad ea veniam, quae non nisi in singulis partibus incidere consueverunt, orsus a capite.

In hoc igitur capillis fluentibus maxime quidem saepe cadendo succurritur. Adiecit autem vim quandam ad continendum lacrum cum oleo mixtum. Nunc de his capillis loquor, qui post morbum fere fiunt: nam quominus caput quibusdam aetate nudetur, succurri nullo modo potest.

2. *Porrigo* autem est, ubi inter pilos quaedam quasi squamulae surgunt haecque a cute resolvuntur: et interdum madent, multo saepius siccae sunt. Idque evenit modo sine ulcere, modo exulcerato loco, hinc quoque modo malo odore, modo nullo accedente. Fereque id in capillo fit, rarius in barba, aliquando etiam in supercilio. Ac neque sine aliquo vitio corporis nascitur neque ex toto inutile est: nam bene integro capite non exit.—Ubi aliquod in eo vitium est, non incommodum est summam cutem

* V. 26, 27, 28.

² *Porrigo* means scurf or dandruff, and the name was given to conditions, such as seborrhoea or eczema capitis, where there was excessive detachment of such scales from the scalp. The word, according to Pliny, *N.H.* XX. 2. 29. = *furvus*, *brua*, and the corresponding Greek name for the condition,

BOOK VI

1. I HAVE spoken of those lesions which affect the whole body and require the aid of medicaments*; now I come to those which customarily occur only in particular parts, beginning with the head.

In the head, then, when the hair falls out, the principal remedy is frequent shaving. Ladanum mixed with oil, however, is some help in preserving it. I am now referring to the falling out of hair after illness; for no kind of remedy can be given to stop the head of some people from becoming bald through age.

2. But the condition is called *porrigo*,^b when between the hairs something like small scales rise up and become detached from the scalp: and at times they are moist, much more often dry. Sometimes this happens without ulceration, sometimes there is a localized ulceration, and from this comes sometimes a foul odour, sometimes none. This generally occurs on the scalp, more seldom on the beard, occasionally even on the eyebrow. It does not arise unless there is some general bodily lesion, so that it is not entirely without its use; for it does not exude from a thoroughly sound head. When there is present some lesion in the head, it is not disadvantageous for the surface of the scalp to become here *crustaceous*, had the same derivation (*κρούω*, *cras*), and is still used. *

CRISUS

potius subinde corrumpi quam id quod nocet in aliam
 2 partem magis necessariam verti. Commotius est
 ergo subinde pectendo repurgare quam id ex toto
 prohibere. Si tamen ea res nitrum offendit, quod
 umore sequente fieri potest, magisque si is etiam
 mali odoris est, caput saepe radendum est, dein id
 super adluendum aliquis ex leviter reprimentibus,
 quale est nitrum cum aceto, vel ladanum cum
 murice et vino, vel myrobalarum cum vino. Si
 parum per haec proficitur, vehementioribus uti licet
 cum eo ut sciamus utique in recenti vitio id inutile
 esse.

3. Est etiam alius, quod a fici similitudine syensis
 a Graecis nominatur: caro excrestat. Et id quidem
 generale est: sub eo vero duae species sunt: alterum
 alius durum et rotundum est, alterum humidum et
 inaequale. Ex duro exiguum quiddam et gluti-
 2 nosum exit, ex humido [†] simplicius¹ et mali odoris. Fit
 utrumque in is partibus, quae pilis contegentur:
 sed id quidem, quod callosum et rotundum est,
 maxime in barba, id vero, quod humidum, praecipue
 in capillo. - Super utrumque oportet imponere ele-
 ctarium aut lini semen contritum et aqua coactum aut
 ficum in aqua decoctum aut emplastrum tetra-
 pharmacum ex aceto subactum; terra quoque
 Eretria ex aceto liquata recta inlinitur.

4. Arcarius quoque duo genera sunt. Commune

¹ The text here is corrupt; Marx conjectures copiosum pos
 and this is translated.

¹ *crisurus* was so named by Heracleides of Tarentum be-
 cause the diseased area resembled the interior of a ripe fig.
 When the disease occurred on the beard it was known as chin
 disease, *mentagra*. It was said by Pilay (N.H. XXVI. 3. 2, 3)
 to have been recently imported from Asia and to be
 contagious.

and there corrupted, rather than for the harmful material to be diverted thence to another part of more importance. Hence it is more beneficial from time to time to clear the scalp by combing, than to repress the disorder altogether. But if this condition is too troublesome, which may happen when a discharge of humour has set in, and especially if this is malodorous, the head is to be shaved often, after which one of the mild repressants is applied, such as soda in vinegar, or leadum in myrtle oil and wine, or hennet oil with wine. If there is little benefit from these measures it is permissible to use stronger ones, whilst bearing in mind that, at any rate when the disease is of recent origin, this is not a good thing.

3. There is also an ulceration, called *syccosis*^a by the Greeks from its resemblance to a fig: a sprouting up of flesh occurs. That is the general description: but there are two subordinate species; in one the ulceration is indurated and circular, in the other moist and irregular in outline. From the hard species there is a somewhat scanty and glutinous discharge; from the moist the discharge is abundant and malodorous. Both occur in those parts which are covered by hair; but the callous and circular ulceration mostly on the beard, the moist form, on the other hand, chiefly on the scalp. In both it is good to apply elaterium, or pounded linseed worked up in water, or a fig boiled in water, or the plaster *tetraplarmacum*^b moistened with vinegar; also Eretcian earth dissolved in vinegar is suitable for smearing on.

4. Bald spots^c also are of two kinds. In both,

^a See V. 18. 9.

^b To these the term "*arsae Calvi*" has often been applied in medical works in reference to this description.

atque est, quod emortua summa pellicula pili primam extenuantur, deinde excidunt; ac si ictus is locus est, sanguis exit liquidus et nulli odoris. Incrementum utrumque in aliis celeriter, in aliis tarde; pelus est id quod densam cutem et subpinguem et ex toto glabram facit. Sed ea, quae alopecia nominatur, sub qualibet figura dilatatur. Est et in capillo et in barba. Id vero, quod a similitudine ophis appellatur, incipit ab occipite; duorum digitorum latitudinem non excedit; ad aures duobus capitibus serpit, quibusdam etiam ad frontem, donec se duo capita in priori parte committant. Illud vitium in qualibet aetate est, hoc fere in infantibus.—Illud vix unquam sine curatione, hoc per se saepe finitur. Quidam haec genera arearum scalpello exasperant; quidam inlinunt adurentia ex oleo, maximeque chartam coebustam; quidam resinam terebenthinam cum thapsia inducunt. Sed nihil melius est quam novacula cotidie radere, quia, cum paulatim summa pellicula excisa est, adaperiuntur pilorum radicae; neque ante oportet desistere, quam frequentem pilum nasci apparuerit. Id autem, quod subinde reditur, solius atramento scriptorio satis est.

5. Paeae ineptiae sunt curare veros et lenticulas et ephelidas, sed eripi tamen feminis cura cultus, cui non potest. Ex his autem, quas supra posui, vari lenticulaeque vulgo notae sunt; quarum variorum species est, quam scion Graeci vocant,

* *Aloneia* = mange la tige (*Aloneia*).

† From its resemblance to the track of a serpent (*serpens*). Babouand described the occurrence of this disease in 10 Paris school children (*Monatsschrift. f. prakt. Dermatol.* 1884, 27, 430, 3).

owing to the dying of the surface pellicle, hairs are first rendered thin, and then they fall out; and when the place is cut into, the blood which flows is thin and malodorous. Both kinds spread, in some quickly, in others slowly; the worse kind is that in which the skin has become thick, somewhat fatty, and quite smooth. But that which is named alopecia^a spreads without defined configuration. It occurs in the hairy scalp or in the beard. That again which is culled from its shape ophtis,^b commences at the back of the head, and without exceeding two fingers in breadth, creeps forward to the ears with two heads, in some even to the forehead, until the two heads join one another in front. The former affection occurs at any age, the latter generally in young children. The former scarcely ever terminates, except under treatment, the latter often by itself. Some scarify these bald patches with a scalpel; some smear on caustics mixed with oil, and especially burnt papyrus; some apply turpentine-resin with fennel. But there is nothing better than to shave the part daily with a razor, because as the surface skin is gradually removed, the hair roots become exposed; and the treatment should continue until a number of hairs are seen to be growing up. Following upon the shaving it is sufficient to smear on Indian ink.

5. To treat pimples and spots and freckles is almost a waste of time, yet women cannot be torn away from caring for their looks. But of these just mentioned, pimples and spots are commonly known, although that species of spot is more rare which is called by the Greeks *senison*,^c since it is

^a * οἰσμός, a birth mark, nevus.

eum sit ea lenticula rubicundior et inaequalior. Ephelis vero a plerisque ignoratur, quae nihil est nisi asperitas quaedam et durities mali coloris.

- 2 Cetera non nisi in facie, lenticula etiam in alia parte nonnumquam nasci solet; de qua per se scribere alio loco visum operae pretium non est.—Sed vari commodissime tolluntur imposita resina, cui non minus quam ipsa est aluminis scissilis, et paulum mellis adiectum est. Lenticulam tollunt galbanum et nigrum, cum partes portiones habent contritaeque ex aceto sunt, donec ad mellis crassitudinem venerint. His corpus inlinendum et interpositis pluribus horis [mane] eluendum est oleoque leviter unguendum.
- 3 Ephelidem tollit resina, cui tertia pars salis fossilis et paulum mellis adiectum est. Ad omnia ista vero atque etiam ad colorandas cicatrices potest ea compositio, quae ad Tryphonem patrem auctorem refertur. In ea partes portiones sunt myrobalani magnatis, cretae Cimoliae subcaeruleae, nucum anacardium, farinae hordei atque erui, struthi albi, vertulae Caropanae seminis. Quae omnia contrita melle quam amarissimo coquantur, lolutumque id vespere mane eluitur.

4. Sed haec quidem mediocria sunt. Ingentibus vero et variis casibus oculi nostri patent; qui cum magnam partem ad vitae simul et usum et dulcedinem conferant, summa cura tuendi sunt. Protinus autem orta lippitudine quaedam notae sunt, ex quibus quid eventurum sit colligere possumus.

* Celsum non lippitudo to translate the ὀφθαλμία of Hippocrates — running or blind eye (ὀφθαλμοὶ λυγρόντες; γρήνις for ὀφθαλμ. rheum; οὐρησις for ὑδαρμα, which was used in denoting chronic conjunctivitis, ophthalmia and trachoma, the

rather red and irregular. Freckles are, in fact, ignored by most; they are nothing more than a roughened and indurated discoloration. Whilst the others occur only on the face, a spot sometimes also appears on other parts of the body; of that by [itself] do not think it worth while to write elsewhere. But pimples are best removed by the application of resin to which not less than the same amount of split alum and a little honey has been added. A spot is removed by equal quantities of galbanum and soda pounded in vinegar to the consistency of honey. With this the part is to be smeared, and after the lapse of several hours, [the next morning,] it is washed off, and the place anointed lightly with oil. Freckles are removed by resin to which a third part of rock-salt and a little honey has been added. For all the above and also for colouring scars that composition is useful which is said to have been invented by Trypho the father. In this are equal parts of the drugs of hennut oil, bluish Ciminian chalk, bitter almonds, barley and vetch meal, along with white saxwort and mellilot seeds. These are all rubbed up together with very bitter honey, smeared on at night and washed away in the morning.

8. Now the foregoing are subjects of minor importance. But there are grave and varied mishaps to which our eyes are exposed; and as these have so large a part both in the service and the amenity of life, they are to be looked after with the greatest care. Now directly ophthalmia sets in, there are certain signs by which it is possible to foretell the course of the disease. For if lacrima-

eye diseases general among eastern races. For the whole chapter cf. Hippocrates (*Protrhetica* II. 18) *Liber* IX. 44

Nam si simul et lacrima et tumor et crassa pituita coeperint, si ea pituita lacrimae mixta est, si ea lacrima calida non est, pituita vero alba et mollis, tumor non durus, linguae valetudinis metus non est.

- B At si lacrima multa et calida, pituitae paulum, tumor modicus est, idque in uno oculo est, longum id, sed sine periculo futurum est. Idque lippitudinis genus minime cum dolore est, sed vix ante vicissimum diem tollitur, nonnumquam per duos menses durat. Quandoque finitur, pituita alba et mollis incipit esse, lacrimaeque misceatur. At si simul ea utrumque oculum invaserunt, potest esse brevior, sed periculum ulcerum est. Pituita autem sicca et arida dolorem quidem movet, sed maturius desinit, nisi quid exulceraverit. Tumor magnus et sine dolore est et siccus, sine ulla periculo est: si siccus quidem, sed cum dolore est, fore exulcerat, et nonnumquam ex eo casu fit, ut palpebra cum oculo glutinetur. Eiusdem exulcerationis timor in palpebris pupillave est, ubi super magnum dolorem lacrimae salsae calidaeque eunt, aut etiam, si tumore [in] fixito diu
- D lacrima cum pituita profuit. Petus olivaceum est, ubi pituita pallida aut livida est, lacrima calida et multa profuit, caput calet, a temporibus ad oculos dolor pervenit, nocturna vigilia urget, siquidem sub his oculis plerumque rumpitur, votumque est, ut tantum exulceretur. Intus ruptum oculum febricula iuvat. Si foras iam ruptus procedit, sine auxilio est.

tion and swelling of the eyelids and a thick rheum appear all at once : if that rheum is mixed with tears, if the tears are not hot, but the rheum is white and bland, and the swelling not hard, there is then no apprehension of a prolonged illness. But if lachrimation is profuse and hot, rheum scanty, swelling moderate, and that in one eye only, the case will be a prolonged one, but without danger. And that kind of ophthalmia is the least painful, but is seldom relieved before the twentieth day, and at times lasts two months. As it subsides, the rheum begins to be white and bland, mixed with tears. But if both eyes are attacked simultaneously, the duration may possibly be shorter, but there is danger of ulceration. Now rheum, when it is dry and sticky, gives rise to some pain, but subsides sooner unless ulceration is set up. If there is great swelling without pain and dryness, there is no danger ; if there is dryness, accompanied by pain, there is generally ulceration, and at times the result is that the eyelid sticks to the eyeball. There is danger of similar ulceration in the eyelids or in the pupils when, in addition to great pain, the tears are salt and hot ; or if, even after the swelling has subsided, there continues for some time a flow of tears mixed with rheum. The case is worse still when the rheum is pallid or livid, the tears hot and profuse, the head hot, and pain shoots from the temples to the eyes, causing wakefulness at night ; in these circumstances generally the eyeball ruptures, and we must pray that there may be ulceration only. When the eyeball has ruptured inwards a touch of fever is beneficial. If the eyeball protrudes after rupturing outwards, there is no remedy. If something white

Si de nigro aliquid albidum factum est, diu manet: at si asperum et crassum est, etiam post curationem
 E vestigium aliquod relinquit.—Curari vero oculos sanguinis detractio, medicamento, balneo, vino vetustissimus auctor Hippocrates memoriae prodidit: sed eorum tempore et causas parum explicuit, in quibus medicinae summa est. Neque minus in abstinentia et alvi ductione saepe auxilii est. Hoc igitur interdum inflammatio occupat, ubi cum tumore in his dolor est, sequiturque pituitae cursus nonnumquam copiosior vel acrior, nonnumquam utraque parte moderatur. In eiusmodi casu prima
 P omnia sunt quies et abstinentia. Ergo primo die loco obscuro cubare debet, sic ut a sermone quoque abstinere; nullum cibum adsumere, si fieri potest, ne aquam quidem; si[n] minus, certe quam minimum eius. Quod si graves dolores sunt, commodius secundo die; si tamen res urget, etiam primo sanguis mittendus est, utique, si in fronte venae tument, si firmo corpore materia superest. Si vero minor impetus, minus acram curationem requirit; alvum,
 G sed non nisi secundo tertiove die, duci oportet. At modica inflammatio neutrum ex his auxilium desiderat, satiaque est uti quies et abstinentia. Neque tamen lippentibus longam ieiunium necessarium est, ne pituita tenuior atque acrior fiat: sed secundo die dari debet id, quod levissimum videri

has developed from the dark part of the eye, it persists for a long while; but if it is rough and thick, some vestige remains even after treatment. According to Hippocrates, the oldest authority, the treatment of the eyes includes bloodletting, medicaments, the bath and wine; but he gave little explanation of the proper times and reasons for these remedies, things of the highest importance in the art of medicine. There is no less help, often, in abstinence and clysters. Now at times inflammation seizes the eyes, and there is pain in them together with swelling, and there follows a flow of rheum, sometimes rather profuse or acrid, sometimes in both respects rather moderate. In such a case, rest in bed and abstinence are the chief remedies. From the first day, therefore, the patient should lie in bed in a dark room, and at the same time he should refrain even from talking; take no food at all, and if feasible not even water, or at any rate the least possible amount. If the pains are severe, it is better that he should be bled on the second day, but when urgent this may be done even on the first day, at any rate if the veins on the forehead are swollen, and if there is superfluity of matter in a robust patient. But if the attack is less violent, it requires less drastic treatment: the bowel should be clystered, but only on the second or third day. But moderate inflammation requires neither blood-letting nor clystering, it is sufficient for the patient to stay in bed and fast. A prolonged abstinence, however, is not necessary in patients with ophthalmia, for it may render the rheum thinner, and more acrid; hence some of the lightest kind of food should be given on the second day, such as seems likely to

CELSUS

potest ex his, quae pituitam faciunt crassiorem; qualia sunt ova sorbilia: si minor vis urget, pulicula quoque aut panis ex lacte. Insequentibusque diebus quantum inflammationi detrahetur, tantum adici elbis poterit, sed generis eiusdem; utique ut nihil saluum, nihil acre, nihil ex his, quae extenuant,

- H** sumatur, nihil potui praeter aquam. Et victus quidem ratio talis maxime necessaria est. Protinus autem primo die croci P. * I, et farinae candidae quantum tenuissimae P. * II, excipere oportet ovi albo, donec melis crassitudinem habeat, idque in linteolum inclinere et fronti adglutinare, ut compressis venis pituitae impetum cohibeat. Si crocum non est, tunc idem facit. Linteola an lana excipiat, nihil
- I** interest. Superiungni vero oculi debent, sic ut croci quantum tribus digitis comprehendendi potest, sumatur; murræ ad fabae, papaveris lacrimae ad lenticulae magnitudinem; easque cum passo conterantur, et specillo super oculum inducantur. Aliud ad idem: murræ P. * —; mandragorae suavi P. * I; papaveris lacrimae P. * II; foliorum rosae, cicutae seminis, singulorum P. * III; acaciae
- K** P. * IIII; cumulae P. * VIII. Et haec quidem interdum: nocte vero, quo commodior quies veniat, non alienum est superimponere candidi panis interiorē partem ex vino subactam: nam et pituitam reprimat, et, si quid lacrimae processit, absorbet, et oculum glutinari non patitur. Si grave id et durum propter magnam oculorum dolorem videtur, ovi et

* Cf. V. 1, p. 4 which includes acacia and fumaria among medicaments which suppress haemorrhage. Acacia must mean
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render the rheum thicker; for instance, raw eggs; in a less severe case, porridge also or bread soaked in milk. On the following days, according as the inflammation subsides, additional food may be taken, but of the same class; certainly nothing salted, or acrid, or likely to make the rheum thinner should be consumed, and nothing but water drunk. Such a dietetic regimen is exceedingly necessary. But from the first day, saffron 4 grms. and the finest wheat flour 8 grms. should be made up with white of egg to the consistency of honey, then spread on lint and stuck on the forehead, in order that by compressing the veins the flow of rheum may be checked. If saffron is not at hand, frankincense has the same effect. Whether it is spread on linen, or on wool, makes no difference. There should be smeared over the eyeball, of saffron as much as can be taken up in three fingers, of myrrh in amount the size of a bean, of poppy-tears the size of a lentil: these are pounded up in raisin wine, and applied on a probe to the eyeball. Another composition having the same efficacy is made up of: myrrh 0.33 grms., mandragora juice 4 grms.; poppy-tears 8 grms.; rose-leaves and hemlock seeds 12 grms. each; acacia 16 grms.; gum 52 grms. These applications are made by day; at night, in order better to assure sleep, it is not inappropriate to apply above the eye, the crumb of white bread soaked in wine; for this at once represses rheum, and absorbs any flow of tears, and prevents the eye from becoming glued up. If this application, owing to the great pain in the eye, seems oppressive and hard, the gum prepared from the acacia shrub and contains some other gum—probably mastic or balsam.

- album et vitellus in vas defendendum est, adiciendumque eo mulsi paulum, idque digito permiscendum. Ubi facta unitas est, demitti debet lana mollis bene capta, quae id excipiat, superque
- L oculos imponi. Ea res et levis est et refrigerando pituitam coevert, et non exarescit, et glutinari oculum non patitur. Farina quoque hordeacea cocta, et cum malo Cotoneo cocto mixta commodè inponitur; neque a ratione abhorret etiam penicillo potissimum uti expresso, si levior impetus est, ex aqua, si maior, ex posca. Priora fasciâ deliganda sunt, ne per somnum cadant: at hoc superinponi satis est, quia et reponi ab ipso commodè potest, et,
- M cum inaruit, iterum madefaciendum est. Si tantum oculi est, ut somnum diu prohibeat, coram aliquod dandum est, quae anodyna Graeci appellant; satisque puero quod ervi, viro quod fabae magnitudinem impleat. In ipsum vero oculum primo die, nisi modica inflammatio est, nihil recte coicitur: saepe enim potius concitatur eo pituita quam minuitur. A secundo die gravi quoque lippitudini per indita medicamenta recte succurritur, ubi vel iam sanguis misceus vel alvus ducta est, aut ventrum necessarium esse manifestum est.
- 2 Multa autem multorumque auctorum collyria ad id apta sunt, poroque etiam nunc mixturis temperari possunt, cum lenia medicamenta et modice reprimenda facila et varie misceantur. Ego nobilissima exequar.

* V. 25. 1-3.

† For the meaning of collyrium see p. 154, ante a.

eggs, both the white and the yolk, are poured into a vessel, a little honey-wine added, and the mixture stirred with the finger. When thoroughly mixed, soft well-combed wool is soaked in it and the wool then applied over the eyes. This is both a light application and one which by cooling checks rheum, yet does not quite dry it up, and so the eye is not allowed to become glued up. Roasted barley-meal, mixed with boiled quince, is also a suitable application; nor is it inconsistent with the treatment, even to put on a pad of wool wrung as hard as possible out of water, if the attack is a lighter one, or out of vinegar and water, if it is more severe. The former applications are to be bandaged on, so that they do not fall off during sleep; the latter it suffices to lay on because it can be changed readily by the patient himself, and when it becomes dry, it must be wetted again. If the affection is so severe as to prevent sleep, for a time one of the remedies which the Greeks call *anodyna*^a should be administered, an amount the size of a vetch to a child, that of a bean to a man. For the eyeball itself there is no appropriate application on the first day, unless the inflammation is only moderate, for by such the flow of rheum is often stimulated rather than lessened. From the second day, even when the disease is severe, the direct application of medicaments is proper, when blood has been let or clystering applied, or after it has become evident that neither is needed.

Now for this disease there are many salves^b devised by many inventors, and these can be blended even now in novel mixtures, for mild medicaments and moderate repressants may be readily and variously mingled. I will mention the most famous.

3. Est igitur Phlomis, quod habet cerussae elotae, spodii, cummis, singulorum P. * I; papaveris lacrimae combustae P. * II. Illud scire oportet, huc quaque omnia medicamenta singula primum per se teri, deinde mixta iterum adiecta paulatim vel aqua vel alio umore: cummi cum quasdam alias facultates habeat, hoc maxime praestare, ut, ubi collyria facta inhaerent, glutinata sint neque frientur.
4. Dionysi vero collyrium est: papaveris lacrimae combustae, donec tenerescat, P. * I —; turis combusti, cummis, singulorum P. * S; spodii P. * III.
5. Cleonis nobile admodum: papaveris lacrimae frictae P. * I; croci P. * =; cummis P. * I; quibus cum teruntur adiecit rosae suavis. Aliud eiusdem valentius: squamae aeris, quod stomoma appellant, P. * I; croci P. * II; spodii P. * III; plumbi eloti et combusti P. * VI; cummis tantundem. Attallum quoque ad idem est, maxime ubi multa pituita profuit: castorei P. * —; alnes P. * =; croci P. * I; murrac P. * II; Lycl P. * III; cadmia curatae P. * VIII; stibis tantundem, aesciae sive P. * XII. Quod cum cummis quid hoc non habet, liquidum in paxidicula servatur. Theodotus vero huc compositioni adiecit papaveris lacrimae combustae P. * —; aeris combusti et eloti P. * II; nucleos palmarum combustos P. * X; cummis P. * XII.
6. At ipse Theodotus, quod a quibusdam sebaristum nominatur, eiusmodi est: castorei, nardi Indici, singulorum P. * I; Lycl P. * =; papaveris lacrimae tantundem; murrac P. * II; croci, cerussae

* Hardened in the fire.

* "Ungrateful": relapsing so quickly that the patient felt no gratitude for his cure (Galen, XII. 749).

There is then the salve of Philo, which contains : washed cerussa, spode and gum 4 grms. each ; poppy-tears toasted 8 grms. It is important to know that each of these ingredients should be pounded separately, then mixed together, gradually adding water, or some other fluid. Gum, amongst other properties, has this particular advantage, that when salves made of it have become dry, they stick together and do not break up.

The salve of Dionysius consists of : poppy-tears toasted until they soften 4.66 grms., toasted frankincense and gum 2 grms. each, and zinc oxide 16 grms.

The salve of Cleon is quite famous : poppy-tears toasted 4 grms., saffron 0.86 grms., gum 4 grms., to which after being pounded is added rose juice. The same man prescribed another more active salve : scales of the copper which is called *atomoma* 4 grms. ; saffron 8 grms. ; zinc oxide 16 grms. ; lead washed and roasted 24 grms. ; with a like quantity of gum. There is also for the same complaint the salve of Attalus especially when the rheum is profuse : castoreum 0.33 grms. ; lign-aloes 0.66 grms. ; saffron 4 grms. ; myrrh 8 grms. ; lycium 12 grms. ; prepared zinc oxide 32 grms. ; a like quantity of antimony sulphide and socia juice 48 grms. And when no gum is added it is preserved liquid in a small receptacle. Theodotus added to the above mixture : poppy-tears toasted 0.33 grms. ; copper scales roasted and washed 8 grms. ; toasted date kernels 40 grms. ; gum 48 grms.

The salve of Theodotus himself, which by some is called *achariston*,⁴ is composed of : castoreum and Indian hard 4 grms. each ; lycium 0.86 grms. ; an equal amount of poppy-tears ; myrrh 8 grms. ; saffron,

elotae, aloes, singulorum P. # III; cadmise bo-
truitidis elotae, aeris combusti, singulorum P.
VIII; cummis P. # XVIII; acaciae suci P. # XX;
stibis tantundem; quibus aqua pluvialis[ti]l[is] adicitur.

- 7 Praeter haec ex frequentissimis collyriis est id,
quod quidam cymon, quidam a cinereo colore
tephron appellant: amuli, tescantae, acaciae suci,
cummis, singulorum P. # I; papaveris lacrimae
P. # II; cerussae elotae P. # III; spumae elotae
P. # VIII, quae aequae ex aqua pluvialis[ti]l[is] con-
teruntur.

- 8 Euclides autem, qui aetate nostra maximus
fuit ophthalmus medicus, utebatur eo, quod ipse com-
posuerat: trygodes nominabat: castorei P. # ~~III~~ ^{II}; Lyci,
nardi, papaveris lacrimae, singulorum P. # I;
croci, murræ, aloes, singulorum P. # III; aeris
combusti P. # VIII; cadmiae et stibis, singulorum
P. # XII; acaciae suci P. # XXXVI; cummis
tantundem.

- B Quo gravior vero quaeque inflammatio est, eo
magis leniori medicamentum debet adiecto vel albo
ovi vel muliebris lacte. At si neque medicus neque
medicamentum praesto est, saepius utrumlibet
horum in oculos penicillo ad id ipsum facto infusum
id malum lenit. Ubi vero aliquis relevatus est,
tamque cursus pituitae constitit, reliquias fortasse
leniores futuras discutit balneum et vinum.

- C Igitur lavari debet leviter ante oleo perfrictus
distingue in cruribus et feminibus, multaue calida
aqua fovere oculos; deinde per caput prius calida,

* This compound collyrium was stamped with the likeness of
a swan; it is mentioned also by Galen, Alexander of Tralles and
Aetius. It was also known as the albas (ἀλβος) alba, from
its colour due to the litharge (black oxide of lead and silver)
which it contained.

washed white lead and lign-aloes 12 grms. of each; cluster-shaped oxide of zinc, washed and roasted copper scales 32 grms. each; gum 12 grms.; acacia juice 80 grms.; the same amount of antimony sulphide, to which is added rain-water.

Besides the above, among the most commonly used salves is that which some call evenon,* others from its ashen colour tephron, which contains: starch, tragacanth, acacia juice, gum 4 grms. each; poppy-tears 6 grms.; washed cerussa 18 grms.; washed litharge 32 grms. These ingredients likewise are compounded with rain-water.

Ruelpides, the most famous oculist of our time, used a salve of his own composition called trygodes†: castoreum 1.33 grms.; lycium, nard and poppy-tears 6 grms. each; saffron, myrrh and lign-aloes 16 grms. each; roasted copper scales 36 grms.; oxide of zinc and antimony sulphide 48 grms.; acacia juice 144 grms.; the same amount of gum.

The more severe the inflammation, the milder should the application be made, by adding to it white of egg or woman's milk. But if neither doctor nor medicine is at hand, either of the above, dropped into the eye with a little screw of lint prepared for the purpose, often relieves the trouble. But when the patient has been relieved and the discharge of rheum is already checked, any slight symptoms which remain may be got rid of by making use of the bath and of wine. Therefore when at the bath the patient should be first rubbed over gently with oil, especially over the legs and thighs, and he should bathe his eyes freely with hot water, next hot water should be poured over his head, followed

* So called from its resemblance to *εὐώνη* (*Lathyrus*) wild bean.

deinde egredienda perfundi: a balneo cavere ne quo frigore afflatus laedatur; post haec cibo paulo pleniore quam ex eorum dierum consuetudine uti vitatis tamen omnibus pituitas extenuantibus. Vinum bibere lenē, subausterum, modice vetus, neque effuse neque timide, ut neque cruditas ex eo et tamen somnus fiat lenianturque solus latentis

D aeris. Si quis in balneo sensit maiorem oculorum perturbationem quam attulerat, quod incidere eis solet, qui moriente adhuc pituitae cursu festinarunt, quam primum discedere debet, nihil eo die vini adsumere, ubi crinus etiam quam pridie. Deinde cum primum satis pituita subest, iterum ad usum balnei redire. Solet tamen evenire nonnumquam sive tempestatum vitio sive corporis, ut pluribus diebus neque dolor neque inflammatio et solitudo pituitae cursus finitur. Quod ubi incidit tamque ipsa vetustate res matura est, ab his sisdem auxilium

E petendum est [Id est balneo et vino]. Haec enim ut in recentibus mollis aliena sunt, quia concitare et possunt et accendere, sic in veteribus, quae nullis aliis auxiliis cessaverunt, admodum efficacia esse consueverunt, videlicet hic quoque ut alibi, cum secunda rana sperant, contrariis adiuvantibus. Sed ante tonderi ad eam convenit, deinde in balneo aqua calida quam plurima caput atque oculos fovere,

* i.e. the period of his illness.

† Secunda ranae were the ordinary remedies, those which followed the rule laid down in the text-books of the time, and were contrasted with contraries remedies (vol. I. p. 38).

by tepid water; after the bath he must take care that he is not harmed by cold or draught; subsequently he should use a diet rather fuller than had been customary for those days,^d whilst avoiding everything which may render the rheum thinner. He should drink mild wine, not too dry, and moderately old, taking it neither too freely nor too sparingly, so that, without causing indigestion, it may nevertheless induce sleep, and mullify the internal latent acid humour. If at the bath the patient feels the trouble in the eyes becoming worse than before he entered, which often happens to those who have hurried on to this course of treatment whilst there is still a discharge of rheum, he ought immediately to leave the bath, take no wine that day, and less food even than on the previous day. Afterwards, as soon as the flow of rheum has subsided sufficiently, he may return again to the use of the bath. Nevertheless, from the fault of the weather, or of the patient's constitution, it often happens that for many days neither the pain nor inflammation is checked, and least of all the discharge of rheum. When this occurs and the affection is now established by reason of its long standing, recourse must be had to these same remedies [that is, the bath and wine.] For whilst they are unsuitable early in the complaints because they can then irritate and stir up inflammation, yet in inveterate cases which have not yielded to other remedies, they are quite effectual, that is to say, so this as in other instances, when ordinary remedies^e have proved useless, contrary ones are beneficial. But beforehand the patient should be shaved down to the scalp, then in the bath he should foment both his head and eyes with plenty of hot water, next

- tum utrumque penicillo decingere, et ungere caput irino unguento; continereque in lectulo se, donec omnia calor, qui conceptus est, finiatur desinatque sudor, qui necessario in capite collectus est. Tum ad idem albi vique genus veniendum, sic ut potiones merceantur; obtegendumque caput et quiescendum. Saepe enim post haec gravis somnus, saepe sudor, saepe alvi defectio pituitae cursum finit. Si levatura malum est, quod aliquanto saepius fit, per plures dies idem fieri oportet, donec ex toto sanitas restitatur. Si diebus iisdem alvus nihil reddit, ducenda est, quo magis superiores partes levantur. Nonnumquam autem ingens inflammatio tanto impetu erumpit, ut oculos sua sede propellat: propterea id, quoniam oculi precipitant, Graeci appellant. His utique, si vires patiuntur, sanguinem mittere; si id fieri non potest, alvum duci, longioremque mediam indici necessarium est. Opus autem lenissimis medicamentis est, ideoque Cleonis collyrio quidam, quod ex duobus ante (§ ant.) positum est, utuntur: sed optimum est Nilei, neque de illo magis inter omnes auctores convenit.
- ¶ Id habet nardi Indici, papaveris lacrimae, singulorum P. # —; cummis P. # I; croci P. # II; foliorum rosae recentium P. # III; quae vel aqua pluvia[t]ili, vel vino levi, subaustero coguntur. Neque alienum est malicorium vel bertulam Campanam ex vino coquere, deinde conterere; aut murrain nigram cum rosae foliis miscere; aut

* *epidurae*; is not found in any extant works of earlier authors as a description of the eye condition to which the name is still applied, though this passage of Celsus shows that it was so used in Greek writers on medicine.

* VI. 6. 5 A.

clean both with a little yolk of lnt, and anoint the head with iris ointment: and he should keep to his bed until all the heat so produced has ended, and the sweat which of necessity has collected in the head has passed off. He is then to take food and wine of the same sort as above, drinking the wine undiluted; and he must rest with the head wrapped up. For often, after these measures a sound sleep, or a sweat, or a clearance of the bowel, terminates the discharge of rheum. If, as more often happens, the malady is in some measure relieved, the same regimen is pursued for a number of days until recovery is completed. If, meanwhile, the bowels do not act, clysters are given to relieve the upper parts of the body. But occasionally a violent inflammation breaks out with so much force as to push forwards the eyes out of their place: the Greeks call this *proptosis*,^a because the eyes drop forwards. In these cases especially, if the strength allows of it, blood is to be let; if that is impracticable, then a clyster and prolonged abstinence should be prescribed. The blandest medicaments are required; hence some use that salve of Clean's^b which has been noted above, as consisting of two ingredients, poppy-tears and gum, but the best is the salve of Nileus;^c and this point is agreed on by all authorities.

This salve consists of Indian hard and poppy-tears ʒss grm. each,; gum 4 grms.; saffron 8 grms.; fresh rose leaves 16 grms., which are mixed up in rain-water or in a rather mild wine. And it is not out of place to boil pomegranate rind or mallot in wine and then pound it; or to mix black myrrh with rose leaves,

^a Mentioned also by Galen, *De Comp. Med.*, sec. loc. IV. XII. 786.

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- lyuscyami folla cum ovi vitello cocti aut farinam cum acaciae succo vel passio aut melleo; quibus et folia quoque papaveris addiduntur, aliquanto valentiora sunt. Horum aliquo praeparato penicillo fovere oculos oportet ex aqua calida expresso, in qua ante vel murti vel rosae folia decocta sint; deinde ex illis aliquid imponi. Praeter haec ab oecipitio iacis cute cucurbitula adhibenda est. Quod si per haec restitutus oculus in sedem suam non est eodemque modo prolapsus permanet, scire oportet lumen esse amissum; deinde futurum ut aut indureseat is aut in pus vertatur. Si suppuratio se ostendit ab eo angulo, qui temporis propior est, laevi oculus debet, ut effuso pure et inflammatio ac dolor finiat, et totus tunicae resident, quo minus foeda postea facies sit. Utendum deinde vel his collyriis est ex lacte aut ovo, vel croco¹ . . . vel cui album ovi misceatur. At si induruit et sic emortuus est, ne in pus verteretur, quatenus foede provinebit, excidendum erit, sic ut hanc summam tunicam adprehendatur, infra id scalpellum incidat; tum eadem medicamenta crum coicienda, donec omnis dolor finiat. Iisdem medicamentis in eo quoque oculo utendum est, qui prius procidit, dein per plura loca fessus est.
- 10 Solent etiam carbunculi ex inflammatione nasci, nonnumquam in ipsa oculis, nonnumquam in palpebris, et in his ipsa modo ab interiore modo ab exteriori.—In hoc casu alvus ducenda est, albus

¹ More added by conjecture, the words *vel per se* after *croco*, and *ita* is translated.

or hyoscyamus leaves with the yolk of a boiled egg, or flour with acacia juice and raisin wine or honeyed wine; if poppy-tears too be added to these, they are rendered somewhat more active. Having prepared one of the above, the eyes should be swabbed with a small screw of lint, wrung out in a hot decoction of myrtle or rose leaves and then one of the salves placed in them. Furthermore, after incising the skin of the occiput, a cup is to be applied there. But if the eye is not restored into position by the above remedies, but remains pushed forward as before, it should be recognised that its sight is lost; and that the eyeball will harden or will be converted into pus. If suppuration shows itself in the corner nearest the temple, the eyeball should be cut into, in order that by letting out the pus, both inflammation and pain may be ended, and the coats of the eyeball may recede, so that the patient's looks afterwards may be less disfigured. There should then be applied either one of the above salves with milk or egg, or saffron, either by itself or mixed with white of egg. But if the eyeball has grown hard and is dead, but not converted into pus, so much of it is to be cut out as projects in an ugly fashion; for this purpose the sclerotic coat is seized with a hook, and the scalpel cuts under it; then the same medicaments are to be inserted until all pain has stopped. Use is to be made of the same medicaments for an eye which has first prolapsed, and then has split open in several places.

It is also customary for inflammation to give rise to carbuncles, sometimes upon the actual eyeballs, sometimes upon the eyelids, either on the inner or on the outer surface of these. When this occurs, the

minuendus, hoc potui dandum, ut acris quae laeserunt leniantur. Quod ad cataplasmata et medicamenta pertinet, is utendum, quae adversum inflammationem proposita sunt (B, 1 E—2 H. 26. 27). Atque hoc quoque Nilei collyrium optimum est: si tamen carbunculus in exteriori palpebrae parte est, ad cataplasmata aptissimum est lini semen ex mulo coctum; aut si id non est, tritici farina eodem modo cocta.

- 11 Pusulae quoque ex inflammatione interdum oriuntur. Quod si inter initia protinus incidit, magis etiam servanda sunt, quae de sanguine et quiete supra proposui (1 EF, 6 F): sin serius quam ut sanguis mitti possit, alius tamen ducenda est; si id quoque aliqua res inhibet, ulique vetus ratio servanda est. Medicamentis autem huc quoque lenibus opus est, quale Nilei, quale Cleonis est.
- 12 Id quoque, quod Philalethus vocatur, huc aptum est: murræ, papaveris lacrimae, singulorum P. # I; plumbi eloti, terrae Semeae, quae ester vocatur, tracenti, singulorum P. # III; stibis cocti, amuli, singulorum P. # VI; spodi eloti, cerussae elotae, singulorum P. # VIII. Quae aqua pluviali excipiuntur. Usus collyrii vel ex ovo vel ex lacte est.
- 13 Ex pusulis ulcera interdum fiunt; ea recentia aequè lenibus medicamentis nutrienda sunt, et haecdem fere, quae supra in pusulis posui (V. 28, 15 E).—Fit quoque proprie ad haec quod dia libanu vocatur. Habet aeris combusti et eloti, papaveris lacrimae frictae,

* V. 6. 8 G, 9 A.

* VI. 6. 2.

* Potter's clay from Samos: it was stamped with a star.

* V. §§. 15 E.

* See *Asclepias* so called because it contained *Asclepios*.

patient should be clystered, the food diminished, and milk given as drink, in order to mollify the acrid matter which is doing harm. As regards poultices and medicaments, what has been prescribed for inflammation must be used. And here again the salve of Nileus* is best: but when the carbuncle is on the outer surface of the eyelid, the most suitable poultice is one of linseed boiled in honeyed wine, or, if that is not at hand, flour boiled in the same.

Pustules are also an occasional consequence of inflammation. If this happens early during the first stage, the blood-letting and rest prescribed above should be even more strictly enforced; if later than the stage when blood-letting is possible, the bowels, nevertheless, should be clystered; and if anything should prevent this also, at any rate the regimen as to diet should be followed. For this condition also soothing medicaments are necessary, such as those of Nileus and Cleon.

Also the salve† named after Philothus is suitable, consisting of: myrrh and poppy-tears 4 grms. each; washed lead, Samian earth called aster,‡ and tragacanth 16 grms. each; boiled antimony sulphide and starch 24 grms. each; washed oxide of zinc and washed cerussa 32 grms. each. These are made up with rain-water. The salve is used either with white of egg or milk.

From pustules ulcerations sometimes arise. These when recent are likewise to be treated by mild applications, generally by the same as I have prescribed above for pustules.‡ That which is called 'die lithani'§ is specially prepared for the above condition. It is composed of roasted and washed copper, and parched poppy-tears 4 grms.

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singularum P. & I; spodi eloti, turis, stibis combusti et eloti, murræ, cummis, singularum P. & II.

- 14 Evenit etiam, ut oculi vel ambo vel singuli minores fiant quam esse naturaliter debeant; idque et acer pituitæ curvus in lippitudine efficit et continpati betus et ictus parum bene curati.—In his quoque hædem lenibus medicamentis ex muliebri lacte utendum est; elbis vero is, qui maxime corpus alere et implere consueverunt; vitandaque omni modo causa, quæ lacrimas excitet, curaque domesticorum; quorum etiam, si quid tale incidit, (eius) otitiae subtrahendum. Atque acris quoque medicamenta et acres cibi non alio magis nomine his nocent, quam quod lacrimas movent.

- 15 Genus quoque vitæ est, quoniam inter pilos palpebrarum peduculi nascentur: plurimam Græci nominant. Quod cum ex malo corporis habitu fiat, raro non ultra procedit. Sed fere tempore interposito pituitæ curvus acerrimus sequitur, exulceratisque vehementer oculis aciem quoque ipsam corrumpit.—His alvus ducenda est, caput ad eutem tendendum, dluque cotidie tejunis perfricandum; his ambulationibus aliisque exercitationibus diligenter utendum; gargarizandum ex mulso, in quo nepeta et pinguis ficus decocta sit; sæpe in balneo multa aqua calida fovendum caput; vitandi acres cibi, lacte vinoque pingui atroxium, bibendumque liberalius quam edendum est. Medicamenta vero lotus quidem lenis danda sunt, ne quid acrioris pituitæ

* i.e. any worry likely to cause tears.

each; washed zinc oxide, frankincense, roasted and washed, antimony sulphide, myrrh, and gum 8 grms. each.

It happens too that the eyeballs, either both or one, become smaller than naturally they ought to be. An acrid discharge of rheum in the course of ophthalmia causes this, also continuous weeping, and an injury improperly treated. In these cases the same mild applications mixed with woman's milk should also be used, and for food, that which is most nourishing and body-building. In every way any cause which may excite tears must be avoided, and anxiety about home affairs also, knowledge of which, if anything of that sort has arisen,^o must be kept from the patient. And acrid medicaments and sour food do harm in these cases, chiefly because of the tears which they excite.

There is also a kind of disorder in which loc are born between the eyelashes; the Greeks call it phthiriasis. Since this comes from a bad state of health it seldom fails to get worse; but usually in time a very acrid discharge of rheum follows, and if the eyeballs become severely ulcerated, it even destroys their vision. In these cases the bowels should be clystered, the head shaved to the scalp, and rubbed for a good while daily whilst the patient fasts; walking and other exercises should be diligently practised; he should gargle honey wine in which mint and ripe figs have been boiled; at the bath the head should often be freely fomented with hot water, acrid food avoided, milk and sweet wine should be taken, with more drink than food. Medicaments administered internally should be bland lest they stimulate the acridity of the rheum;

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concitant, super ipsos vero peduculos alba, quae necare eos, et prohibere, ne similes nascentur, possint. Ad id ipsa spuma nitri P. * —; sandaracae P. * —; urae tanninae P. * I simul teruntur, adiciturque vetus oleum pari portione atque acutum, donec melis et crassitudo sit.

- in Haecenus oculorum morbi¹ lenibus medicamentis nutriuntur. Genera deinde alia sunt, quae diversam curationem desiderant, foreque ex inflammationibus nata, sed finitis quoque his manentia. Atque in primis in quibusdam perseverat tenuis pustulae cursum; quibus alvus ab inferiore parte erocanda est, demendum aliquid ex cibo. Neque alienum est inlini frontem compositione Andriae, quae habet cumulae P. * I; cerusae, stibis, singulorum P. * II; spumae argenti coctae et elotae P. * III. Sed ea spuma ex aqua pluviali² coquitur, et arida haec medicamenta ex succo mortis conteruntur. His lecta fronte cataplasma quoque superiniiciendum est ex farina, quae frigida aqua cocta sit, cuique aut acaciae succus aut cupressus adiecta sit. Cucurbitula quoque inciso vertice recte accommodatur aut ex temporibus sanguis emittitur. Inungui vero eo debet, quod habet: squamae aeris, papaveris lacrimae, singulorum P. * I; cervini cornus combusti et eloti, plumbi eloti, cumulae, singulorum P. * III; turis P. * XII. Hoc collyrium, quia cornu habet, dia tu ceratos nominatur. Quotienscumque con-

¹ *Marx conjectures that the words referantur qui have fallen out after morbi; V. d. Linden supplies qui.*

² *Aut rui referunt: boiled stag's horn yielded a glutinous mucus and is mentioned by Galen as a bland application; 208*

other medicaments too are put upon the lice themselves in order to kill them and prevent any more from being born. For this purpose soda-scum 0.33 grm., sandarach 0.33 grm. and black bryony berries 4 grms. are pounded up together, with equal proportions of old oil and vinegar, until of the consistency of honey.

The preceding diseases of the eyes are treated with bland applications. Next come other classes which require a different treatment, and they usually originate from inflammation, but also persist after the inflammation has subsided. And first in some cases there is a thin discharge of rheum which persists; in these the bowel is to be clystered, and the amount of food somewhat reduced. And it is not inappropriate to smear the forehead with the composition of Andrias; this consists of gum 4 grms., cerussa and antimony sulphide 8 grms. each, litharge heated and washed 16 grms. But the litharge must be boiled in rain-water, and the dry ingredients pounded up in myrtle juice. When the forehead has been smeared with this, a poultice is put on of flour made into a paste with cold water, to which is added acacia juice or cypress oil. It is also useful to apply a cup to the top of the head after making an incision, or blood may be let from the temples. The following ointment should be used: copper scales and poppy-seeds 4 grms. each; stag's horn calcined and washed, washed lead, and gum, 16 grms. each; frankincense, 48 grms. This salve, because it contains horn, is called *dia tu keratos*.* Whenever

it is to be distinguished from *cornu cervinumustum*, incinerated stag's horn yielding calcium oxide, quicklime, which was used for cleaning wounds, V. 5. 2.

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adicio, quod genus umoris adiciendum sit, aquam intellegi volo.

- 17 Ad idem Euelpidis, quod memigmenon nominabat. In eo papaveris lacrimae et albi piperis singulae unctae sunt; cummis libra P.; aeris combusti P. & I S. Inter has autem curationes post intermissiones aliqua praesunt balineum et vinum. Cumque omnibus lippientibus vitandi cibi qui extenuant, tum praecipue, quibus tenuis umor diu fertur. Quod si iam fastidium est eorum, quae pituitam crassiorem reddunt (sicut in hoc genere materiae maxime promptum est), confugiendum est ad ea, quae, quia ventrem, corpus quoque adstringunt.
- 18 At ulcera, si cum inflammatione finita . . .¹ non sunt, aut supererescuntia aut sordida aut cava aut certe vetera esse consueverunt. Ex his supererescuntia collyrio, quod memigmenon vocatur, optime reprimuntur: sordida purgantur et eadem et eo,
- 19 quod zozition nominatur. Habet serupinis P. & IIII; cummis tantundem; Hammoniaci, mini Sinopici, singulorum P. & XVI; quae quidam ex aqua, quidam, quo vehementiora sint, ex aceto terunt.
- 20 Id quoque Euelpidis, quod pyrron[s] appellabat, huc utile est: croci P. & I; papaveris lacrimae, cummis, singulorum P. & II; aeris combusti et eloti, murræ, singulorum P. & IIII; piperis albi P. & VI. Sed ante leni, tum hoc tranguendum est.

¹ *Mors laetis sanata after finita, and this is translated.*

* *periphrasis callicum*—mixed salve.

+ *Zozition* (*ζωζίτιον*, the Hils ocolpel) was sharp as a knife in its effect.

I do not name the kind of fluid to be added, I would have water to be understood.

For the same purpose there is the salve of Euclydes, which he called *menigmenon*,^a containing poppy-tears and white peppercorns 28 grms. each; gum 336 grms.; roasted copper 6 grms. However, in the course of the treatment, after a subsidence of the disease, the bath and wine are of some service. In all cases of ophthalmia food that makes thin should be avoided, but especially in those who have had for long a discharge of thin humour. But if food which renders the rheum thicker comes to be disliked, which very readily happens with this kind of diet, recourse should be had to those foods which, in bracing up the bowels, do the same to the body in general.

Again, ulcerations which do not heal after inflammation has ended, tend to become fungous or foul or excavated, or at any rate chronic. Such as are fungous are best repressed by the salve called *menigmenon*; those which are foul are cleaned both by the same and by that called *smilion*.^b This contains: verdigris 16 grms.; gum the same; ammoniacum and Sinopic minium 84 grms.; some pound up these with water, others with vinegar, in order to make it more active.

The salve of Euclydes also which he called *pyrron*^c is of use for this: saffron 4 grms.; poppy-tears and gum 8 grms.; roasted and washed copper and myrrh 16 grms. each; white pepper 24 grms. But the eyes are first smeared with a mild ointment, then with the above.

^a From its red (purple) colour: it contained red oxide of copper.

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- 21 Id quoque eiusdem, quod sphaerion nominabat, eodem valet: lapidis haematitis eloti P. * I —; piperis grana sex; cadmiae elotae, murræ, papaveris lacrimae, singulorum P. * II; croci P. * III; cummisi P. * VIII. Quae cum vino Amniaco conterantur.
- 22 Liquidum autem medicamentum ad idem componebat, in quo erant haec: aeruginis P. * =; misy combusti, atramenti autori, cinnamomi, singulorum P. * I; croci, nardi, papaveris lacrimae, singulorum P. * I —; murræ P. * II; aeris combusti P. * III; cineris ex odoribus P. * IIII; piperis grana XV. Haec ex vino austero teruntur, deinde cum passi tribus heminis decoquantur, donec corpus unum sit; idque medicamentum vetustate efficacius fit.
- 23 Cava vero plera commodissime implentur ex his, quae supra posita sunt, sphaerion et id, quod Phlalethus vocatur. Idem sphaerion vetustis ulceribus et vix ad cicatrices venientibus optime succurrit.
- 24 Est etiam collyrium, quod, cum ad plura valeat, plurimum tamen proficere in ulceribus videtur. Refertur ad Heronem auctorem. Habet piperis longi P. * I —; albi P. * —; cinnamomi, costi, singulorum P. * I; atramenti autori, nardi, casiae, castorei, singulorum P. * II; gailae P. * V; murræ, croci, turis, Lycl, cerussae, singulorum P. * VIII; papaveris lacrimae P. * XII; aloes, aeris combusti, cadmiae, singulorum P. * XVI; asaeclae, stibis, cummisi, singulorum P. * XXV.
- 25 Factae vero ex ulceribus cicatrices duobus vitiis periclitantur, ne aut cavae aut crassae sint. Si

* From the shape which was that of a bell (σφαιρα): see also V. 8. 23, 24, 25, 28.

That salve of his which he named sphaerion* has the same effect: washed haematite stone 4·68 grms.; 6 peppercorns; washed zinc oxide, myrrh and poppy-tears 8 grms.; saffron 18 grms.; gum 32 grms.; these are pounded up in Aminean wine.

For the same purpose he prepared a liquid salve, containing verdigris 0·68 grm.; roasted antimony sulphide, shoemakers-blacking, and ammoniac 4 grms. each; saffron, nard and poppy-tears 4·68 grms. each; myrrh 8 grms.; roast copper 12 grms.; ash of aromatic herbs 16 grms.; 15 peppercorns. These are pounded up in dry wine, then boiled in 750 c.ccm., of raisin wine until of uniform consistency. This is rendered more efficacious by age.

Excavated ulcerations, too, are most readily replenished with flesh by the compositions mentioned above, sphaerion, and that called Philaethus.^b Sphaerion is the best remedy for old-standing ulcerations, and those that are difficult to heal.

There is also a salve, which whilst efficacious in many ways seems to be specially so in the case of ulcerations. It is said to have been invented by Hermus. It contains: long pepper 4·68 grms.; white pepper 0·33 grm.; cinnamon and costmary 4 grms. each; shoemaker's blacking, nard, casta and castoreum 8 grms. each; gall 20 grms.; myrrh, saffron, frankincense, lycium and ceruse, 32 grms. each; poppy-tears 48 grms.; lign-aloes, roasted copper and oxide of zinc 64 grms. each; acacia, antimony sulphide and gum 100 grms. each.

Scars resulting from ulcerations are liable to two defects, they are either depressed or thick. If

* VI. 6. 12.

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- cavae sunt, potest eas implere id, quod *sphaerion* vocari dixi, vel id, quod *Asclepios* nominatur. Habet *papaveris lacrimae* P. * II; *sagapeni*, *opopanacli*, singulorum P. * III; *aeruginis* P. * IIII; *cummis* P. * VIII; *piperis* P. * XII; *cadmlae elotae*, B *cerussae*, singulorum P. * XVI. At si crassae cicatricies sunt, extenuat vel *emilion* vel *Canopite collyrium*, quod habet: *cinnamomi*, *acaciae*, singulorum P. * I; *cadmlae elotae*, *croci*, *murtae papaveris lacrimae*, *cummis*, singulorum P. * II; *piperis albi*, turis singulorum P. * III; aeris combusti C P. * VIII. Vel *Euclypidis pyximum*, quod ex his constat: *salis fossilis* P. * IIII; *Hammoniaci thymiamatis* P. * VIII; *papaveris lacrimae* P. * XII; *cerussae* P. * XV; *piperis albi*, *croci* *Siculi*, singulorum P. * XXXII; *cuminis* P. * XIII; *cadmlae elotae* P. * VI. Maxime tamen tollere cicatricem videtur id, quod habet: *cummis* P. * —; *aeruginis* P. * I; *croci magmatici* P. * IIII.
- 26 Est etiam genus inflammationis, in qua, si cui tument ac distendantur cum dolore oculi, sanguinem ex fronte emitti necessarium est, multaque aqua calida caput atque oculos fovere; gargarizare ex lenticula vel fici cremore; inungui acerbis medicamentis, quae supra (18 seqq., 21 seqq.) comprehensa sunt, maximeque eo, quod *sphaerion* nominatur, quod lapideam haematitem habet. Atque alia quoque utilia sunt, quae ad extenuandam asperitudinem fiunt, de qua protinus dicam.
- 27 Haec autem inflammationem oculorum fere sequi-

* A salve named after the town of Canopus in Egypt.

^b *Collyrium pyximum*, a salve kept in a box-wood case; such receptacles, specially labelled, have been unearthed from apothecaries or drug shops excavated in Pompeii and elsewhere.

depressed, new flesh may be grown by applying that salve called sphaerion, or that named Asclepios, which contains: poppy-tears 8 grms.; sagapœum and all-heal 12 grms. each; verdigris 16 grms.; gum 32 grms.; pepper 48 grms.; washed oxide of zinc and cerussa 64 grms. each. But thick scars are thinned either by the solution, or by the salve of Canopus² which contains: cinnamon and anacia 4 grms. each; washed oxide of zinc, saffron, myrrh, poppy-tears and gum 8 grms. each; white pepper and frankincense 12 grms. each; roasted copper 32 grms. Or the pyxium³ of Euelpidēs, which consists of: rock-salt 16 grms.; ammoniacum used for incense, 32 grms.; poppy-tears 48 grms.; cerussa 60 grms.; white pepper and Sicilian saffron 128 grms. each; gum 52 grms.; washed zinc oxide 36 grms. However, the best for elevating a scar seems to be: gum 0.56 grm.; verdigris 4 grms.; drags of saffron 16 grms.

There is also a class of inflammation in which, if the eyes swell and become tense with pain, it is necessary to let blood from the forehead, and to foment the head and eyes freely with hot water; also to gargle, using a decoction of lentils, or the cream of figs; to apply as an ointment acid medicaments, such as have been noted above, especially that named sphaerion, and that containing hæmatite stone. There are also other salves of use for softening trachoma⁴ of which I am just going to speak.

Now this condition generally follows inflammation

² For trachoma see p. 184 note a; the disease continues unaltered to this day among eastern races; in Egypt especially it is general among the populace in various degrees of severity.

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tur, interdum maior, interdum levior. Nonnumquam etiam ex asperitudine lippitudo fit, ipsam deinde asperitudinem auget, sitque r̄ alias brevis, in aliis longa et quae vix umquam finiatur.—In hoc genere valetudinis quidam crassas durasque palpebras et sculneo folio et asperato specillo et interdum scalpello eradunt, versasque cotidie medicamentis suffrificant; quae neque nisi in magna vetustaque asperitudine neque saepe facienda sunt: nam melius eodem ratione victus et idoneis medicamentis pervenitur.

B Ergo exercitationibus utemur et balneo frequentiore, multaque . . .¹ oculorum aqua calida fovebimus; cybos autem sumemus acres et extenuantis, medicamentum id, quod Caesarianum vocatur. Habet atramenti sutori P. * I —; mixy P. * I =; piperis albi P. * — —; papaveris lacrimae, cummis, singulorum P. * II; caduvisae clotae P. * III; stibis P. * VI; satisque constat hoc collyrium adversus omne genus oculorum valetudinis idoneum esse, exceptis h, quae lenibus nutriuntur.

28 Id quoque, quod Hieracis nominatur, ad asperitudinem potest. Habet murræ P. * I; Hammoniaci thymiamatis P. * II; aeruginis rarse P. * III. Ad idem idoneum est etiam id, quod Canopitæ est et, quod smilicon vocatur, et id, quod pyzinum et id, quod sphæron. Si composita medicamenta non adsunt, felle caprino vel quam optimo melle satis commode asperitudo curatur.

29 Est etiam genus aridae lippitudinis: xerophthalmien Graeci appellant. Neque tumant neque fluunt oculi,

¹ *Atrox propositio magis orem ac paratam.*

* *Id. chronic conjunctivitis.*

of the eyes; sometimes it is more serious, sometimes less so. Often too, as the result of trachoma, inflammation^a is set up, which in its turn increases the trachoma, and sometimes lasts a short time, sometimes long, and then it is scarcely ever terminated. In this class of affection, some scrape the thick and indurated eyelids with a fig-leaf and a rasp and sometimes with a scalpel, and every day rub medicaments into the under surface of the eyelid; such things should only be done when there is marked and inveterate hardness, and not often; for the same result is better attained by dieting and proper medicaments. Therefore we shall make use of exercise and frequent baths, and foment the eye-lids freely with hot water, and the food we give will be acid and attenuating, and the medicine the salve called *caesarianum*. This contains: shoemaker's blacking 1.33 grms.; antimony sulphide 1.88 grms.; white pepper 1.33 grms.; poppy-tears and gum 8 grms. each; washed oxide of zinc 16 grms.; antimony sulphide 24 grms. And this preparation will do for all kinds of eye-inflammations, except such as are relieved by bland remedies.

That called after Hierax is also efficacious for trachoma. It contains: myrrh 4 grms.; ammoniacum used for incense 9 grms.; copper filings 16 grms. For the same purpose there are also those called respectively Canopite, smilion, pyxium, and sphæction. But when none of these made up medicaments is at hand, then goat's bile or honey of the best is suitable enough for the treatment of trachoma.

There is a kind of dry inflammation of the eyes called by the Greeks *xerophthalmia*. The eyes neither swell nor run, but are none the less red

sed rubent tamen et cum dolore quodam gravescent
et noctu praegravi pituita inhaerescunt; quantoque
minor generis bulas impetus, tanto fida minus
expeditus est. — In hoc vitio multum ambulare,
multum exerceri, lavari saepe,¹ . . . ibique desudare,
multaque frictione uti necessarium est. Cibi neque
ii qui implent, neque nimium acres apti sunt, sed
inter hos medi. Mane, ubi concussisse manifestum
est, non est alienum ex sinapi gargarizare, tum
deinde caput atque us diutius defricare.

30 Collyrium vero aptissimum est, quod rinion vocatur.
Habet murræ P. * = ; papaveris lacrimae, acaciae
suc, piperis, cummis, singulorum P. * I; lapidis
haematitis, lapidis Phrygii, Lucli, lapidis scissilis,
singulorum P. * II; aeris combusti P. * III.
Ac pyrinum quoque eodem accommodatum est.

31 Si vero scabii oculi sunt, quod maxime in angulis
esse consuevit, potest prodesse rinion, id quod supra
positum est; potest militare: id, quod habet
aeruginis rasae, piperis longi, papaveris lacrimae,
singulorum P. * II; piperis albi, cummis, singu-
lorum P. * III; cadusae elotae, cetrusae, singu-
lorum P. * XVI. Nullum tamen mellis est quam
Euelpidis, quod basilicon nominabat. Habet papa-
veris lacrimae, cetrusae, lapidis Assii, singulorum
P. * II; cummis P. * III; piperis albi P. * III;
Beroet P. * VI; periscl P. * XIII. Nulla autem per
se materia est, quae psoricum nominetur, sed
chalcitidis aliquid et cadusae diutius plus ex aceto

¹ *After* would add *after* saepe: in balneo sedere, and this
is translated.

* Cf. Paulina Aegineta, §. 22. judicium. * *Splis alqm*, cf. V. 2.
* Inflammation of the eyelid (*Blepharitis marginata* or
angulosis).

and heavy and painful, and at night the lids get stuck together by very troublesome rheum; the less violent the onset of this kind of trouble is, the less readily it is terminated. In this lesion there is need for much walking, much exercise, frequent bathing, sitting in the bath and sweating, and much rubbing. The food should not be too flesh-making, neither is acid food suitable, but a mean between the two. In the morning, when it is plain that all food has been digested, it is not inappropriate to gargle with mustard, then next to rub the head and face for a considerable time.

Again, a most suitable salve is that called rhinion.* It contains: myrrh 0.55 grm.; poppy-tears, acacia juice, pepper and gum 4 grms. each; hæmatite stone, Phrygian and Lycian stone, and split stone,² 8 grms. each; roasted copper 16 grms. The salve pyximum is also fitting for this same purpose.

When the eyes are scabrous,³ which mostly occurs at their angles, the rhinion salve noted above may do good; that one may also serve which contains: copper filings, long pepper and poppy-tears 8 grms. each; white pepper and gum 16 grms. each; washed oxide of zinc and cerussa 64 grms. each. Nothing, however, is better than that named by Euelpides basilicon. It contains: poppy-tears cerussa and Assos stone, 8 grms. each; gum 12 grms.; white pepper 16 grms.; saffron 24 grms.; psoricum⁴ 42 grms. Now there is no drug called psoricum, but some copper ore and a little more than half as much oxide of zinc are pounded up together in vinegar,

* Psoricum (ψωρικός φάρμακον) was a remedy for itch, ψώρα. The composition was noted by Dioscorides and Pliny; oxides of copper and zinc were the active ingredients.

simul conterantur, idque in vas fictile additum et contextum ficulneis folijs sub terra reponitur, sublatumque post dies viginti rursus teritur, et sic $\dagger$ appellatur.¹ Verum in basilico quoque collyrio convenit ad omnes affectus oculorum id esse idoneum.

Cui non lacibus medicamentis curantur. Ubi non sunt autem medicamenta composita, seabros angulos levant et mel et vinum; succurruntque et his et aridae lippitudini, si quis panem ex vino subactum super oculum imponit. Nam cum fere sit unus aliquis, qui modo ipsum oculum, modo angulos aut palpebras exasperat, sic et, si quid predit uicoris, extrahitur, et, si quid iuxta est, repellitur.

32 Caligare vero oculi nonnumquam ex lippitudine, nonnumquam etiam sine hac propter senectutem, inbecillitatemve aliam conserunt. Si ex reliquis lippitudinis id vitium est, adjuvat collyrium, quod Asclepios nominatur, adjuvat id, quod ex croci magroste fit.

23 Propria etiam ad id componitur, quod diu crocu vocant. Habet piperis P. $\ast$ I; croci Cilles, papaveris lacrimae, cerussae, singularum P. $\ast$ II; psoriel, cammis, singularum P. $\ast$ III.

24 At si ex senectute alve inbecillitate id est, recte iungi potest et melle quam optumo et cypro et oleo veteri. Commodissimum tamen est balsami partem unam et olei veteris aut cyperi partes duas, mellis quam acerrimi partes tres miscere. Utilia huc quoque medicamenta sunt, quaeque ad caliginem

¹ Marx suggests adhibetur for the MSB. appellatur. One MS. inserts psorium after appellatur.

and this is placed in an earthenware jar and covered over with fig-leaves and is buried underground; after twenty days it is taken up, and again pounded, when it is given this name. It is generally agreed that the *saive basilicum* is suitable for all affections of the eyes which are not treated by blood medications. But when such compositions are not at hand, honey and wine relieve the scabrous angles of the eyes; in this and in dry ophthalmia relief is afforded by soaking bread in wine, and applying it over the eyes. For since there is generally some humour which is irritating either the eyeball itself, or its angles, or the eyelids, by this application any humour on the surface is drawn out and any near at hand driven back.

Again the eyes tend at times to become dim from ophthalmia, but also apart from that, on account of old age, or other weakness. If the disorder is owing to the remnants of an ophthalmia, the *saive* called *Asclepios* is of service and that which is composed of saffron dregs.

Also there is a special preparation for this purpose called *dia crocu*.² It contains pepper 4 grms.; Cilician saffron, poppy-tears and ceruse 8 grms. each; psoricum and gum 16 grms. each.

But if the eyes are dim from old age or other weakness, it is good to anoint with best honey, cyprus oil, and old olive oil. The most suitable unguent, however, is made of bakam one part, and old olive or cyprus oil two parts, and three parts of the sharpest honey. Here too those applications are suitable which were noted just above

² *Sed asclepiu*, containing saffron from Cocyto (now Khegoz) in Cilicia.

proxime (32, 33) quæque ad extenuandas cicatrices
B supra (25 B) comprehensa sunt. Culeumque vero
oculi caligabunt, hæc opus erit multa ambulatione
atque exercitatione, frequenti balneo, ubi totum
quidem corpus perfricandum est, præcipue tamen
caput, et quidem irino, donec inaudet velandumque
postea nec detegendum antequam sudor et calor
domi conquierint. Tum cibus utendum acerbis et
extenuantibus, interpositisque aliquibus diebus ex
sinapi gargarizandum.

- 35 Suffusio quoque, quam Graeci hypochysin nominant, interdum oculi potentissae, quæ cernit, se opponit. Quod si inveteravit, manu curandum est. Inter ista nonnunquam certis observationibus discutietur. Sanguinem ex fronte vel naribus mittere. In temporibus venas adurere, gargarizando pituitam evocare, subsumigare, oculos acerbis medicamentis iunguere expedit. Victus optimus est, qui pituitam extenuat.

- 36 Ac ne resolutio quidem oculorum, quam paralyzin Graeci nominant, alio victus modo vel aliis medicamentis curanda est. Exposuisse tantum genus vitii satis est. Igitur interdum evenit, modo in altero oculo, modo in utroque, aut ex ictu aliquo aut ex morbo comitiali, aut ex distentione nervorum, quæ vehementer ipse oculus concussus est, ut is neque quoquam intendi possit, neque omnino consistat, sed hoc illuc sine ratione moveatur; Ideoque ne conspectum quidem rerum præstat.

* See VI. 8, 25 R.

¹ Suffusio (*دخخوع*) is a collection of humour behind the pupil. The name *catarrhus* (*كترار*) was first used by Constantinus about 1070 in a translation from the Arabic. See also VII. 7, 12.

BOOK VI. 6. 34-36

for dim vision and previously for thinning² scars. If anyone finds his eyes becoming dim, he must walk and exercise a great deal; also bathe frequently, and in the bath he is to be rubbed all over, especially, however, on his head, with iris unguent, until he sweats; and he should then be wrapped up, and not uncover, until after reaching home the sweating and heat have passed off. Then he should take acid foods which will make him thin and some days afterwards gargle with mustard.

Cataract³ also, which the Greeks call *hypochysis*, sometimes interferes with the vision of the eye. When it has become long established it is to be treated surgically. In its earliest stages it may be dispersed occasionally by certain measures: it is useful to let blood from the forehead or nostrils, to cauterize the temporal blood vessels, to bring out phlegm by gargling, to inhale smoke, to anoint the eyes with acid medicaments. That regimen is best which makes phlegm thin.

Again, even the relaxation of the eyes which the Greeks call *paralysis*⁴ is not to be treated by any different regimen or by any different medicaments. It is sufficient to explain just the kind of lesion it is. It happens then sometimes in the case of one eye, sometimes of both, from some blow, or from epilepsy, or from a spasm, by which the eyeball itself is violently shaken, that it cannot be directed at any object, or be held at all steady, but with no reason it turns now this way, now that, and so does not even afford a view of objects.

² *Paralysis* and *resolusio nervorum* are used alternatively. The description is rather of a functional disorder than of a muscular paralysis.

- 27 Non multum ab hoc malo distat id, quod mydriasi Græci vocant. Pupilla funditur et dilatatur, aciesque eius hebetescit ac pæne. . . .¹—Difficillime genus id inbecillitatis eliditur. In utraque parte vero [id est et paralyti et mydriasi] pugnandum est per eadem omnia, quæ in caligine oculorum præcepta sunt (32-34), paucis tantum mutatis, aliquidem ad caput lyso interdum acetum, interdum nitrum B adiciendum est, melle iungui satis est. Quidam in posteriore vitio calida aqua vel relevatque; quidam sine ulla manifesta causa subito obæscati sunt. Ex quibus nonnulli cum aliquandiu nihil viderent, repentina profusione alvi lumen recuperunt; quo incus alienum videtur et recenti re et interposito tempore medicamentis quoque moliri deiectiones, quæ omnem noxiam materiam in inferiora depellant.
- 29 Præter hæc inbecillitas oculorum est, ex qua quidam interdum satis, noctu nihil vident; quod in feminam bene respondentibus mensuris non cadit.—Sed sic laborantes iungui oportet asule forneris maxime hircini, si minus, caprini, ubi id assum coquitur, excepta; atque edl quoque ipsum lecur debet. Licet tamen etiam iisdem medicamentis non inutiliter uti, quæ vel cicatryces vel asperitudinem extenuant: quidam contrito semini portulacæ mel adiciunt, caveant ne id ex specillo destillet, coque

¹ A word has fallen out here, Marc supplies deficit.

¹ Mydriasis (mydriasis). The reflex effect of more light entering through the dilated pupil is to cause the eyelids to close (Müller).

² Galen here describes a particular functional disorder called *crepuscularia*, inability to see at dusk, and at night;

The malady the Greeks call mydriasis* is not very different from the above. The pupil spreads out and is dilated, and its vision becomes dimmed and almost lost. This kind of weakness is most difficult to relieve. Both of these [paralysis and mydriasis] are to be countered by all the same prescriptions as mistiness of the eyes, but with a few alterations, such as the addition sometimes of vinegar, sometimes of soda, to the iris unguent for the head; while honey is sufficient for the eye linctions. In the case of mydriasis, some patients have been relieved by the use of hot water, some without any obvious cause have suddenly become blind. Some of these after seeing nothing for some time have suddenly regained vision following a profuse stool. Hence it seems not inappropriate, whether in a recent case or in one of some standing, by the use of medicaments to force stools in order to drive downwards all noxious matter.

There is besides a weakness of the eyes, owing to which people see well enough indeed in the daytime but not at all at night;⁶ in women whose menstruation is regular this does not happen. But such sufferers should anoint their eyeballs with the stuff dripping from a liver whilst roasting, preferably of a he-goat, or failing that of a she-goat; and as well they should eat some of the liver itself. But, we may also use with advantage the same remedies which dry up scars and trachoma. Some add honey to pounded perslane seed until the mixture no longer drops from the end of a probe, and with it anoint the

male and other animals have better vision than man in this respect. The term nyctalopia (night blindness) is meaningless and so has led to endless confusion.

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inungunt. Exercitationibus, balneo, frictionibus, gargarizationibus isdem his quoque utendum est.

- 38 Et hæc quidem in ipsis corporibus oriuntur. Extrinsecus vero interdum sic ictus oculum lædit, ut sanguis in eo suffundatur. — Nihil commodius est quam sanguine vel columbæ vel palumbi vel hirundinis inungere. Neque id sine causa fit, cum harum acies extrinsecus læsa interposito tempore in antiquum statum redeat, celerrime hirundinis. Unde etiam fabulæ locus factus est, per parentes id herba restitui, quod per se sanescit. Morumque ergo sanguis nostros quoque oculos ab externo casu commodissime tuitur, hoc ordine, ut sit hirundinis optimus, deinde palumbi, minime efficax columbæ et illi ipsi et nobis. Supra percussam vero oculum ad inflammationem leniendam non est alienum inponere etiam cataplasma. Sal Hammoniacus vel quilibet alius quam optimus tem debet, sic ut et paulatim oleum adiciatur, donec crassitudo strigmenti fiat. Id deinde miscendum est cum hordeaceæ farina, quæ ex mulso decocta sit. Facile autem recognitis omnibus, quæ medici prodiderunt, apparere cuilibet potest, viz ullum ex iis, quæ supra comprehensa sunt, oculi vitium esse, quod non simplicibus quoque et promptis remediis summoferi possit.

7. Hactenus in oculis ea . . .¹ reperiuntur, in quibus medicamenta plurimum possint: ideoque ad aures transeundum est, quarum usum proximum a

¹ *Most would supply morborum genere after ea.*

* *Obedidmum majus, the greater oelandino, which blooms when the swallow (yēdān) is arriving on the swallow word*

eyeballs. The same exercises, baths, rubbings and gargles are also to be used for these patients.

All the foregoing disorders arise within the body; but a blow from without at times so injures the eye that it is suffused with blood. Nothing is then better than to anoint the eyeball with the blood of a pigeon, dove, or swallow. There is some reason for this, because the vision of these birds, when injured from without, returns after an interval to its original state, most speedily in the case of the swallow. This also has given rise to the fable that the old birds restore the vision by a herb,* when it really returns spontaneously. Hence the blood of these birds most properly protects our eyes too after an external injury, and in the following order: swallow's blood is best, next that of the pigeon, and the dove's is the least efficacious, both as regards the birds themselves and us. In order to relieve inflammation, it is not unfitting to apply a poultice over the injured eye. The best salt from Ammon, or some other salt, is pounded, and oil gradually added until it is of the consistency of strigil scrapings. Then this is mixed with barley-meal which has been boiled in honey wine. But it is easy, after looking through all that medical practitioners have written, for anyone to see that there is scarcely any one of the eye disorders among those included above which it may not be possible to clear up by simple and readily procured remedies.

7. So much, then, for those classes of eye disease, for which medicaments are most successful; and now we pass to the ears, the use of which comes next to eye-

(Theophrastus, *Enquiry into Plants*, VII. 13. 1, Loeb translation, II. 126). *alta* juice yields a narcotic alkaloid.

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luminibus natura nobis dedit. Sed in his aliquanto malus periculum est: nam vitia oculorum intra ipsos nocent, aurium inflammationes doloresque interdum etiam ad dementia[m] mortemque præcipitant. Quo magis inter initia præstus succurrendum

B est, ne maiori periculo locus sit.—Ergo ubi primum dolorem quis sensit, abstinere et condinere se debet; postero die, si vehementius malum est, caput tondere, idque irino unguento calido perunguere et operire. At magnus cum febre vigiliisque dolor exigic, ut sanguis quoque militatur; si id aliquæ causæ prohibent, alvus solvenda est. Cataplasmata quoque calida subinde mutata proficiunt, sive feni Græci sive lini sive alia farina ex melle decocta et recte etiam subinde admoventur apocynæ ex aqua calida

C expressæ. Tum levato dolore ceratum circumdari debet ex irino aut cyprino factum: in quibusdam tamen melius quod ex yosa est proficit. Si vehemens inflammatio somnum ex toto prohibet, adici cataplasmati debent papaveris cortices fricti atque contriti, sic ut ex his pars dimidia sit, eaque tum simul ex passio mixto decoquatur. In aurem vero infundere aliquid medicamentum oportet, quod semper ante tepesceri convenit, commodissimeque per strigilem instillatur. Ubi auris repleta est, super lana mollis

D addenda est, quæ umorem intus contineat. Et hæc quidem communia sunt medicamenta: verum est et rosa et radicum herundinis succus, et oleum, in quo lumbrici cocti sunt, et unguis ex amaris nucibus

^a The truth of this statement, unique in ancient medical literature, only came to be appreciated after the middle of the 19th century.

^b The strigil, commonly made of horn, had a groove like our shoehorn, into which liquid medicaments were poured, and from which fluid could be poured in drops.

right as Nature's gift to us. But in the case of the ears there is a somewhat greater danger; for whereas lesions of the eyes keep the mischief to themselves, inflammations and pains in the ears sometimes even serve to drive the patient to madness and death.* This makes it more desirable to apply treatment at the very beginning, that there may be no opening for the greater danger. As soon, therefore, as the pain is first felt, the patient should fast and keep quiet; the next day, if the pain is still severe, the head should be shaved, and after it has been anointed with hot iris unguent, covered up. But great pain with fever and sleeplessness require also that blood should be let; if anything prevents this, the bowels are to be moved. Hot poultices also, frequently changed, are of service, whether composed of fennel-seed or linseed or other meal boiled in honey wine, and sponges also wrung out of hot water, applied at intervals, are appropriate. Then, when the pain is relieved, iris or cyprus unguent should be spread around the ears; in some cases, however, the rose unguent is more advantageous. If severe inflammation entirely prevents sleep, there should be added to the poultice half its quantity of toasted and pounded poppy-head rind, and this should be boiled down with the rest in diluted raisin wine. It is desirable also to pour some medicament into the ear, and this should always be made lukewarm beforehand; and is best dropped in from a syringe.¹ When the ear is full, soft wax is applied over it to keep in the fluid. And these are the medicaments generally used for this purpose: but also there is rose oil and arundo-root juice and oil in which worms have been boiled, and juice expressed from bitter almonds or

aut ex nucleis mali Persici expressus. Composita vero ad inflammationem doloremque leniendum hæc fere sunt: castorei, papaveris lacrimae pares portiones conteruntur; deinde adiicitur his passum. Vel papaveris lacrimae, croci, murræ par modus teritur, ut invicem modo rosa modo passum instilletur.

E Vel id, quod amarum in Aegypto faba est, conteritur rosa adiecta; quibus murræ quoque paulum a quibusdam misceatur vel papaveris lacrimae aut tunc cum muliebri lacte vel amarum nigrum cum rosa succus. Vel castorei, murræ, papaveris lacrimae pares portiones cum passum. Vel croci P. * m —; murræ, aluminis scissilis, singulorum P. * —; quibus dum teruntur paulum miscentur passum cyathi tres, mellis minus cyathis, idque ex primis medicamentis est.

F Vel papaveris lacrimae ex aceto. Idem etiam compositione uti Themisonis, quæ habet castorei, opopanax, papaveris lacrimae, singulorum P. * I; spumæ Lynci P. * IIII. Quæ contrita passum excipiuntur, donec ceræ crassitudinem habeant, atque ita reponuntur. Ubi usus requiritur, rursus id medicamentum adiecto passum spectillo teritur. Illud perpetuum est, quotienscumque crassius medicamentum est quam ut in autem instillari possit, adiciendum cum esse umorem, ex quo id componi debet, donec satis liquidum sit.

2 Si vero pus quoque aures habent, recte Lychum per se infunditur, aut irinum unguentum aut porri succus cum melle aut centauri succus cum passum aut daboia mali Punici succus in ipsius cortice tepidus, adiecta murræ exigua parte. Recto etiam miscentur

from peach-kernels. But the compositions for relieving inflammation and pain generally employed are: castoreum and poppy-tears in equal amounts, pounded together; then to these there is added raisin wine. Or poppy-tears, saffron and myrrh in equal quantities pounded, while rose oil and raisin wine are dropped in by turns. Or the bitter part of the Egyptian bean pounded up with rose oil added; with these some mix a little myrrh or poppy-tears, or frankincense in woman's milk, or the juice of bitter almonds with rose oil. Or castoreum, myrrh and poppy-tears, equal parts, with raisin wine. Or saffron 1 grm.; myrrh and shredded alum 0.86 grm. of each; whilst this is being pounded there is slowly added to it 125 c.cm. of raisin wine, of honey rather less than 40 c.cm., and this is one of the best remedies. Or poppy-tears in vinegar. Theissen's compound may also be used; it contains: castoreum, opopanax and poppy-tears 8 grms. each, buckthorn scam 15 grms. These are pounded and made up in raisin wine, until they have the consistency of a wax salve and are so preserved. When required for use, this composition is again stirred with a probe whilst adding raisin wine. The rule is general, that when a composition has become too thick to be dropped into the ear, some of the fluid with which it was made up is added until it becomes sufficiently liquid.

If again the ears have pus in them as well, it is proper to pour in horthorn juice by itself, or iris unguent or leek juice with honey or centaury juice with raisin wine or the juice of a sweet pomegranate warmed in its rind, to which a little myrrh is added. It is useful to mix together myrrh of the sort called

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murræ, quam statim cognominant, P. $\frac{1}{2}$ I; croci tantundem; nuces cinaræ XXV; mellis sex cyathi; quæ contrita, cum utendum est, in cortice mali Punici tepescunt. Ea quoque medicamenta, quæ oris exulcerati causa componuntur, æque ulcera aurium sanant. Quæ si vetustiora sunt et multa sanies fluit, apta compositio est, quæ ad auctorem Erasistratum refertur: piperis P. $\frac{1}{2}$ =; croci P. $\frac{1}{2}$ =; murræ, misy cocti, singulorum P. $\frac{1}{2}$ I; aeris combusti P. $\frac{1}{2}$ II. Haec ex vino teruntur: deinde ubi inaruerunt, adiciuntur passi lerninae tres et simul incocuntur. Cum utendum est, additur his mel et vinum. Est etiam Ptolemæi chirurgi medicamentum, quod habet: lentisci P. $\frac{1}{2}$ =; gallæ P. $\frac{1}{2}$ =; omphaci P. $\frac{1}{2}$ I; sucum Punici mali. Est Menophilii validum admodum, quod ex his constat: piperis longi P. $\frac{1}{2}$ I; castorei P. $\frac{1}{2}$ II; murræ, croci, papaveris lacrimæ, nardi Sarsæ, turis, malicori, ex Aegypcia faba partis interioris nucum amararum, mellis quam optimi, singulorum P. $\frac{1}{2}$ III; quibus cum teruntur additur acetum quam acerrimum, donec crassitudo in his passi sit. Est Cratæi: cinnamonomi, casiae, singulorum P. $\frac{1}{2}$ =; Lynci, nardi, murræ, singulorum P. $\frac{1}{2}$ I; aloës P. $\frac{1}{2}$ II; mellis cyathi tres; vini sextarius; ex quibus Lycium cum vino decoquitur, deinde his alia miscentur. At si multum puris malæque odor est, aeruginis rosæ, turis, singulorum P. $\frac{1}{2}$ II; mellis cyathi duo; acetæ quattuor simul incocuntur. Ubi utendum est,

stacte 4 grms.; the same amount of saffron; 25 bitter almonds; of honey 250 c.cm.; these are pounded together, and when they are to be used, are warmed in a pomegranate rind. The medicaments which are compounded for ulcerations of the mouth are equally healing for ulcerations of the ear.¹ If the disease is of longer standing, and much matter is discharged, the composition said to have been invented by Erasistratus is suitable: pepper 0.66 grm.; saffron 0.66 grm.; myrrh and cooked antimony sulphide 4 grms. each; roasted copper 3 grms. These are pounded up in wine, and when the mixture has become dry, 750 c.cm. of raisin wine are added, and are boiled up with it. When it is to be used, wine and honey are added to these ingredients. There is also the medicament of the surgeon Ptolemaeus, which contains: mastic 0.66 grm., oak galls 0.66 grm., ammoniacum 4 grms.; and pomegranate juice. There is the very active remedy of Menophitus, which consists of: long pepper 4 grms.; castoreum 3 grms.; myrrh, saffron, poppy-tears, Syrian card, frankincense, pomegranate rind, the embryo of an Egyptian bean, bitter almonds, and the best honey 18 grms. each. These are pounded together with the addition of very sour vinegar until of the consistency of raisin wine. The prescription of Oraton is the following: cinnamon and casia 0.66 grm. each, boxthorn juice, card and myrrh 4 grms. each, lign-aloes 8 grms., honey 125 c.cm., wine half a litre. The lycium is first boiled in the wine, and the rest added. But when there is much pus, and the odour bad, verdigris scrapings and frankincense 8 grms. each, honey 65 c.cm.; vinegar 170 c.cm. are boiled together. For use, it is mixed with sweet

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dulce vinum miscetur. Aut aluminis acualis, papaveris lacrimae, acaciae sive par pondus miscetur, hisque adicitur hyoscyami sive dimidia minor quam unus ex superioribus portio, eaque trita ex vino diluuntur. Per se quoque hyoscyami succus satis proficit.

- 3 Commune vero auxilium adversus omnes aurium casus iamque usu comprobatum Aesclepiades composuit. In eo sunt cinnamomi, casiae, singulorum P. § I; floris iunci rotundi, castorei, albi piperis, longi, anomi, myrobalani, singulorum P. § II; turis masculi, nardi Syriaci, murræ pinguis, croci, spumae natri, singulorum P. § III. Quae separatim contrite, rursus mixta ex aceto conteyuntur, atque ita condita, ubi utendum est, aceto diluuntur. Eodem modo commune auxilium auribus laborantibus est. Polydri sphragis ex dulci vino liquata, quae compositio priore libro (V. 20, 2) continetur. Quod si et sanies profuit et tumor est, non alienum est mixto vino per oricula-rium elysterem eluere, et tum infundere vinum ansterum cum rosa mixtum, cui spodi paulum sit adiectum, aut Lucium cum lacte aut herbae sanguinalis suum cum rosa aut mali Punici socum cum exigua murræ parte.

- 4 Si sordida quoque ulcera sunt, melius multo eluuntur, et tum aliquid ex iis, quae supra scripta sunt, quod mel habeat, infunditur. Si magis pus profuit, et caput utique tundendum est et multa calida aqua perfundendum, et gargarizandum, et usque ad lassitudinem ambulandum, et cibo modico utendum est. Si cruor quoque ex ulceribus apparuit, Lycium cum

wine. Or equal weights of shredded alum, poppy-tears and acacia juice are mixed together, and to these is added of hyocyamus juice less than half the quantity of each one of the above; and these are pounded together and diluted with wine. Also hyocyamus juice is sufficiently beneficial by itself.

A general remedy for all ear cases, and one approved by experience, was composed by Asclepiades. This contains: cinnamon and cassia $\frac{1}{2}$ grms. each; flowers of round hyperus, castoreum, white pepper, long pepper, cardamomum and bennet, 8 grms. each; male frankincense, Syrian nard, fatty myrrh, saffron, soda-acum, 12 grms. each. These are pounded separately, then mixed with vinegar and again pounded, and so preserved; when for use they are diluted with vinegar. In the same way a general remedy for all ear disorders is the tablet of Polydus, dissolved in sweet wine, the prescription for which is given in the last book.* But if there is both a discharge of matter and a swelling, it is not unfitting to wash out the ear with diluted wine through an ear syringe, and then pour in dry wine mixed with rose oil, to which a little oxide of zinc has been added, or boxthorn juice with milk, or polygonum juice with rose oil, or pomegranate juice with a very little myrrh.

If there is also foul ulceration, it is better to wash out with honey wine, and then pour in some one of the compositions described above which contain honey. If there is a great discharge of pus the head is to be shaved, and hot water poured freely over it, also the patient should gargle with the same, walk until tired, and take food sparingly. If there is bleeding from the ulcerations, boxthorn

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lacte debet infundi, vel aqua, in qua rosa decocta sit, sive aut herbae sanguinalis aut acetosae adiecto.

- 4 Quod si super ulcera caro laevet, eaque mali odoris saniem fundit, aqua tepida elui debet, tum infundi id, quod ex ture et aerugine et aceto et melle sit, aut mel cum aerugine incocum. Squama quoque aeris cum sandaraca contrita per fistulam recte instillatur.

- 5 Ubi verum vermes orti sunt, si iuxta sunt, protrahendi oriculario specillo sunt; si longius, medicamentis excandendi, cavendumque ne postea nascentur. Ad utrumque proficit album veratrum cum aceto contritum. Elui quoque auris oportet vino, in quo marrubium decoctum sit. Emortui sub his vermes in primam partem auris provocabuntur, unde educi facillime possunt.

- 6 Si foramen auris compressum est, et intus crassa series subest, mel quam optimum addendum est. Si id parum proficit, mella cyatho et diuidio aeruginis rasae P. ʒ II adiciendum est incoquendumque, et eo utendum. Iris quoque cum nicile idem proficit. Item galbani P. ʒ II, murræ et fellis taurini, singulorum P. ʒ = =, vini quantum astis est ad murræm diluendum.

- 7 Ubi vero gravior aliquis audire coepit, quod maxime post longos capitis dolores evenire consuevit, in prima autem ipsam considerare oportet: apparebit enim aut crusta, qualis super ulcera nascitur, aut

juice should be poured is mixed with milk, or with water in which rose leaves have been boiled, with polygonum juice or that of scasia added. If flesh has formed over the ulcerations and there is a malodorous discharge, the ear should be washed out with tepid water, then that composition poured in which contains frankincense, verdigris, vinegar and honey; or honey boiled with verdigris. Copper scales also pounded up with sandarach may be instilled through a tube with advantage.

When maggots have appeared, if they are near the surface, they must be extracted by an ear scoop; if further in they must be killed by medicaments, and afterwards care taken that they do not breed. White veratrum pounded up in vinegar serves for both these purposes. The ear should also be washed out with a decoction of horehound in wine. By this procedure dead maggots will be driven forwards into the outer part of the ear, whence they can be readily withdrawn.

But if the ear-passage has been narrowed and thick matter collects within, honey of the best ought to be introduced. If this does not help, there must be added to 65 c.cm. of honey 8 grms. of verdigris scrapings; they must be boiled together and so used. Iris root with honey has the same efficacy. So also has galbanum 8 grms., myrrh and ox bile 1-33 grms. each, and of wine a sufficient quantity to dissolve the myrrh.

When a man is becoming dull of hearing, which happens most often after prolonged headaches, in the first place, the ear itself should be inspected; for there will be found either a crust such as comes upon the surface of ulcerations, or concretions of wax.

- sordium coitus. Si crusta est, infundendum est oleum caldum, aut cum melle aetugo vel purri suvus, aut cum melle nitri paulum. Atque ubi crusta a corpore iam recedit, eluenda auris aqua tepida est, quo facilius ea per se diducta oriculario specillo protrahatur. Si sordes haecque molles sunt, eodem specillo eximendae sunt: al si durae sunt, acetum et cum eo nitri paulum emiciendum est; eoque emollitae sunt, eodem modo elui autem purgarique oportet. Quod si capitis gravitas manet, attendendum; idem leniter¹ . . . sed diu perficiendum est, adlecto vel lino vel lauro oleo, sic ut utrilibet paulum aceti miscetur; tum diu ambulandum, leniterque post uictiorem aqua calida caput fovendum.
- C Cibusque utendum ex inbecillissimis et media materia, magisque adsumendae dilutae potiones; nonnumquam gargarizandum est. Infundendum autem in aurem castoreum cum aceto et lauro oleo et succo radiculae corticis, aut cucumeris agrestis anona additis contritis rosea foliis. Immaturae quoque uvae succus cum rosea instillatus adversus surditatem satis proficit.
- B Aliud viti genus est, ubi aures intra se ipsas sonant; atque hoc quoque fit, ne externum sonum accipiant. Levissimum est, ubi id ex gravidine est; peius, ubi ex morbo capitisve longis doloribus incidit; pessimum, ubi magnis morbis venientibus maximeque comitiali praevent.
- B Si ex gravidine est, purgare aurem oportet et

¹ *Marx supplies castoreo after Instillat.*

If a crust, hot oil is poured in, or verdigris mixed with honey or leak juice or a little soda in honey wine. And when the crust has been separated from the ulceration, the ear is irrigated with tepid water, to make it easier for the crusts now disengaged to be withdrawn by the ear-scoop. If it be wax, and if it be soft, it can be extracted in the same way by the ear-scoop: but if hard, vinegar containing a little soda is introduced; and when the wax has softened, the ear is washed out and cleared as above. When the heaviness of the head persists it should be shaved; the head rubbed over gently and for some time with castoreum to which either iris or laurel oil has been added with either of which a little vinegar has been mixed; then the patient must take a long walk, and after the rubbing his head is to be fomented gently with hot water. And the food should be of the lightest and of the middle class, and the drinks especially diluted; he should occasionally gargle. Further, the ear should be syringed with castoreum mixed with vinegar and laurel oil and the juice of young radish root, or with cucumber juice, mixed with crushed rose leaves. The dropping in of the juice of unripe grapes mixed with rose oil is also fairly efficacious against deafness.

Another class of lesion is that in which the ears produce a ringing noise within themselves; and this also prevents them from perceiving sounds from without. This is least serious when due to cold in the head; worse when occasioned by diseases or prolonged pains of the head; worst of all when it precedes the onset of serious maladies, and especially epilepsy.

If it is due to a cold,^a the ear should be cleaned

spiritum continere, donec indeumor aliquis expumet. Si ex morbo vel capitis dolore, quod ad excitationem, frictionem, perfusionem gargarizationemque pertinet, eadem facienda sunt. Oibis non utendum nisi extenuantibus. In aurem dandus radicularum sucus cum rosa vel cum succo radicis ex cucumere agresti; vel castoreum cum aceto et lauro oleo; veratrum quoque ad id ex aceto conteritur, deinde melle aceto exsiccatur, et inde collyrium factum in aurem demittitur.

- C Si sine his coepit idemque nova metu curret, in aurem dari debet castoreum cum aceto vel irino aut lauro oleo; aut huius mixtum castoreum cum succo nucum amararum; aut murræ et astrucum cum rosa et aceto. Plus tamen in hoc quoque proficit victus ratio, eademque facienda sunt, quæ supra (B) comprehendit, cum maiore quoque diligentia; et præterea, donec is sonus finiat, a vino abstinendum.
- D Quod si simul et sonus est et inflammatio, laurum oleum conieciere abunde est, aut id, quod ex amaris nucibus exprimitur, quibus quidam vel castoreum vel murræ miscent.
- E Solet etiam interdum in aurem aliquid incidere, ut calculus aliquodve animal. Si pulcx intus est, compellendum est lana paulum est, quo ipse is subit et simul extrahitur. Si non est secutus aliudve animal est, specillum lana involutum in resina quam glutinosissimam maximeque terebinthina demittendum, idque in aurem conieciendum ibique vertendum

and the breath held until some humour froths out from it. If it arises from disease and pain in the head, the prescriptions as to exercise, rubbing, affusion and gargling should be carried out. Only foods that make thin are to be used. Into the ear rudish juice should be dropped with oil of roses or with the juice of wild cucumber root; or castoreum with vinegar and laurel oil. Also veratrum is pounded up for this purpose in vinegar, then mixed with boiled honey, and a salve made of it and introduced into the ear.

If the noise begins without these reasons and so causes dread of some new danger, there should be inserted into the ear castoreum² in vinegar or with either iris oil or laurel oil; or castoreum is mixed with this together with the juice of bitter almonds; or myrrh and soda with rose oil and vinegar. But in this case also, there is more benefit from regulation of the diet, and the same is to be done as was prescribed above,³ with even greater care. And, besides, until the noise has ceased the patient must abstain from wine. But if there is at the same time both ringing and inflammation, laurel oil should be freely inserted, or the oil expressed from bitter almonds with which some mix myrrh or castoreum.

It happens also occasionally that something slips into the ear, such as a small stone, or some living thing. If a flea has got in, a little wool is introduced in which it becomes engaged and so is extracted. If it does not come out, or if it is some other creature, a probe is wrapped round with a little wool, soaked in very sticky resin, especially turpentine resin, which after being passed into the ear is there twisted

est: utique enim comprehendit [exhinet]. Sin aliquid exanime est, specillo oriculario protrahendum est: aut
B hamulo ciliis paulum recurvato. Si ista nihil proficiant, potest eodem modo resina protrahi. Sternumenta quoque adnata id commode effluunt, aut oriculario clystere aqua vehementer intus compulsa. Tabula quoque collocatur, media inhaerens, capitibus utrinque pendentibus; superque eam homo deligatur in id latum versus, cuius auris eo modo laborat, sic ut extra tabulam emineat. Tum malleo caput tabulae, quod a pedibus est, feritur; atque ita concussa aure id quod inest excidit.

B. Narces vero exulceratas fovere oportet vapore aquae calidae. Id et spongia expressa atque adnata sit et subiecto vase oris angustis calida aqua repleto. Post id fomentum inclinenda ulcera sunt aut plumbi recremento aut cerussa aut argenti spuma: cum quolibet horum¹, . . . aliquid conterit[,] eique, dum teritur, in vicem vinum et oleum muricatum adici[t], donec² mollis crassitudinem fecerit. Sin autem ea ulcera circa os sunt pluresque crustas et odorem foedum habent, quod genus Graeci ozenam appellant,
B sciri quidem debet vix ei malo posse succurri. Nihilominus tamen haec temptari possunt, ut caput ad cutem tondentur assidueque vehementer perfricetur, multa calida aqua perfundatur, multa dein ambulatio

¹ After horum, Mars would read: malagma debet aliquid conterri, and this is translated.

² The text here is corrupt: Mars conjectures donec ad mollis crassitudinem veniunt, and this is translated.

* Celsus is the first to use the word ozena (Greek *ozena*, bad-smelling breath, cf. Dioscorides IV. 140) of the ulcers, which are one of the causes of this condition; Galen (*Med.*

round; for that will certainly catch it. If it is some insinuate object, it is to be withdrawn by an ear scoop or by a small blunt hook slightly bent. If these are ineffectual it is possible to extract it by means of resin as above. Also if a sneezing fit is induced, this easily moves it away or a forcible injection of water through an ear syringe. Again, a plank may be arranged, having its middle supported and the ends unsupported. Upon this the patient is tied down, with the affected ear downwards, so that the ear projects beyond the end of the plank. Then the end of the plank at the patient's feet is struck with a mallet, and the ear being so jarred what is within drops out.

8. Now ulcerated nostrils should be fomented with steam from hot water; that is done either by applying a sponge after squeezing it out, or by holding the nose over a narrow-mouthed vessel filled with hot water. After this fomentation the ulcerations should be smeared with lead slag, white lead or litharge; with any of these a kind of poultice is compounded, and to this, while it is being pounded up, wine and myrtle oil are added alternately, until it becomes of the consistency of honey. But if these ulcerations involve bone, and have numerous crusts with a foul odour, which kind the Greeks call *ozæna*,* it ought to be understood that it is scarcely possible to afford relief in that disease. The following measures, none the less, can be tried: the head may be shaved to the scalp, rubbed frequently and vigorously, and sluiced with quantities of hot water; then the patient is to take a great deal of

18. XIV. 785) describes the relief of *stoma* by the removal of polyp.

sit, albus modicus, neque acer neque valentissimus. Tum in narrem ipsam mel cum exiguo modo resinae terebenthinae coiciatur (quod specillo quoque involuto lana fit) adtrahaturque spiritu is absus, donec

C In ore gustus eius sentiat. Sub his enim crustae resolvuntur, quae tum per sternumenta elidi debent. Pura ulceribus vapor aquae calidae subiciendus est; deinde adhibendum aut Lycium ex vino dilutum, aut amurea aut omphacium aut mentae aut marubii succus aut stramentum sutorium, quod concordefactum, deinde contritum sit; aut interior scillae pars contrita, ac ut horum cuilibet mel adiciatur.

D Culus in ceteris admodum exigua pars esse debet; in stramento sutorio tanta, ut ea mixtura liquida fiat; cum scilla utique pars maior; involvendumque lana specillum est, et in eo medicamento tinguendum, eoque ulcera implenda sunt. Iturusque stramentum involutum et oblongum eodem medicamento liniendum demittendumque in narrem est et ab inferiore parte leniter deligandum. Idque per hiemem et per hīs die, per aestatem et autumnum ter die fieri debet.

E Interdum vero in naribus etiam carunculae quaedam similes muliebribus mamillis nascuntur, eaeque in his partibus, quae carnosissimae sunt, inhaerent. Has curare oportet medicamentis adurentibus, sub quibus ex toto consumuntur. Polypus vero est caruncula, modo alba modo subrubra, quae nasum omni inhaeret, ac modo ad labra tendens narrem

exercise, and a moderate amount of food, neither sour nor very nutritious. Further, into the nostril itself may be inserted honey to which a very small quantity of turpentine resin has been added (this is done on a probe wrapped round with wool), and this juice is drawn inwards by the breath until it can be tasted in the mouth. For in this way the crusts are loosened, and they should then be blown out by sneezing. The ulcerations having been cleaned are steamed over hot water; then there should be applied either box-thorn juice diluted with wine or wine lees or omphacium or the juice of mint or horehound or blacking made glowing hot and then pounded, or the interior part of a squill crushed; provided that to any of these honey is added. The honey should be a very small part in all these mixtures, except with the blacking, when there should be just enough to make the mixture liquid, whilst with the squill certainly the honey should form the larger part; a probe should be wrapped round with wool, and dipped into this medicament, and with it the ulcers are filled. And further, a strip of linen is folded into a long roll, smeared with the same medicament, and inserted into the nostril, and is lightly bandaged on below. This should be done in winter and spring twice a day, in summer and autumn three times a day.

Again, inside the nostrils there are sometimes formed little lumps like women's nipples, and these are fixed by their deepest and most fleshy parts. These should be treated by caustics, under which they are completely eaten away. A polypus, in fact, is a lump of this sort, sometimes white, sometimes reddish, which is attached to the bone of the nose, and fills the nostril, being directed

implet, modo retro per id foramen, quo spiritus a naribus ad fauces descendit, adeo inrescit, uti post unam conspicui possit; strangulatque hominem, maxime austro aut euro flante; fereque mollis est, raro dura, eaque magis spiritum impedit et nares dilatat; quae fere carcinodes est; itaque attingi non debet. Illud aliud genus fere quidem ferro curatur, interdum tamen inarescit, si addita in nares per linamentum aut penicillum ea compositio est, curae habet: mini Sinoptel, chalettidia, calcis, sandracae, singulorum P. $\frac{1}{2}$ i; atramenti sutori P. $\frac{1}{2}$ II.

9. In dentium autem dolore, qui ipse quoque maximis tormentis adnumerari potest, vinum ex toto circumcidendum est. Cibo quoque primo abstinendum, deinde eo modico molliorque utendum, ne mandentia dentes laesit; lum extrinsecus admovendus per spongiam vapor aquae calidae, imponendumque ceratum ex cyprino exve icino factum, lanaque id comprehendendam, caputque velandum est. Quod si gravior dolor est, utiliter et alvus ducitur, et calida cataplasmata super maxillas imponuntur, et ore umor calidus cum medicamentis aëquibus continetur, saepiusque mutatur. Oculi rei causa et quinquifolia radix in vino mixto coquitur, et hyoscyami radix vel in pocea vel in vino, sic ut paulum his salis adiciatur et papaveris non nimium aridi cortices et mandragorae radix eodem modo. Sed in his tribus utique vitandum est, ne, quod haustum erit, devoretur. Ex populo quoque alba cortex radicis in hunc usum

sometimes towards the lips, sometimes backwards through that passage by which the breath goes from the nose to the throat. In this direction it may grow until it can be seen behind the uvula; it chokes the patient, especially when the south or east wind blows; generally it is soft, rarely hard, and the latter sort hinders breathing more and dilates the nose; it is then generally cancerous, and so should not be touched. But the other kind can generally be removed by the knife¹; sometimes, however, it dries up, if the following composition is inserted into the nostril on lint or on a feather: *minium* from Sinope, copper ore, lime, and sandarach $\frac{1}{2}$ grms. each, blacking 8 grms.

9. Now in the case of pain in the teeth, which by itself also can be counted among the greatest of torments, wine must be entirely cut off. At first the patient must fast, then take sparingly of soft food, so as not to irritate the teeth when masticating; then externally steam from hot water is to be applied by a sponge, and an ointment put on made from cypress or iris oil, with a woollen bandage over it, and the head must be wrapped up. For more severe pain a clyster is useful, with a hot poultice upon the cheeks, and hot water containing certain medicaments held in the mouth and frequently changed. For this purpose cinquefoil root may be boiled in diluted wine, and hyoscyamus root either in vinegar and water, or in wine, with the addition of a little salt, also poppy-head skins not too dry and mandragora root in the same condition. But with these three remedies, the patient should carefully avoid swallowing the fluid in the mouth. The bark of white poplar, roots boiled in diluted wine may be

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in vino mixto recte coquitur, et in aceto cornus cervini ramentum, et nepeta cum caeda pingui ac fieu stera pingui vel in mulso vel in aceto et melle; ex quibus cum fieu decocta est, is umor percolatur.

- 3 Specillum quoque lana involutum in calidum oleum demittitur, eoque ipse dens fovetur. Quin etiam quaedam quasi cataplasmata in dentem ipsum inhaerunt; ad quem usum ex malo Punico acido acido malicorii pars interior cum pari portione et galiae et pinei corticis conteritur, misceturque his vinum; eaque contrita aqua pluviali coquitur. Aut panacis, papaveris lacrimae, pencedani, uvae taniniae sive acmilibus pares portiones conteruntur. Aut galhani partes tres, papaveris lacrimae pars quarta. Quicquid dentibus adnotum est, nihilo minus supra maxillas ceratum, quale supra (1) posui, esse debet lana implectum. Quidam etiam murræ, cardamomi, singulorum P. # I; croci, pyrethri, flicorum, sparteae, singulorum P. # IIII; sinaple P. # VIII contrita linteola inhaerunt, inponuntque in umero partis eius, quo dens dolet: si is superior est, a scapulis; si inferior, a pectore; idque dolorem levat, et cum levavit, protinus summovendum est.
- 6 Si vero exesus est dens, festinare ad eximendum eum, nisi res coegit, non est necesse: sed tum omnibus formentis, quae supra (3 seq.) posita sunt, adiciendae quaedam valentiores compositiones sunt quae dolorem levant; qualis Haeræ est. Habet autem papaveris lacrimae P. # I; piperis P. # II; sorbei P. # X; quae contrita galbanum excipiuntur, idque circum-

appropriately used for the same purpose, and stag's horn shavings boiled in vinegar, and camomil together with a torch rich in resin and a fig equally rich boiled either in honey wine or in vinegar and honey. When the fig has been boiled down with these, this fluid is strained. Also a probe wrapped round with wool is dipped in hot oil, and the tooth itself fomented with this. Moreover, some applications, like poultices, are smeared on the tooth itself, and for this purpose the inside rind of an unripe dry pomegranate is pounded up with equal parts of oak-galls and pine bark, with which minium is mixed; and these when pounded together are made up with rain-water. Or equal quantities of all-heal, poppy-tears, sulphur wort, and black bryony berries without the seeds are pounded together. Or three parts of galbanum to one of poppy juice. Whatever is applied to the teeth directly, none the less the ointment mentioned above must also be put on the jaws and covered over with wool. Some rub up together myrrh and cederworms, 4 grms. each; saffron chamomile figs and broom 16 grms. each; and mustard 32 grms.; spread it on lint and apply to the shoulder on the side of the painful tooth; over the shoulder-blade, if it is an upper tooth; on the chest if a lower one; and this relieves the pain, and as soon as it has relieved it, must be at once taken off. When a tooth decays, there is no hurry to extract it, unless it cannot be helped, but rather to the various applications described above, we must add more active compositions for the relief of pain, such as that of Hieron. This has: poppy juice 4 grms.; pepper 3 grms.; tory 40 grms., powdered, taken up in galbanum, and

datur; aut Menenuechi, maxime ad maxillares dentes, in qua sunt croci P. * —; cardamomi, turis fuliginis, ficorum, spartes, pyrethri, singulorum P. * III; sinapis P. * VII. Quidam autem miscent pyrethri, piperis, elateri, spartes, singulorum P. * I; aluminis solasile, papaveris lacrimae, uvae laminiae, sulphuris ignem non experti, bituminis, lauri & bacerum, stoeapis, singulorum P. * II. Quod si dolor eximi eum cogit, et piperis semen cortice liberatum, et eodem modo baccæ hederæ coniuncta in [id] foramen dentem findit, isquo per testas exidit. Et plani piscis, quam pastinacam nostri, trygonæ Græci vocant, sculem torretur, deinde conteritur resinaque excipitur, quæ denti circumdata hunc solvit. Et alumen scissile et . . .¹ in foramen collectum dentem citat. Sed id tamen involutum in laniola demitti commodius est, quia sic dente servato dolorem levat. Hæc medicis accepta sunt. Sed agrestium experimento cognitum est, cum dens dolet, herbam mentastrum cum sola radicibus excili debere, et in pelvem coctæ, superaque aquam infundî, collocarique iuxta sedentem hominem undique veste contextum; tum in pelvem candentes silices demitti, sic ut aqua tegantur; hominemque eum hiante ore vaporem excipere, ut supra dictum est, undique inclusum. Nam et sudor plurimus sequitur, et per os continuus pituita defluit, idque sæpe longiorem, semper æquam valetudinem hominem præstat.

10. Si vero tonsillæ sine exulceratione per inflam-

¹ Probably some word has fallen out here. One MS. has id in for et in. F. G. Linden suggests id for in.

* The sting ray (Pliny, N.H. IX. 163; the spines calcined would produce caustic soda, quick-lime.

applied round the tooth; or that of Menemachus, especially for molar teeth, containing saffron 2-66 grms., cardamoms, frankincense root, figs, broom and pellitory 16 grms. each; mustard 32 grms. Again, some mix chamomile, pepper, elaterium and broom 4 grms. each; shredded alum, poppy juice, black hyony berries, crude sulphur, bitumen, laurel berries and mustard 8 grms. each. But if pain compels its removal, a peppercorn without the tegument, or an ivy berry without the tegument is inserted into the cavity of the tooth, which it splits, and the tooth falls out in bits. Also the tail spine of the flat fish which we call *pastinaca*, and the *Grocks trygon*,² is roasted, pounded and taken up in resin, and this, when applied around the tooth, loosens it. Also shredded alum and . . . put into the cavity loosens the tooth. However, it is better to insert this wrapped up in a flake of wool, for it thus relieves the pain whilst preserving the tooth. These are the remedies recognized by medical practitioners, but country people have found out by experience that if a tooth aches, cat-mint should be pulled up with its roots, and put into a pot, and water poured over it, and placed beside the patient as he sits all covered by clothes; then red-hot stones are thrown in so as to be covered by the water; the patient inhales the steam with his mouth open, whilst, as stated above, he is completely covered over. For profuse sweating follows, and also a steady stream of phlegm flows from the mouth, and this ensures good health always for a year, and often for longer.

10. Again, if the tonsils³ owing to inflammation

² See III. 370, note 4, where an operation for their removal is described.

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mationem intumuerunt, caput velandum est; extrinsecus is locus vapore calido fovendus; multa ambulatione utendum; caput in lecto sublimi habendum; gargarizandumque reprimentibus. Radix quoque ea, quam dulcem appellant, contusa et in passo mulsove decocta idem praestat. Leniterque quibusdam medicamentis eas inlini non alienum est, 2 quae hoc modo fiunt: ex malo Punico dulci succus exprimitur, et eius sextarius in leni igne coquitur, donec ei mellis crassitudo est; tum croci, murræ, aluminis scissilis, singulorum P. ʒ II per se conteruntur, paulatimque his adiciuntur vini lenis cyathi duo, mellis unus; deinde priori succo ista miscentur, et rursus leniter incoentur. Aut eiusdem succi sextarius eodem modo coquitur, atque eadem ratione trita hæc adiciuntur: nardi P. ʒ —; omphaci P. ʒ I; cinnamomi, murræ, cassiac, singulorum P. ʒ —; eadem autem hæc et auribus et naribus 3 purulentis adcommodata sunt. Cibus in hac quoque valetudine lenis esse debet, ne exasperet. Quod si tanta inflammatio est, ut spiritum impediat, in lecto coquiescendum, cibo abstinendum, neque adsumendum quicquam præter aquam calidam est; alvus quoque ducenda est; gargarizandum ex fico et mulso; inlinendum mel cum omphaci; intrinsecus admovendus sed aliquanto diotius vapor calidus, donec ea suppurent et per se aperiantur. Si pure substantiæ non rumpuntur hi tumores, incidendi 4 sunt; deinde ex mulso calido gargarizandum. At

* Radix dulcis (γλυκύριζα), liquorice, yielded a peculiar sugar, an important alternative to honey in the days before the introduction of cane sugar.

† I.e. for a longer time than was necessary for the external treatment described in sect. 1.

‡ For the operation see VII. 18. 2. 3.

are swollen but not ulcerated, the head is to be kept covered; externally the painful part should be fomented by steam; the patient is to take walking exercise freely; when in bed his head should be raised; repulsive gargles should be used. Also that root which they call sweet,^a crushed and boiled in raisin wine or honey wine, has the same beneficial effect. It is useful to anoint them gently with certain medicaments prepared as follows: the juice is squeezed out of sweet pomegranates, and of this half a litre is boiled over a slow fire until of the consistency of honey; then saffron, myrrh, and shredded alum 8 grms. each are pounded together, and to this is added a little at a time 85 c.cm. of mild wine and 42 c.cm. of honey; next these latter are mixed with the pomegranate juice aforesaid, and all gently boiled again. Or half a litre of the pomegranate juice is boiled in the same way, and the following after being pounded in like manner are added: nard 0.33 grm.; omphacium 4 grms.; cinnamon, myrrh and casia 0.33 grm. each; these same compositions are also appropriate both for purulent ears and nostrils. Food too in this affection should be bland that it may not irritate. If the inflammation is so severe that breathing is hindered, the patient should keep in bed, abstaining from food, and take nothing else except hot water; the bowels should be moved by a clyster, and the gargle of fig and honey wine used; the tonsils are to be smeared with honey and omphacium; internally steam is to be inhaled somewhat longer^b until the tonsils suppurate and spontaneously open. If after pus has formed these swellings do not burst, they are to be cut into;^c then the patient must gargle with warm honeyed wine.

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si modicus quidem tumor sed exulceratio est, furfurum cremori ad gargarizandum paulum mellis adieciendum est; independaque plura hae medicamenta: passi quam dulcissimi tres heminae ad unam coeuntur; tum adiicitur turis P. 4 I; ali P. 4 I; croci, murræ, singulorum P. 4 =; leviterque omnia rursus fervereunt. Ubi pura ulcera sunt, eodem furfurum cremore vel lacte gargarizandum est. Atque hic quoque cibus lenibus opus est, quibus adici dulce vinum potest.

11. Ulcera autem oris si cum inflammatione sunt et parum pura ac rubicunda sunt, optime his medicamentis curantur, quae [supra (cap. X, 2) posita] ex malis Punicis sunt. Continerendusque saepe ore reprimens cremor est, cui paulum mellis sit adiectum: utendum ambulationibus et non acri cibo. Simul atque vero pura ulcera esse coeperunt, lenis unguis, interdum etiam quam optima aqua ore continenda est. Prodestque adsumptum primum pituitus pleniorque cibus cum acri aceto inspergique ulcera debent alumine scissili, cui dimidia plus gallae imaturae sit adiectum. Si iam crustas habent, quales in adustis esse consueverunt, exhibendae sunt hae compositiones, quas Graeci anthieras nominant: iunci quadrati, murræ, sandaracæ, aluminis partes portiones. Aut croci, murræ, singulorum P. 4 I; iridis, aluminis scissilis, sandaracæ, singulorum P. 4 III; iunci quadrati P. 4 VIII. Aut gallae, murræ, singulorum P. 4 I; aluminis scissilis P. 4 II; rosae foliorum P. 4 III. Quidam autem croci P. 4 =; aluminis scissilis, murræ, singulorum P. 4 I; sanda-

* VI. 10. 2.

* For these medicaments from flower blossoms, cf. VI. 13. 2, 4; 15. 1; 18. 2, and see Galen (XIII. 839);

But if with only moderate swelling there is ulceration as well, the throat is to be gargled with bran gruel to which a little honey should be added; and the ulcers smeared with the following composition: The skins of the sweetest raisin wine are boiled down to one-third, then are added: frankincense 4 grms.; galls 4 grms.; saffron and myrrh 0.56 grm. each; and all are then gently heated together. When the ulcers have cleaned, the throat is gargled with bran gruel or milk. And here also bland food is necessary, and in addition sweet wine can be taken.

11. Now ulcerations of the mouth if accompanied by inflammation, and if they are foul and reddish, are best treated by the medicaments made from pomegranates [mentioned above].^a And, as a representant, pearl barley gruel to which a little honey has been added is to be often held in the mouth; the patient must walk and not take acid food. As soon as the ulcerations begin to clean, a bland liquid, at times even the purest water, is held in the mouth. It is then beneficial to eat a pear of the softer sort, and more food along with sharp vinegar; then the ulcers should be dusted over with split alum, to which about half as much again of unripe oak-galls has been added. If the ulcers are already encrusted, as happens after cauterization, those compositions are to be applied which the Greeks call *anchuræ*:^b equal portions of galingale, myrrh, sandarach, and alum. Or saffron and myrrh 4 grms. each; iris, split alum and sandarach 15 grms. each; galingale 32 grms. Or oak-galls and myrrh 4 grms. each; split alum 3 grms.; rose leaves 15 grms. But some mix saffron 0.65 grm.; split alum and myrrh 4 grms. each; sandarach 3 grms.; galingale 16 grms.

racae P. ✱ II; iunci quadrati P. ✱ IIII miscent. Priore arida insperguntur: hoc cum melle inlinitur, neque ulceribus tantum sed etiam tonsillis.

- 3 Verum ea longe periculosissima sunt ulcera, quae apthas Graeci appellant, sed in pueris: hoc enim saepe consumunt, in viris et mulieribus idem periculum non est. Haec ulcera a gingivis incipiunt; deinde palatum totumque os occupant; tum ad uvam faucesque descendant, quibus obaesis non facile fit, ut puer convalescat. Ac miserius etiam est, si lactens adhuc infans est, quo minus imperari remedium aliquod potest. Secus inprimis nutrix cogenda est exerceri et ambulationibus et iis operibus, quae superiores partes movent; mittenda in balneum inhendaque ibi calida aqua manus perfundere; tum alenda cibis lenibus et iis, qui non facile corrumpuntur: potionem, si febricitat puer, aquae; si sine febre est, vini diluti. Ac si alius nutricula substituit, ducenda est. Si pituita eius in os coit, vomere debet. Tum ipsa ulcera perungenda sunt melle, cui rhus, quem Syriacum vocant, aut amarae nuges adiectae sunt; vel mixtis inter se rosae foliis aridis, pineis nucleis, menta,¹ colicula, melle, vel eo medicamento, quod ex moris fit, quorum suus eodem modo quo Punici mali ad mellis crassitudinem coquitur; eademque ratione ei crocum, murra, alumen, vinum, mel miscetur: neque quicquam dandum, a quoumor evocari possit. Si vero iam firmior puer est, gargaris-

¹ *Dorernberg* supposita mentae colicula "young mint-stalks."

* I. 186 nota; Appendix I, p. 387.

The first compositions are dried and then dusted on; the last one is smeared on with honey added, and used not only for ulcerations of the mouth, but also of the tonsils.

But by far the most dangerous are those ulcers which the Greeks call aphthæ,^a certainly in children; in them they often cause death, but there is not the same danger for men and women. These ulcers begin from the gums; next they invade the palate and the whole month; then they pass downwards to the uvula and throat, and if these are involved, it is not easy for the child to recover. But the disease is even worse in a suckling, for there is then less possibility of its conquest by any remedy. But it is most important that the nurse should be made to take exercise both by walking and by doing work which moves her arms; she should be sent to the bath, and ordered when there to have hot water poured over her breasts; moreover, she should have bland, easily digestible food; and for drink, if the infant is feverish, water; if free from fever, diluted wine. And if the nurse is constipated, her bowels are to be moved by a clyster. If there is clotted phlegm in her mouth, she must vomit. Then the child's ulcers are to be anointed with honey, to which is added sumach, which they call Sytian, or bitter almonds; or a mixture of dried rose leaves, pine-cone seeds, mint, young stalks, and honey, or that medicament which is made of mulberries, the juice of which is concentrated in the same way as pomegranate juice to the consistency of honey; similarly too there is mixed with it saffron, myrrh, alum, wine and honey; nothing should be given which can provoke spittle. If it is an older child he should

zare debet is fere, quae supra (cap. X, 3, 4) comprehensa sunt. Ac si levia medicamenta in eo parum proficiunt, adlubenda sunt ea, quae adurendo crustas ulceribus inducant. Quale est caissile alumen vel chalcitis vel atramentum autorium. Prodest etiam fames et abstinencia quanta maxime inperari potest. Cibus esse debet lenis: ad purganda tamen ulcera interdum caseus ex melle recte datur.

12. Linguae quoque ulcera non aliis medicamentis agent, quam quae prima parte superioris capitis (11, 1-2) exposita sunt. Sed quae in latere eius nascuntur, diutissime durant; videndumque est, num contra dens aliquis scitior sit, qui sanescere saepe ulcus eo loco non sinit, ideoque levandus est.

13. Solent etiam interdum iuxta dentes in gingivis tubercula quaedam oriri dolentia: parulides Graeci appellant. Haec initio leniter sale contrito perficere oportet; aut inter se mixtis sale fossili combusto, cypressu, nepeta; deinde eluere os cremore lentilulae, inter haec hiare, donec pituita satis profuat.

- 2 In maiore vero inflammatione hisdem medicamentis utendum est, quae ad ulcera oris supra (cap. XI) posita sunt: et molli linamenti paulum involvendum ex illa aliqua compositione, quae autheras vocari dixi (cap. XI, 2), demittendumque id inter dentem et gingivam. Quod si t duriore id² prohibebit extrinsecus admoventus erit spongia vapor calidus,

² The reading of our MS. "durior erit et" in place of "durior" is translated. Alternatively Targa suggests tumor, *Maxe dolor in ore for duriora.*

generally gargle as described above. If the milder medicaments do little good, the caustic materials which induce crusts upon the ulcers should be applied, such as split alum or copper ore or blacking. Even hunger is beneficial and the greatest possible abstinence is to be ordered. The food ought to be bland; for cleansing the ulcers, however, sometimes cheese with honey is appropriately given.

12. Ulcerations of the tongue need no other treatment than that noted in the first part of the previous chapter. But those which arise at the side of the tongue last the longest; and it should be looked to, whether some tooth opposite the ulcer is too pointed, which often keeps an ulceration in that position from healing, in which case the tooth must be smoothed down.

13. There often occur on the gums adjacent to the teeth certain painful swellings: the Greeks call them *parulides*.^a These at first should be gently rubbed over with powdered salt; or with a mixture of powdered rock-salt, cyprus oil and catmint; then the mouth is washed out with lentil gruel, and the mouth is held open at intervals until there has been a sufficient flow of phlegm.

When there is still more severe inflammation, the same medicaments are to be used as noted above for ulcerations of the mouth: and between the tooth and gum should be inserted a little roll of soft lint soaked in one of the compositions which I said are called *antherae*.^b If the hardness of the gum prevents this, then hot steam by means of a sponge

^a *Parulis* (properly, *Galen*, XIV. 786), a gumboil; not mentioned elsewhere by *Galen*.

^b p. 254, col. 2b.

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inponendumque ceratum. Si suppuratio se ostendet, diutius eo vapore utendum erit, et continendum quo calidum mulsum, in quo ficus decocta sit; idque suberudum incidendum, ne, si diutius ibi pus remanserit, os laedet. Quod si maior is tumor est, commodius totum exsiccatur, sic ut ex utraque parte dens liberetur. Pure exemplo si levis plaga est, satis est ore calidam aquam continere, extrinsecus fovere eodem vapore; si maior est, lenticulas cremore uti iisdemque medicamentis, quibus cetera ulcera oris curantur. Alia quoque ulcera in gingivis plerumque oriuntur, quibus eadem quae in reliquo ore succurrunt; maxime tamen mandere ligustrum oportet, sucumque eum ore continere. Fit etiam interdum, ut gingivae ulcere, sive parvis fuit sive non fuit, diutius pus feratur; quod aut dente corrupto, aut fracto vel . . . aliterque vitiato osse; maximeque id per fissum evenire consuevit. Ubi incidit, locus aperiendus, dens eximendus; testa ossis, si qua excessit, recipienda est; si quid vitiosi est, cadendum. Post quae quid fieri debeat, supra (cap. XI) in aliorum ulcerum curatione comprehensum est. Si vero a dentibus gingivae recedunt, esedae antherae succurrunt. Utile est etiam pira aut mala non percutura mandere, et ore eum vaporem continere. Idemque praestare non aere nocturno in ore retentum potest.

¹ *More suppurat being rather after vel, and this is translated.*
F. J. Linden deletes quod.

is to be applied outside, followed by a ecrate. If suppuration shows itself, the steaming is continued longer, and hot honey wine in which a fig has been boiled down is held in the mouth; and before the abscess is quite mature it should be cut into, for fear that the bone may suffer if the pus should be retained longer. But if there is greater swelling, it is better to cut all away so as to free the tooth on both sides. When the pus is let out, if the incision is small it will suffice to hold hot water in the mouth and to foment externally with its steam; if it is larger, lentil gruel should be used, and the same medicaments as for the treatment of ulcerations of the mouth in general. There are also other ulcerations, mostly arising in the gums, for which the same remedies are beneficial; in particular, however, privet should be chewed and the juice held in the mouth. It happens now and then, whether following a gumboil or not, that a discharge of pus persists from an ulcer on the gum: this is due to either a decayed tooth or to bone that is broken or injured and diseased in some other way, and it most commonly occurs through a fissure in the bone. When this is the case, the place must be laid open, the tooth extracted; any projecting scale of bone is to be removed; and any carious bone scraped away. What ought to be done after this has been included in the treatment of other ulcerations. If the gums have retracted from the teeth, the same antherae are of service. It is also useful to chew pears and apples which are not too ripe, and to hold their juice in the mouth. Vinegar that is not too sharp can also be held in the mouth with similar advantage.

CEISUS

14. Uvae vehemens inflammatio terrore quoque debet. Itaque in hac et abstinentia necessaria est, et sanguis recte mittitur; et si id aliqua res prohibet, alvus utiliter duclitur; caputque super haec velandum et sublimius habendum est: tum aqua gargarizandum, in qua simul rubus et lenticula decocta sit. Inflamenda autem ipsa uva vel amphraeo vel galla vel alumine scissili, sic ut cuilibet eorum unel indicatur; chelidoniae quoque succo per coctear inlita uva maximeque . . . prodest.¹ Est etiam medicamentum hac aptum, quod Andronium appellatur. Constat ex his: alumine scissili, squama aeris rubri, argumeto sutorio, galla, murra. mixy; quae per se contrita mixtaque rursus paulatim adiecto vino austero teruntur, donec his mellis crassitudo sit.
- 2 Ubi horum aliquo inlita uva est, fere multo pituita decurrit; cumque ea quiescit, ex vino calido gargarizandum est. Quod si minor ea inflammatio est, laser terere, etque adicere frigidam aquam satis est, eamque aquam cocteario exceptam ipsi uvae subicere. Ac medicenter eam tumentem aqua quoque frigida eodem modo subiecta reprimit. Ex eadem autem aqua gargarizandum quoque est, quae vel cum lasere vel sine eo hac ratione uvae subiecta est.

15. Si quando autem ulcera oris cancer invasit, primum considerandum est, num malum corporis habitus sit, ei que occurrendum; deinde ipsa ulcera

¹ The text is doubtful. Some editors and MSS omit the words *chelidoniae . . . prodest*. If they are retained, something must be supplied after *maximeque*. *Mora* suggests *cuma melle*.

14. Inflammation of the uvula should also cause anxiety when severe. In this case, as before, abstinence is necessary, and it is right to let blood; and if anything prevents this, it is useful to clyster the bowels; and also the head must be kept covered and raised; and the patient must gargle with a decoction of blackberries and lentils. But the uvula itself is to be smeared either with orophaecium or oak-galls or split alum to any one of which honey has been added; it is also good to smear the uvula with chelidonium juice by means of a spoon, and especially (with honey). For this purpose also the composition called *Androumum* is suitable; it consists of: split Rham, red copper scales, blacking, oak-galls, myrrh and antimony sulphide; these are pounded separately and again pounded when mixed together, a dry wine being gradually added till the ingredients have the consistency of honey. After the uvula has been smeared with one of these compounds there is, as a rule, a free flow of phlegm; when this has subsided, hot wine should be gargled. But if there is less severe inflammation, it is sufficient to pound up *assafoetida* and add cold water to it, and to put the fluid into a spoon and apply it under the uvula itself. When there is only moderate swelling, even cold water held in the same way under the uvula subdues it. Also the same cold water is to be used as a gargle which, with or without the addition of *assafoetida*, has been applied in this manner to the uvula.

15. If at any time gangrene has attacked ulcers of the mouth, the first thing to consider is whether the general health is bad, and if so to obviate it; next the actual ulcers are to be treated. But if the

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curenda. Quod si in summa parte id vitium est, satis proficit anthera umida ulceri asida inaspera; seclori cum exigua parte mellis indita: si paulo altius, chartae combustae partes duae, auripigmenti pars una: si penitus malum descendit, chartae combustae partes tres, auripigmenti pars quarta, aut pares portiones salis frieti et lridis frietac, aut item pares portiones chalcitidis, calois, auripigmenti.

2. Necesse est linamentum in rosa tingere, et super adurentia medicamenta inponere, ne vicinum et sanum locum laedant. Quidam etiam in acris aceti heminam frictum salem coeliunt, donec tabescere desinat; deinde id acetum coquant, donec emisceatur; eoque salem contritum inaspergunt. Quotiens autem medicamentum iniicitur, et ante et post os diluendum est vel cremore lentivulae vel aqua, in qua aut arvum aut oleae verbenae decoctae sint, sic ut cuilibet eorum parum mellis miscetur. Acetum quoque ex acilla retentum satis adversus haec ulcera prodest, item ex aceto cocto sal, sicut supra (2) demonstratum est, rursus mixtum acetum. Sed et diu continere utrunlibet, et id bis aut ter die facere, prout vehemens malum est, necessarium est. Quod si puer est, cui id incidit, specillum lana involutum in medicamentum demittendum est, et super ulcus tenendum, ne per imprudentiam adurentia devoret. Si in gingivis est, moventurque aliqui dentes, refigi eos oportet: nam curationes vehementer impediunt. Si nihil medicamenta proficiunt, ulcera erunt adurenda. Quod tamen in labris ideo non est necessarium,
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disease is superficial, it is sufficient to use a powdered anthrax to dust on the ulcer if moist; if the ulcer is rather dry, to smear it on mixed with a little honey; for somewhat deeper ulcerations, apply burnt papyrus two parts, and orpiment one part; if the mischief penetrates very deeply, burnt papyrus three parts, orpiment one part, or equal parts of rock salt and roasted iris, or copper ore, quick-lime and orpiment, likewise equal parts. But in order that neighbouring spots may not be injured, it is necessary to apply lint dipped in rose oil over these caustic medicaments. Some also put the roasted salt into 250 c.c. of strong vinegar until it ceases to dissolve; then the vinegar is boiled to dryness, and the salt pounded up and dusted on. But whenever this medicament is applied, the mouth should be washed out both before and after, either with lentil gruel, or with a decoction of vetches or of olives or of vervains, to any one of which a little honey is added.

Also vinegar of squilla held sufficiently long in the mouth is beneficial for such ulceration, so too the salt after evaporation as described above dissolved again in vinegar. But whilst the affection continues to be severe it is necessary both to hold one or other of the remedies in the mouth for some time and to use them two or three times a day. If it is a child who is attacked, a probe wrapped round with wool is dipped in the medicament and held to the ulcer, lest by accident he should swallow the caustic. If it is the gums which are involved, and some teeth are loose, they should be extracted, for they greatly hinder treatment. If these medicaments do no good, the ulcers are to be cauterized. But this procedure is not necessary for any ulcer on

quodam excidere commodius est. Et id quidem, neque adustum atque exelsum, sine ea curatione, quae corpori manu adhibetur, impleri non potest. Gingivarum vero ossa, quae hebetia sunt, in perpetuum ratione nudantur: neque enim postea caro increscit. Inponenda tamen adustis lenticula est, donec sanitatem, qualis esse potest, recipiant.

16. Haec in capite fere medicamentis egent. Sub ipsis vero auribus urfri parotides solent, modo in secunda valetudine ibi inflammatione orta, modo post longas febres illuc impetu morbi conversa. Id abscessus genus est: itaque nullam novam curationem desiderat, arimodversionem tantummodo hanc habet necessariam: [quæ,] si sine morbo id intumuit, primum reprimendum faciendum experimentum est; si adversa valetudine, illud inimicum est maturarique et quæso primum speciei commodius est.

17. Ad umbilicos vero prominentes, ne manu ferioque utendum sit, ante temptandum est, ut abstinenter, alvus his ducatur, inponatur super umbilico id, quod ex his constat: cleutæ et fuliginis, singularum P. § 1; cerussæ elotæ P. § VI; plumbi eloti P. § VIII; ovæ duobus, quibus etiam solani surus adieitur. Hoc etiam distinctius inpositum esse oportet: sed interius conculcassere hominem, cibo modico uti, sic ut vitentur omnia infantia.

* *Lenticula* may be a lentil poultice to cleanse the wound, or dried and powdered lentils applied as an exsiccant. Some commentators think a cutting abscess or gunga is referred to, with a lentil shaped button on the point (*scilicet lenticularis*, at VIII. 2. 4; & 14) which was to be used to scrape the bone.

* The parotid swellings that occurred "during health" were perhaps *maquis* (cf. Hippocrates l. 146, *Epitimesis* l. 1): "After prolonged fevers," dryness and fullness of the mouth might produce an infection which spread up to the ducts to the

the lips since excision is more convenient. Indeed such an ulcer, except by adopting surgical measures, whether cauterizing or excising, cannot be replenished with new flesh. But the bones of the gums, which are inert, continue bare after the cauterization; for no flesh grows up afterwards. A lentil dressing,^f however, is to be applied to the parts cauterized until it is rendered as healthy as possible.

18. Such are the disorders in the head which generally require medicaments. But just below the ears parotid swellings^g are inclined to occur, sometimes during health when inflammation occurs there, sometimes after prolonged fevers when the force of the disease has been turned in that direction. It is of the nature of an abscession: and so no novel treatment is called for, only what follows must be attended to: if there is swelling without previous disease, repressants are to be tried first; if there has been illness, repressives are objectionable, and it is more convenient that the abscess should mature and be opened as soon as may be.

19. For prominent navels, in order that surgical measures need not be used,^h abstinence should first be tried, a clyster to induce a motion, and the following applications to the umbilicus: hemlock and root 4 grms. each; washed white lead 24 grms.; washed lead 32 grms.; 2 eggs; to these nightshade juice also is added. This ought to be kept on for a long time, the patient meanwhile lying up, and taking food in such moderation that all flatulence is avoided.

parotid glands, while the "abscess" resulted from some general septic infection, especially an abdominal one.

^f VII. 14.

18. Proxima sunt ea, quae ad partes obaeenas pertinent, quarum apud Graecos vocabula et tolerabilis se habent et accepta iam usu sunt, cum in omni fere medicorum volumine atque sermone iactentur: apud nos foediora verba ne consuetudine quidem aliqua verocundius loquendum commendata sunt, ut difficilior haec explanatio sit simul et pudorem et artis praecepta servantibus. Neque tamen ea res a scribendo me deberrere debuit: primum, ut omnia quae salutaria accepi, comprehenderem; dein, quia in vulgus eorum curatio etiam praecipue cognoscenda est, quae invitisimus quisque alteri ostendit.

2. Igitur si ex inflammatione coles intumuit, reduci quae aequa cutis aut cursus induci non potest, multa calida aqua fovendus locus est. Ubi vero glans contexta est, oriculario quoque cystere inter eam cutemque aqua calida inserenda est. Si mollita sic et extenuata cutis ducenti paruit, expeditior reliqua curatio est. Si tumor viest, inponenda est vel lentacula vel marnabium vel oleae folia ex vino cocta, sic ut cuiusbet eorum, dum teritur, mollis paululum adiciatur; sursumque coles ad ventrem deligendus est. Quod in omni curatione eius necessarium est; isque homo continere se et abstinere a cibo debet, et potionae aquae tantum a siti vindicari. Postera die rursum adhibendum iisdem rationibus aquae foveamentum est, et cum vi quoque experendum, an cutis

* *CE. VII. 28. 2*, where the condition is called phimosis (*phimosis*, *phimosis*); the first known use of the special term for this condition.

18. Next come subjects relating to the privy parts, for which the terms employed by the Greeks are the more tolerable, and are now accepted for use, since they are met with in almost every medical book and discourse. Not even the common use has commended our coarser words for those who would speak with modesty. Hence it is more difficult to set forth these matters and at the same time to observe both propriety and the precepts of the art. Nevertheless, this ought not to deter me from writing, firstly in order that I may include everything which I have heard of as salutary, secondly because their treatment ought above all things to be generally understood, since every one is most unwilling to show such a complaint to another person.

So then when the penis swells up owing to inflammation, and the foreskin cannot be drawn back, or conversely drawn forwards, the place should be fomented freely with hot water. But when the glans is covered up,^a hot water should be injected, between it and the foreskin, by means of an ear syringe. If the foreskin is thus softened and rendered thinner, and yields when drawn upon, the rest of the treatment is more speedy. If the swelling goes on, either lentil meal or borehound or olive leaves, boiled in wine, is to be laid on, to each of which, whilst being pounded up, a little honey is to be added; and the penis is to be bandaged upwards to the belly. That is required in the treatment of all its disorders; and the patient ought to keep quiet and abstain from food, and drink water just so much as is justified by thirst. On the next day fomentations with water must again be applied in the same way, and even force should be tried as to

sequatur; eaque si non parebit, leviter summa scalpello consolidanda erit. Nam cum sanies probaverit, extenuabitur is locus, et facilius cutis Cducetur. Sive autem hoc modo victa erit, sive nunquam repugnaverit, ulcera vel in cutis ulteriore parte vel in glande ultrave eam in cole reperientur; quae necesse est aut pura sineve sint aut umida et purulenta. Si siccæ sint, primum aqua calida fovenda sunt; deinde inponendum Lycium ex vino aut amurea cocta cum eodem aut cum rosa buturum. Si levis isumor laest, vino eluenda sunt, tum buturo et rosæ mellis paulum, et resinae terebenthinae pars quarta adicienda est; eoque utendum.

D At si pus ex ils profuit, ante omnia elai multo calido debent; tum inponi piperis P. ♀ I; murræ P. ♀ =; croci, misyos cocti, singulorum P. ♀ II; quae ex vino austero encuntur, donec mellis crassitudinem habeant. Eadem autem compositio tonsillis, uvæ madenti, oris nariumque ulceribus accommodata est. Aliud ad eadem: piperis P. ♀ =; murræ P. ♀ =; croci P. ♀ =; misy cocti P. ♀ I; aeris combusti P. ♀ II; quae primum ex vino austero conteruntur, deinde ubi inarserunt, iterum teruntur ex passis tribus cyathis et incountur, donec visci B crassitudinem habeant. Aerugo quoque cum cocto melle eaque quae ad oris ulcera supra (II, l. 2) comprehensæ sunt [curant] aut Prasistrati compositio

* VI, 11, l. 2; also prescriptions in clauq. B to 18.

whether the foreskin will yield; if it does not give way, the foreskin is to be notched at its margin with a scalpel. For when sanies has flowed out this part will become thinner, and the foreskin the more easily drawn upon. But whether the foreskin is made to yield by this procedure, or whether it has at no time proved resistant, ulcerations will be found, either in the ulterior part of the foreskin, or in the glans, or behind this in the penis, and these ulcerations must of necessity be either clean or dry or moist and purulent. If they are dry, they must, in the first place be fomented with hot water; then apply either buckthorn in wine, or olive lees in the same, or butter with rose oil. If there is a thin humour, the ulcerations should be bathed with wine, and then to butter and rose oil a little honey and a fourth part of turpentine resin is to be added and this dressing put on. But when pus runs from the ulcers, first they are to be bathed with hot honey wine; then there is put on: pepper 4 grms.; myrrh 0.85 grm.; saffron and boiled antimony sulphide 8 grms. each; these are heated in dry wine to the consistency of honey. Moreover, the same composition is suitable for the tonsils, a dripping uvula, and ulcerations of the mouth and nostrils. Another for the same purpose consists of pepper and myrrh 0.66 grm. each; saffron 1.33 grm.; cooked antimony sulphide 4 grms.; roasted copper 8 grms.; these are first pounded together in dry wine, then, when they are dry, are again pounded up in 125 c.cm. of raisin wine and heated to the consistency of birdlime. Verdigris too mixed with boiled honey, also those compositions noted above for ulcerations of the mouth,^c or the compositions of *Erasiastatus* or of

aut Cratonis recte super parvula naturalia imponitur. Foliorum quoque oleae P. * . .¹ ex novem cyathis vini cocuntur; his adicitur aluminis scissilis P. * IIII; Lyci P. * VIII; mellis sex cyathi: ac si plus parvis
 est, id medicamentum ex melle; si minus, ex vino diluitur. Illud perpetuum est, post curationem, dum inflammatio manet, quale supra (C) positum est, cataplasma super dare, et cotidie ulcera eodem
 F ratione curare. Quod si pus et multum et cum malo odore coepit profluere, elui cremore lentiscalae debet, sic ut ei mellis paulum adiciatur. Aut oleae vel
 lentisci folia vel marrubium decoquendum est, eoque umore eodem modo cum melle utendum; hyponendeque eadem aut etiam omphacium cum melle aut id, quod ex acrugine et melle ad aures fit; aut compositio Andronis aut anthera, sic ut ei paulum
 G mellis adiciatur. Quidam omnia ulcera, de quibus adhuc dictum est, Lyco ex vino curant. Si vero ulcus latius atque altius serpit, eodem modo elui debet, hyponi vero aut acrygo aut omphacium cum melle aut Andronis compositio aut marrubii, murtae aut croci, aluminis scissilis cocti, rosae foliorum aridorum, gallae, singulorum P. * I; mini Sinopici P. * II. Quae per se singula primum teruntur, deinde iuncta iterum melle adiecto, donec liquidi cerati crassitudinem habeant; tum in aeneo vaso
 H leniter cocuntur, ne superfluant. Cum iam guttae indurescant, vas ab igni removetur; idque medicamentum, prout opus est, aut ex melle aut ex

¹ MS. folia which Targa keeps, omitting the sign of quantity, which is absent from one MS. Marc intends to foliorum and marks the sign of quantity as incomplete.

Ornton^a are suitable for applying to suppurating genitals. Also . . . olive leaves^b are boiled in 275 c.cro. of wine, to which is added split alum 16 grms., lycium 32 grms.; and 250 c.cro. of honey; and if there is more pus, this medicament is made up with honey; if less, with wine. After treatment, the general procedure, so long as the inflammation persists, is to apply a poultice such as was mentioned above, and to dress the ulcers daily in the same way. If a free discharge of foul pus begins, the ulcers should be bathed with lentil gruel to which a little honey has been added. Or a decoction is made of olive or of mastic leaves, or of horsehound, and the liquid used with honey in the same way; and the same remedies are to be laid on or even omphacium with honey, or that prescription used for the ears containing verdigris and honey,^c or Andron's composition,^d or an anthera,^e as long as a little honey is added to it. Some treat all ulcerations of the kind here spoken of with lycium and wine. If the ulceration spreads more widely and deeply, it should be bathed in the same way, and then there should be applied either verdigris or omphacium with honey or Andron's composition or that containing horsehound, myrrh or saffron, split alum boiled, dried rose leaves and oak-galls, 4 grms. each; Sinople minium 5 grms. These are pounded up first separately, then together again, with honey added, until of the consistency of a liquid cerate; then gently heated in a bronze pot but not allowed to boil over. When drops from it begin to solidify, the pot is taken off the fire; and this composition when it is to be

^a The quantity is doubtful, see critical note.

^b VI. 7. 5. "

^c V. 39. 4.

^d VI. 11. 2.

- vino liquatur. Idem autem per se etiam ad fistulas utile est. Solet etiam interdum ad nervos ulcus descendere, profluitque pituita multa, sanies tenuis malique odoris non cocta¹ aut aquae similis, in qua caro recens lata est; doloresque is locus et punctiones habet. Id genus quamvis inter purulenta est, tamen lenibus medicamentis curandum est. quale est emplastrum tetrapharmaceum ex rosa liquatum, sic ut tura quoque paulum ei misceatur; aut id, quod ex butyro, rosa, resina, melle fit, supra (C) vero a me positum est; praecipueque id ulcus multa calida aqua fovendum est, velandumque neque frigori committendum. Interdum autem per ipsa ulcera oculus sub cute exeat sic ut glans excidat; **K** sub quo casu cutis ipsa circumcidenda est. Perpetuumque est, quotiens glans aut ex oculo aliquid vel excidit vel absciditur, hanc non esse servandam, ne coadat ulcerique adglutinetur, ac neque reduci possit postea, et fortasse fistulam quoque urinae claudat. Tubercula etiam, quae phumata Graeci vocant, circa glandem, oriuntur, quae vel medicamentis vel ferro adurantur; et cum crustae exciderunt, squama aeris inspergitur, ne quid ibi rursus increseat.
- L** Haec ultra cancrum sunt; qui cum in reliquis partibus tum in his quoque vel praecipue ulcera infestat. Incipit a nigritie. Quasi cutem occupavit, protinus specillum subscindendum, eaque incidenda est; deinde orae vulsellis prendendae; tum quicquid

¹ The text is corrupt. Marx suggests *colorata* for non cocta, and this is translated.

² V. 18. 2.

³ Par. 2 C.

⁴ For these and their treatment see V. 18. 10 ff. and 28. 9.

⁵ See Appendix, p. 569.

used is dissolved in honey or wine. But the same by itself is also good for *fatulae*. The ulceration at times even penetrates to fibrous tissues; there is a running discharge, then sanies, thin and foul, coloured or like water in which fresh meat has been soaked; and the place is painful and has a pricking sensation. This kind, although purulent, is none the less to be treated by bland applications, such as the *tetrapharmacum* plaster* dissolved in rose oil with the addition of a little frankincense; or the composition made of butter, rose oil, resin and honey noted by me above.¹ In particular this ulcer should be fomented freely with hot water, and should be kept covered, not² exposed to cold. Sometimes through such an ulceration the penis is so eaten away underneath the foreskin that the glans falls off; in which case the foreskin itself must be cut away all round. It is the rule, whenever the glans or any part of the penis has fallen off, or has been cut away, that the foreskin should not be preserved, lest it come into contact, and adhere to the ulceration, so that afterwards it cannot be drawn back, and further perhaps may choke the urethra. Again, little tumours, which the Greeks call *phymata*,³ spring up around the glans; they are burnt away by caustic or the cautery; when the crusts fall off, copper scales are dusted that no more may grow there.

The foregoing ulcerations stop short of canker,⁴ which in other parts, but here the more especially, attacks ulcerations. It begins in a black patch. If it invades the foreskin, at once a probe should be passed underneath, upon which the foreskin is to be incised and the margins seized with forceps; then

- corruptum est excidendum, sic ut ex integro quaque paulum dematur; idque adurendum. Quoties quid ustum est, hic quoque sequitur, ut imponenda lentacula sit; deinde ubi crustae exciderunt, ulcera B sicut alia curentur. Ac si cancer ipsum colicem occupavit, inspergenda aliqua sunt ex adurentibus, maximeque id, quod ex calce, chalcitide, auripigmento componitur. Si medicamenta vincuntur, hic quoque scalpello quicquid corruptum est, sic ut aliquid etiam integri trahat, praecidi debet. Illud quoque aequè perpetuum est, excocto cancro vulnus esse adurendum. Sed sive ex medicamentis sive ex ferro crustae occalluerunt, magnum periculum est, ne his decidensibus ex cole profusio sanguinis C insequatur. Ergo longa quiete et immobili paene corpore opus est, donec ex ipso crustae¹ leniter resolvantur. Ac si vel volens aliquis vel imprudens, dum ingreditur immature, crustas diduxit, et fluxit sanguis frigida aqua adhibenda est. Si haec parum valet, decurrendum est ad medicamenta, quae sanguinem supprimunt. Si ne haec quidem succurrunt, advi diligenter et timide debet, neque ullo postea moto dandus eidem periculo locus est.
- * Nonnunquam etiam id genus ibi cancri, quod phagedaena a Graecis nominatur, oriri solet. In quo minime differendum sed prolihus siadem medicamentis et, si parum valet, ferro adurendum. Quaedam etiam nigrities est, quae non sentitur, sed

¹ Crustae eo Purpo est the pure see or crusto pure of the 1788

what is corrupted is cut away, a little of the sound tissue being also removed; this is followed by cauterization. Whenever there is any cauterization, it follows too that here lentil meal is to be applied; next when the crusts have separated the ulcers are treated like others. But if the canker invades the penis itself, some one of the caustics is dusted on, and especially that composed of quick-lime, copper ore and orpiment. If medicaments fail, in this case also whatever is corrupted should be cut away with a scalpel, so far that some sound tissue is also removed. It is likewise the rule here that after the canker has been cut out, the wound is to be cauterized. But if hard scabs form, whether after caustics or the cautery, there is a great danger that hæmorrhage from the penis will follow upon their separation. Therefore there is need for prolonged rest with the body almost immobile until the scabs gently separate from the penis. But if the patient, either purposely or accidentally, from moving about too soon, has detached the scabs and hæmorrhage has occurred, cold water should be applied. If this has little effect, recourse must be had to medicaments which suppress hæmorrhage. If these do not succeed either, the spot should be carefully and cautiously cauterized, and no opportunity afterwards given for the same risk by any sort of movement.

Occasionally on this part there arises that kind of canker which the Greeks call *phagedæna*.^a In such a case there must be no delay whatever: the treatment is immediate cauterization, whether with causticaments as above, or, if these have little effect, with the cautery. There is also a sort of blackness, which is insensitive, but spreads and, if we leave it

serpit ac, si sustinuimus, usque ad vesicam tendit, neque succurri postea potest. Si id in summa glande circa fistulam urinae est, prius in eam tenue specillum demittendum est, ne claudatur; deinde id ferro adurendum. Si vero alte penetravit, quicquid occupatum est, praecidendum est. Cetera eadem, quae in aliis canceris, facienda sunt.

* Occalescit etiam in cole interdum aliquid, idque omne paene sensu caret; quod ipsum quoque excidi debet. Carbunculus autem ibi natus primum aqua per oricularium clysterem cluendus est; deinde ipse quoque medicamentis utendus, maximeque chalcitide cum melle aut aerugine cum cocto melle, aut ovillo stercore fricto et contrito cum eodem melle. Ubi is excidit, liquidis medicamentis utendum est, quae ad oris ulcera componuntur.

B In testiculis vero si qua inflammatio sine ictu orta est, sanguis a tale mittendus est; a cibo abstinendum; imponenda ex faba farina eo ex mulso cocta cum cumino contrito et ex melle cocto; aut contritum cuminum cum cerato ex rosa facto; aut lini semen frictum, contritum et in mulso coctum; aut tritici farina ex mulso cocta cum eupresso; aut lili radix contrita. At si idem induruerunt, imponi debet lini vel faeni Graeci semen ex mulso coctum; aut ex cyprino ceratum; aut similia ex vino contrita, cum paulum croci sit adiectum. Si vetustior iam durities est, maxime proficit cucumeris agrestis radix

B in mulso cocta, deinde contrita. Si ex ictu tument,

* V. 28. 1. Cf. Boissacius *Lingua*, 25, carbunculos quos dixerunt dicunt. For Carbunculus oculi, VI, 8, 10.

* V. 8.

* Vol. I. p. 182 notae. (IL 46. 12.)

alone, extends even to the bladder, after which nothing can avail. If it is situated at the lip of the gland around the urethra, a fine probe should be inserted into the urethra first that it may not be closed up; then the black patch burnt with the cautery. If it has gone deep, whatever is involved is to be cut away. The rest of the treatment is the same as for other kinds of cancer.

Again, now and then a callosity forms in the penis; and it is almost entirely without feeling; this also should be excised. But if a carbuncle* occurs here, it is first to be irrigated with water through an ear syringe; next the growth is to be cauterized with medicaments, especially copper* are with honey or verdigris with boiled honey, or fried sheep's dung² pounded up similarly with honey. When the carbuncle falls off, use the fluid medicaments prepared for ulcers of the mouth.

But if any inflammation occurs in the testicles, not due to injury, blood is to be let from the ankle; there must be abstinence from food; and bean meal boiled in honey wine must be applied, along with cummin rubbed up in boiled honey; or pounded cummin with the rose oil cerate; or parched linseed, pounded up and boiled in honey wine; or wheat flour in honey wine boiled with cyprus shoots; or pounded lily root. If the testicles have become indurated, apply linseed or fenugreek seed boiled in honey wine; or the cyprus oil cerate; or fine wheat flour pounded up in wine to which a little saffron has been added. If the induration is already of long standing, the most efficacious thing is wild cucumber root boiled in honey wine, then pounded up. If the testicles swell as the result of an injury, it is necessary

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sanguinem mitti necessarium est, magisque si etiam liveat. Inponendum vero utrumlibet ex iis, quae cum cumino componuntur supraque (A) posita sunt; aut ea compositio, quae habet: nitri cocti. P. * I; resinae pineae, cunctini, singulorum P. * II; urvae tamipiae sine seminibus P. * III; mellis quantum satis sit ad ea cugenda. Quod si ex icu testiculus alii deest, fere pus quoque increseit, neque aliter succurri potest quam si inciso seroto et pus emissum et ipse testiculus extensus est.

7. Anus quoque multa traidique plena mala recipit, neque inter se multum abhorrentes curationes habet. Ac primum in eo saepe, et quidem pluribus locis, cutis scinditur: ragadia Graeci vocant. Id si recens est, quiescere homo debet, et in aqua calida desidere. Columbina quoque ova coquenda sunt, et, ubi induruerunt, purganda; deinde alterum deponefacere in aqua bene calida debet, alterum calidum loco subicere, sic ut invicem utroque aliquis utatur. Tum tetrapharmacum aut rhyodes ad hoc rosa diluendum est, aut oesypum recens rubescendum cum cerato liquido ex rosa facto aut eodem cerato plumbum

B elotum: aut addiendum aut resinae cerebenthinæ murræ paulum, aut spumae argenti vetus oleum, et quolibet ex his id perungendum. Si, quicquid laesum est, extra est neque intus reconditum, eodem medicamento tinctum linamentum superdandum est et, quicquid ante adhibuimus, cerato contegendum. In hoc autem casu neque acris cibis utendum est neque asperis neque alvum comprimentibus, ne aridum quidem quicquam satis utile est nisi

* For these, cf. Galen XII. 518 and 715. The surgical treatment of anal disease is described in Book VII. §8. 1 ff.

to let blood, especially if they are livid as well. Then one of the compositions containing camin mentioned above should be put on; or the composition which contains; fixed soda 4 grms.; pine resin and camin, 8 grms. each; black hony berries without the seeds 16 grms.; along with sufficient honey to combine them. If, as the result of an injury, the testicle lacks nutrition, generally pus develops; then the only thing to be done is to cut into the scrotum, and let out the pus, and to excise the testicle itself.

The anus also is subject to many most tedious maladies, which do not require much variation in their treatment. In the first place, the skin of the anus is often fissured at several places; the Greeks call these *ragadia*.⁴ If this is recent, the patient should keep quiet and sit in hot water. Further, pigeon's eggs are to be boiled until hard, shelled, and then one should be covered completely in very hot water, the other is applied hot to the place, the eggs being used thus turn and turn about. Then the tetrapharmacum⁵ or the chypodea⁶ is to be diluted for use with rose oil: or fresh wool-grease is mixed with the liquid cerate made up with rose oil; or washed lead with the same cerate; or a little myrrh is added to turpentine resin; or old oil to litharge; with any one of which the anus is smeared. If the lesion is external, not hidden inside, this may be soaked in the same medicine and applied; whatever is put on is to be covered by a cerate. In such a case also neither acid nor coarse food is to be taken nor such as constipates; dry food is not satisfactory

⁴ M. 12. 8.⁵ V. 12. 15.

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admodum paulum: liquida, lenia, pinguis, glutinosa meliora sunt. Vino leni uti nihil prohibet.

- 8 Condyloma autem est tuberculum, quod ex quadam inflammatione nasci solet. Id ubi ortum est, quod ad quietem, cibos potionesque pertinet, eadem curari debent, quae proxime (7 A.) scripta sunt: Hædem etiam ovis recte tuberculum id fovetur. Sed desiderat ante homo in aqua debet, in qua verbenae decoctae sunt ex reprimentibus. Tum recte imponitur et lentacula cum exigua parte mellis et sertula Campana ex vino cocta; et rubi folia contrita cum cerato ex rosea facto; et cum eodem cerato contritum vel Cotonium malum, vel malicuri ex vino cocti pars interior; et chalcitis cocta atque contrita, deinde omyopa ac rosa excepta; et ex ea compositione, quae habet: turis P. ꝯ I; aluminis scissilis P. ꝯ II; cerussae P. ꝯ III; spumae argenti P. ꝯ V; quibus, dum teruntur, invicem rosa et vinum instillatur. Vinculum autem si loco linteolum aut panniculus quadratus est, qui ad duo capita duas angulas, ad latera duo totidem fascias habet; cumque subiectus est, angulis ad ventrem datis, posteriore parte in eas adductae fasciae coeuntur, atque ubi artatae sunt, dexterior sinistra, sinisterior dextra procedit, circumdataeque circa alvum inter se novissimae deliguntur. Sed si vetus condyloma iam induruit, neque sub his curationibus desidit, ad aliud medicamentum potest, quod ex his constat: aeruginis

unless in very small amount; liquid, mild, fatty and glutinous nutriment is better. There is nothing to prevent the use of mild wine.

A condyloma* is a small tumour due to inflammation of some kind. When it appears the same prescriptions apply regarding rest, food and drink as have just been set out. Also the tumour itself may be properly treated by fomenting similarly with eggs. But the patient should first sit in a repellant decoction of vervains. Then we may properly apply lentil meal with a little honey, also mellilot boiled in wine, bramble leaves pounded up with the rose oil cerate or a quince, or the inner rind of a pomegranate boiled in wine, pounded up in the same cerate; or copper ore boiled and pounded, then taken up in wool-grease and rose oil; and the composition containing: frankincense 4 grms., split alum 8 grms., white lead 12 grms., litharge 20 grms., into which whilst it is being pounded up rose oil and wine are dropped by turns. But the binder for this part is a square of linen or woollen cloth, which has a loop at each of two adjacent angles and a tape at each of the two opposite ones. The square having been applied underneath with the two loops upon the abdominal wall, the tapes are brought round from behind and passed through the loop on its corresponding side. Each tape being drawn tight, that on the right side is carried round the back to the left, and the left tape back and round to the right side. Finally, the ends of the tapes are tied together in front of the abdomen. But if a long-standing condyloma is already indurated and does not yield to the foregoing measures, it can be burnt with a caustic consisting of: verdigris 4

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P. # I; morrae P. # III; eumenis P. # VIII; turis P. # XII; stibis, papaveris lacrimae, acaciae, singulorum P. # XVI, quo medicamento quidam etiam ulcera, de quibus proxime (2 CD) dixi, renovant. Si hoc parum in condylomate proficit, adhiberi possunt etiam vehementer adurentia. Ubi consumptus est tumor, ad medicamenta lenia transeundum est.

- ¶ Tertium autem vitium ora venerum tanquam ex capitulis quibusdam surgentia, quae saepe sanguinem fundunt; haemorrhoidas Graeci vocant; idque etiam in ore solvae feminarum incidere consuevit. Atque in quibusdam parum tuto supprimitur, qui sanguinis profusio inbecilliores non sunt: habent enim purgationem hanc, non morbum. Ideoque curantur quidam, cum sanguis exitum non haberet, inclinata ad praecordia et ad viscera materia, subtilis et gravissimis morbis correpti sunt.—¶ Cui vero id nocet, is desiderare in aqua ex verbenis debet, imponere maxime mellecorium cum aridis rosae foliis contritum, aut ex iis aliquid, quae sanguinem suppriment. Solet autem oris inflammatio maxime ubi maior¹ . . . dura alvus cum locuto laesit. Tum in aqua dulci desidendum est, et fovendum oris; imponendi vitelli cum rosae foliis ex passis subactis; idque si intus est, digito inlinendum; si extra, superinditum panniculo imponendum est. Ea quoque medicamenta, quae recentibus scissuris posita (7 A B) sunt, huc idonea sunt. Cibus vero in hoc casu isdem quibus in prioribus

¹ Max. would add after maior: impostum ventris curatio primum percipit, dolida, and this is translated.

² p. 231.

³ Cf. VII. 30, 2 for the surgical treatment of condylomata.

⁴ Cf. VII. 30, 2 for the surgical treatment of haemorrhoids.

grms.; myrrh 16 grms.; cumin 32 grms.; frankincense 48 grms.; antimony sulphide, poppy juice, and zodiac juice, 84 grms. each, and by this medicament some also produce a fresh surface on the ulcers, which I have described above.* If this has little effect upon the condyloma it is possible to apply strong caustics. When the tumour has been eaten away, a change is made to mild medicaments.†

There is also a third lesion, in which vein mouths rise up as from little heads,‡ which at frequent intervals pour out blood: the Greeks call them hæmorrhoids. In women they may even appear at the vulval orifice. There are some in whom it is hardly safe to suppress such a flux of blood, those who are not the weaker for it; for to these it is a purgation, not a disease. Hence some, after being cured, since the blood had no way out, and diseased matter was diverted towards the præcordia and viscera, have been carried off by sudden diseases of the gravest kind. But if the bleeding is doing harm to anyone, he should sit in a decoction of vervains, and the best thing to apply is pomegranate rind pounded up with dried rose leaves, or anything else that stops bleeding. But inflammation especially tends to occur when first a rather violent evacuation of the bowels has ruptured the epidermis, and later a hard stool has injured this spot.§ Then the patient should sit in soft water and foment with eggs; yolk of egg which has been stirred up with rose leaves and boiled in raisin wine is to be applied; if the hæmorrhoids are internal, by the finger, if external, spread upon linen. The medicaments described above for recent fissures are suitable here also. In this case the diet

* An enlarged pile is the result.

† VI. 18. 7 A

utendum est. Si ista parum iuvant, solent inposita
 C medicamenta adurentia ea capitula absumere. Ac
 si iam vetustiora sunt, sub auctore Dionysio insper-
 genda sandraca est, deinde inponendum id quod ex
 his constat: squarum acris, auripigmenti, singulorum
 P. ꝛ V; saxi caletis P. ꝛ VIII; postero die acu
 compungendum. Adusta capitulis sit cicatrix, quae
 sanguinem fundi prohibet. Sed quotiens is sup-
 pressus est, ne quid periculi adferat, multa exer-
 citatione digerenda materia est. Praetereaque viris
 et feminis, quibus menstrua non proveniunt, interdum
 ex brachio sanguis mittendus est.

10 At si anus ipse vel os vulvae procidit (nam id
 quoque interdum fit), considerari debet, parumne
 id sit, quod provolutum est, an umore mucoso
 circumdatum. Si parum est, in aqua desidere homo
 debet; aut salsa aut cum verbena vel malicorio
 incocta. Si umidum, vino austero subluendum est
 balineandamque faeces vini combusta. Ubi utrolibet
 modo curatum est, intus reponendum est, inponenda-
 que plantago contrita vel folia salicis in aceto cocta.
 tum lintolum, et super lana; eaque deliganda sunt
 cruribus inter se devinctis.

11 Fango quoque simile ulcus in eadem sede nasci
 solet: id, si hiemps est, egelida; si aliud tempus,
 frigida aqua fovendum est. dein squama seris
 inspergenda, supraque ceratum ex amygdalis factum,
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should be the same as in the preceding one. But if the above treatment has little effect, it is usual to apply caustics to destroy these small heads. If they are already of long standing, then, on the authority of Dionysius, sandarach should be dusted on, and after that the composition should be applied containing copper scales and orpiment 20 grs., limestone 32 grs.; the next day the hæmorrhoids are to be punctured with a needle. The small heads having been cauterized, a scab is produced which prevents blood from running out. But whenever hæmorrhage is thus suppressed, the diseased matter is to be dispersed by free exercise that no danger may ensue. And besides, in men and in women who are not menstruating, blood should be let from the arm now and then.

If the anus itself, or, as sometimes happens, the mouth of the womb, prolapses, examination should be made to see whether what is protruding is clean, or is covered by a mucous humour. If it is clean, the patient should sit in water; either in salt water or in water boiled with vervain or pomegranate rind. If it is moist, it should be bathed with dry wine and smeared with roasted wine lees. After being treated in one of these ways, it is to be replaced, and pounded plantain or willow leaves boiled in vinegar applied, next lint, and wool over it: and these must be bandaged on, whilst the legs are kept tied together.

In the same place an ulceration like a fungus may arise, which must be bathed with lukewarm water in winter, at other seasons in cold water; then copper scales are dusted on, and over that is applied a cerate made with myrtle oil to which has been

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eul paulum equatose, fuliginis, caelestis adiectum. Si hac ratione non tollitur, vel medicamentis vehementioribus vel ferro adurendum est.

19. Digitorum autem vetera ulcera commodissime curantur aut Lycio aut amurca cocta, cum utrilibet vinum adiectum est. In iisdem recedere ab ungue caruncula cum magno dolore consuevit: pterygion Græci appellant.—Oportet alumen Melinum rotundum in aqua liquare, donec mellis crassitudinem habeat; tum quantum eius aridi fuit, tantundem mellis infundere, et ruddula miscere, donec amillis croco color effiat, eoque illinere. Quidam . . .¹ ad eundem usum decoquere simul malunt, cum paria pondera aluminis aridi et mellis miscuerunt. Si hac ratione ea non exiderant, excidenda sunt; deinde digiti fovendi aqua ex verbenis, inponendumque super medicamentum ita factum: chalcitis, malicorium, squama ætis excipiantur seu plingui leniter cocta ex melle; aut chartæ combustæ, auripigmenti, sulphuris ignem non experti par modus cerato miscetur ex murteæ factæ; aut seruginis resæ P. 4 I, squamæ P. 4 II mellis cystho coguntur; aut paræ portiones miscentur saxi cales, chalcitidis, auripigmenti. Quicquid horum impositum est, tegendum lintolo & aqua mædefacto est. Tercio die digitus resolvendus,

¹ Most suggest that *adjectum* has dropped out.

² A paronychia or whitlow. Hippocrates (*Epidemics* II. 37: *Liber* V. 138) calls it *paronychia*. The Latin name (not used by Celsus) was *caruncula*, and *pterygion*, which he

added a little of copper scales, soot, and lime. If this treatment gives no relief, it is to be cauterised, either with more active medicaments or with the cautery.

18. Old-standing ulcerations of the fingers are most suitably treated by buckthorn juice, or by boiled olive lees, in either case with the addition of wine. In the same parts a small piece of flesh sometimes grows out from the nail, causing great pain; the Greeks call it *pterygium*.^{*} Round alum from Meos should be dissolved in water to the consistency of honey; the same quantity of honey as there was of dry alum is then poured in, and the mixture is stirred with a rod until it is of a saffron colour, and then smeared on. Some prefer to boil up the same ingredients together for the same purpose after mixing equal quantities of dry alum and honey. If the whitlow is not removed by this treatment, it should be cut away; next the finger is bathed in a decoction of vervaine, and over it is then put the following composition: copper ore, pomegranate rind, and copper scales, mixed with ripe figs, lightly boiled in honey; or burnt papyrus, orpiment, and crude sulphur in equal parts may be mixed with a cerate containing myrtle oil; or scraped verdigris 4 grms., copper scales 8 grms., mixed together in 42 ccm. of honey; or equal parts of limestone, copper ore and orpiment are mixed together. Whichever of these is applied, it is covered over by linen wetted with water. On the third day the finger is dressed again, any dried part is

given as the Greek, is seldom found in this sense in any extant writings, though *pterygium* is often found in Latin writers. For another meaning of *pterygium* see I. 322, note b.

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et si quid aridum est, iterum excolendum, struulisque adhibenda curatio est. Si non vincitur purgandum est scalpello tenuibusque ferramentis adurendum et sicut reliqua ista curandum est.

At ubi scabrum unguis sunt, circum aperiri debent, corpus quo contingunt; tum super eos ex hac compositione aequè inponi: sandracae, sulphuris, singulorum P. ꝯ II; nitri, auripigmenti, singulorum P. ꝯ IIII; resinae Equidae P. ꝯ VIII; tertioque id illa resolvendum est. Sub quo medicamento vitiosi unguis cadunt, et in eorum locum meliores renascuntur.

removed, and similar treatment continued. When this does not succeed, the whitlow is cleared by means of a scalpel, and the place burnt with a fine cauter, followed by the dressing usual after cauterization.

And when nails are scabrous, they must be loosened all round, where they are in contact with the flesh; next some of the following composition is put on them: sandarach and sulphur 3 grms. each; soda and opiment 16 grms. each; liquid resin 32 grms. The finger is dressed again on the third day. Under this medicament, diseased nails fall off and in their stead better ones grow.

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