

Minor ailments : their medical and surgical treatment / by a medical practitioner.

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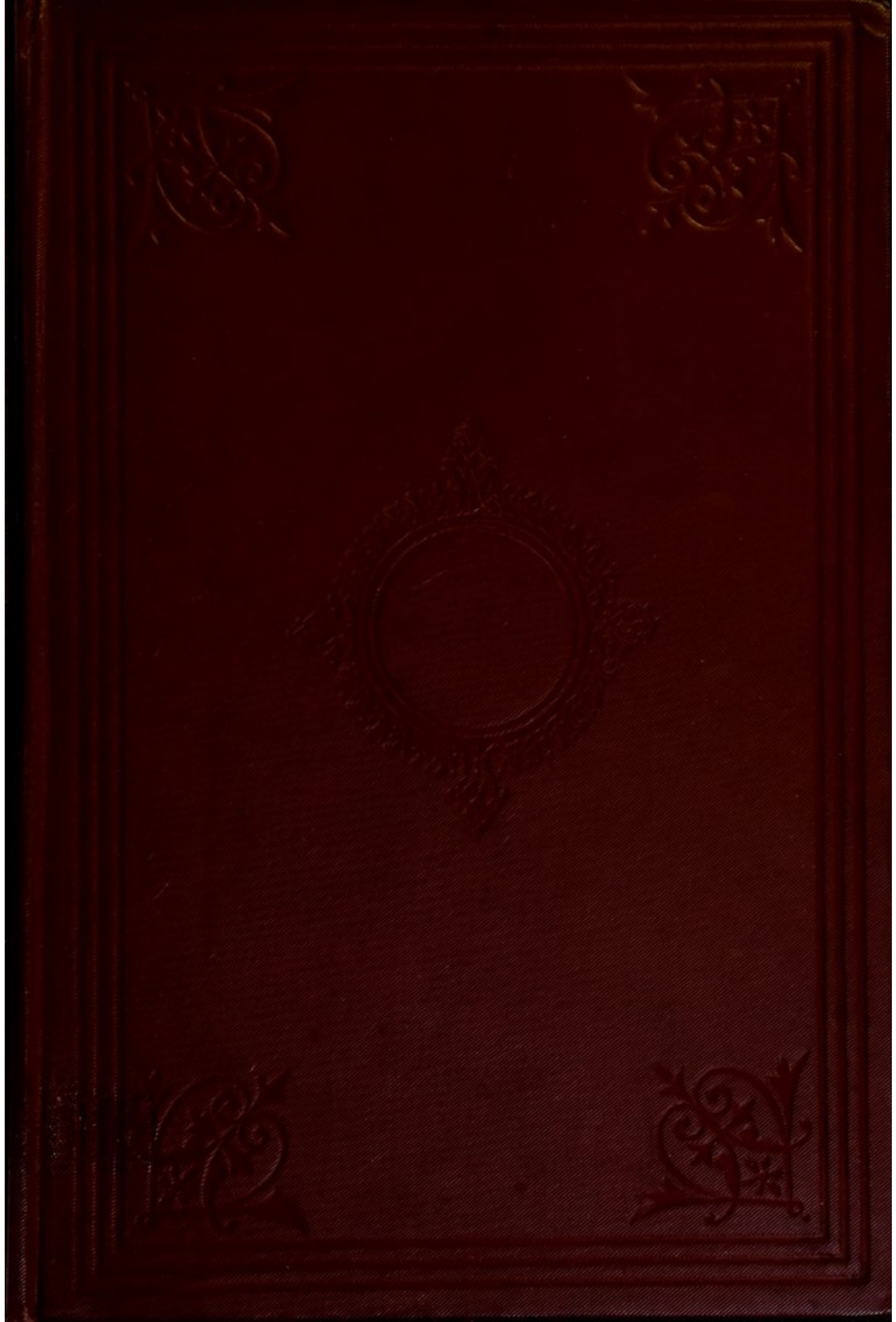
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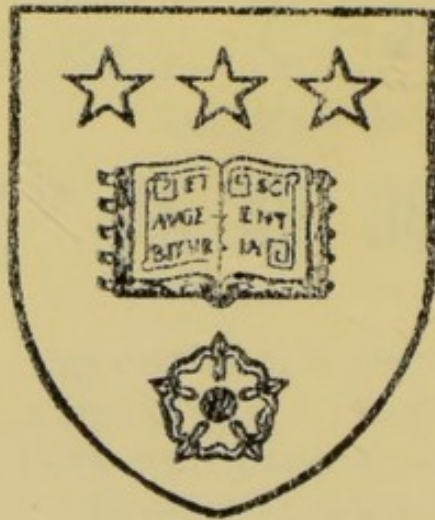
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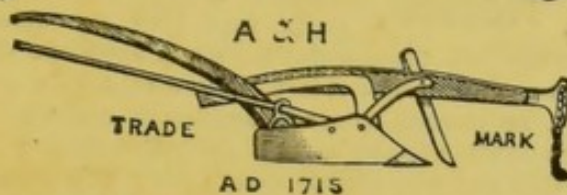
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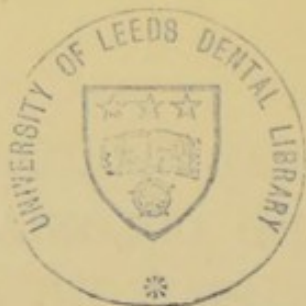
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A MEDICAL PRACTITIONER.

1892.

PUBLISHED AT THE OFFICES OF
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P R E F A C E .

THIS book finds its *raison d'être* in the prevalent and one may fairly say, growing custom of regarding the pharmacist as a convenient and reliable adviser in those passing and less serious ailments which do not call for skilled medical advice. Far from wishing to encourage unjustifiable trespass upon the proper domain of the qualified physician, the opportunity has been taken repeatedly to point out the limits beyond which the chemist should not go.

At the same time, it is not always easy to draw a hard-and-fast line, determining what may be included in a volume dealing with Minor Ailments, and what must be regarded as outside its scope. For this reason a few monographs appear, the purpose of which is less to encourage the semi-professional reader to prescribe for the affections described, than for the sake of completeness, or to enable him to intelligently supplement or explain the medical attendant's instructions when asked to do so, as is by no means infrequently the case, by a customer purchasing medicines or appliances for the sick-room.

In every case the information given has been based upon the labours and experience of the best known and latest authorities on the subject treated; and although the practical aims of the volume have never been lost sight of, no hesitation has been felt in introducing here and there

references to the theories of origin, causation, etc., of various ailments, which are advanced by different writers. Such questions are of intense interest to most thoughtful men, even though they lack the special training to enable them to weigh the probabilities in favour of the truth or otherwise of any physiological or therapeutical theory.

No attempt has been made to substitute for all medical terms English equivalents; such efforts result in most cumbrous forms of expression, which after all are little, if any, clearer in meaning than the words they aim at elucidating. As, however, a knowledge even of elementary physiology and medical terminology cannot be presupposed in all pharmacists, a full glossary of all unusual or difficult words has been placed at the end of the volume, which will prove of service in enabling the reader to understand the text.

The names of the ailments which form the subjects of the monographs are, wherever necessary and possible, traced to their classical or other sources.

June, 1892,

MINOR AILMENTS.

ABSCESS

(*Abscessus*, a departure or separation of matter).

Definition.—A collection of pus within some cavity of the body, generally formed as the result of localized inflammation. Various distinguishing adjectives are employed in connection with the word, according to the location of the process; thus there are alveolar, bursal, dorsal, iliac, mammary abscesses, etc.

Symptoms.—The acute abscess is associated with local inflammation as well as with constitutional disturbance if the process be of any extent. There may be a sensation of cold with increase of pain; the swelling becomes more marked as pus accumulates, and there is local tenderness and throbbing. Pain is much more pronounced when the abscess cavity is bounded by dense structures, and prevented from pointing; if the abscess be near the surface, fluctuation may be detected.

The chronic abscess rarely manifests its presence in any way during the earlier stages of its formation. The principal effect is, that the health fails; sometimes, however, an attack of shivering may attract attention before the abscess has attained any considerable size.

Treatment.—The stages and varieties of abscess that may be suitably treated without aid are not numerous, and attention may be mostly directed to the arrest or prevention of threatening abscess. The measures most suitable for this purpose are (1) rest and (2) sedative applications locally. Of the latter a favourite form is the

glycerine of belladonna containing 10 per cent. of extract. Either hot or cold applications may do good; the former by dilating the vascular system and relieving tension, the latter by cutting off the increased supply of blood. The use of belladonna extract on a poultice may also be resorted to.

When pus is undoubtedly present, surgical interference is called for, in order to open the abscess, either by the knife, by puncturing, or by aspiration and irrigation; pain is generally relieved by this operation and diffusion of the abscess prevented. When the case has reached this stage, it is of course necessary to hand over the patient to the regular practitioner.

ACIDITY

(*acere*, to be sour).

Definition.—A condition, also known popularly as Heartburn, symptomatic of gastric disorder; it is dependent upon the formation of butyric, lactic, and sometimes acetic acids, due to fermentative processes occurring in the stomach.

Symptoms.—An acute attack of acidity is accompanied by severe pain; there are generally sensations of heat and of constriction in the epigastric region or the throat, due to the irritating effect of the acids formed in the stomach upon the cardiac region of that viscus and upon the lower end of the œsophagus. As the terminal fibres of the pneumogastric nerve are also generally affected, various reflex sensations may also be experienced in the throat, often described as resembling “clutching” or as if the part were “fixed in a vice.” These nervous complications will be most frequently met with in cases where the digestive disorder is due to neurasthenia or debility of nervous centres.

Treatment.—The severe pain of acute attacks of acidity is best combated by a single large dose of an alkaline carbonate. As the quantity of organic acid in the stomach will often be very large, as much as 3 or 4

drms. may sometimes be given with advantage; in general 2 drms. may be considered an average dose. Further fermentation is at once arrested, and the irritating acids of the stomach neutralized. If, however, this dose should fail to effect the desired end an emetic is indicated. Not infrequently a smaller dose of alkali given at the commencement of the symptoms will arrest what threatened to be a severe attack; but these remedies must not be often or habitually employed. The more urgent symptoms having been thus relieved, such agents are indicated as prevent or arrest fermentation; these may be such well known antiseptics as Carbolic Acid, 1 to 3 minims, or Creasote in soft gelatine capsules each containing 1 minim (2 being given one or two hours after each meal), or the more harmless essential oils of Cloves and Peppermint (5 minims). Sulphocarbates, Sulphates or Salicylates are also sometimes given with success. Charcoal, given in the dried state, wrapped in wafer paper, is a good absorbent of the gases which accumulate in the stomach. The condition of the gastric mucous membrane must also receive attention, being the true source of the trouble. Bismuth carbonate, Magnesia and very small doses of Opium ($\frac{1}{12}$ to $\frac{1}{8}$ grns.) are the most suitable remedies for restoring the stomach to its normal condition. The opium is intended to act purely as a local sedative, and therefore should not be given in doses above the limit mentioned. Ipecacuanha and Nux Vomica are indicated in the acidity of pregnancy, lemon juice when the condition is associated with gout, and Mercury (Hyd. c. Creta) when accompanied by light clayey stools. As the affection in most instances arises from a deficiency of gastric juice, this may be remedied and digestion assisted, by the administration of artificial digestive ferments; of these Papain is one of the most useful, as it can be prescribed at the same time as alkalies, maintaining its activity as well in alkaline as in acid solution. Diet is here, as in all digestive disorders, of very high importance. Starchy and saccharine foods, especially pastry, should be very sparingly taken if at all, and fermented liquids (except Lager beer) should be forbidden.

ACNE

(ακμαζω, I bloom).

Definition.—A general term used for the designation of inflammation of the hair follicles, or folliculitis of the skin; almost exclusively confined to the face, the neck, the sternal region of the breast, the back and shoulders. Is limited to the period of life corresponding to and soon after puberty.

Symptoms.—Acne is dependent upon a languid and torpid skin, the accumulation of sebaceous matter within the follicles, congestion of the follicular coats, and the ordinary symptoms of inflammation such as infiltration, suppuration, and solidification. All kinds of folliculitis are termed acne, from whatever cause arising, such as the acne rosacea of adult life, and the varieties of folliculitis produced by iodine, bromide, and tar.

In some cases there is simply an accumulation of sebaceous matter which manifests itself as a black point with little or no inflammation; in others, congestion and infiltration lead to the development of conical pimples, while in yet others suppuration, thickening, and induration may be present.

Treatment.—This must be constitutional and local; the first measure, suitable in most cases, being to administer a series of mild mercurial purges, which may be advantageously resorted to again at later stages of the treatment. The indications are to improve the nutritive power of the individual, and to impart tone and vigour to the part locally. Sometimes, when the patients are plethoric or robust, frequent doses of any active mineral water give good results. Where there is any anæmia, iron is of course the remedy.

In the simple indurated form of acne, sulphur and sulphide of calcium are often of very great value; 10–20 grns. of the former mixed with marmalade are given three times a day, or $\frac{1}{10}$ grn of sulphide of calcium, at similar intervals. A favourite remedy is also arsenic (liq. Fow-

leri, 3 minims four times daily after food), but it has to be continued for long periods.

Of local remedies, sulphur holds a prominent place. A good deal must be done, however, besides merely applying lotions or ointments. The inflamed glands should be thoroughly washed with soap and hot water, or, in the case of the face, steamed over boiling water; comedones or pustules should be emptied of their contents by pressure with a watch-key or similar instrument. It is sometimes advised to rub down the area with pumice stone before applying pressure. A lotion of sulphur and calamine may be used as follows:—

R̄	Sulphur. præcip.	. . . . .	ʒij
	Calamin. præp.	. . . . .	ʒss
	Aquæ Rosæ	. . . . .	ʒv
	Aquæ Calcis	. . . . .	ʒv
	Fiat Lotio.		

To this a few drachms of eau de Cologne may be added.

In some cases ointments may be more convenient; they contain about 30 grns. each of sulphur and calamine to the ounce of lanoline, with a small proportion of carbolic acid. In other cases the hypochlorite of sulphur gives good results, thus:—

R̄	Sulphur. hypochlorid.	. . . . .	ʒj
	Adipis	. . . . .	ʒj
	Fiat Unguent.		

If the affected area be still in a condition of inflammation, as evidenced by redness and tenderness, and if pustules are still forming, the steaming process should be followed by the application of an astringent lotion as under:—

R̄	Liquoris Plumbi Subacet.	. . . . .	ʒiv
	Spiritus Vini Rectif.	. . . . .	ʒiss
	Aquæ Rosæ	. . . . .	ʒx
	M. f. Lotio.		

If the disease be of the indurated form, the steaming and friction are followed by mild mercurial ointments, by Hebra's soap solution, or by an alkaline lotion (5 per

cent. of liquor potassæ). The soap solution has the formula :—

R	Saponis virid.	.	.	.	.	.	ʒiv
	Spiritus Vini rect.	.	.	.	.	.	ʒij
	Spiritus Lavand.	.	.	.	.	.	ʒj
M. f. Solutio.							

Other methods involve evacuation of each pustule followed by the application of Liq. Ferri Perchlor. fort. Touching the summits of the pimples with pure carbolic acid or the strong iron solution (by means of a wooden match) has also given good results; only a limited number of pustules should be treated at once.

Finally, a formula is given by Unna which sometimes succeeds where other remedies fail :—

R	Unguent. Zinci Benz.	.	.	.	.	.	ʒx
	Amyli	.	.	.	.	.	ʒv
	Resorcini	.	.	.	.	gr. xxx	
	Hydrarg. Perchlorid.	.	.	.	.	gr. iij	
M. f. Ung. To be well rubbed in three or four times a day.							

ACNE ROSACEA.

Definition.—A congestive condition of the skin and subcutaneous tissue of the face, attended with seborrhœa and tending to permanent vascular dilatation.

Symptoms.—Similar in general to those of acne, but with the characteristic appearance of the erythematous stage to which the affection owes its distinctive name.

Treatment.—The methods adopted for the treatment of ordinary acne are quite useless in acne rosacea, which almost always originates from some abnormal condition of the digestive tract. If, however, it is neglected, this form of erythema passes into one of persistent dermatitis, associated with the formation of pustules, induration, and hypertrophy, which calls for operative measures.

Irritating foods should be stopped, and irregularities in the times of meals avoided. Internally, the following alkaline powder is useful :—

- ℞ Pulv. Rhei Co.
 Pulv. Gentian.
 Sodii Bicarbon. āā ʒj
 M. A large teaspoonful in water after meals.

At intervals of three nights a pill containing 4 grns. of blue pill and 2 grns. of euonymin is recommended followed by saline purges. After the active dyspepsia has been removed, Whitla prescribes a mixture as under:—

- ℞ Antipyrini gr. 100
 Ext. Cocæ liq. ʒij
 Tinct. Aurant. ʒj
 Glycerini ʒj
 M. f. M. One teaspoonful to be taken between meals.

In women acne may be due to menstrual disturbances; sedatives are recommended here (full doses of sodium bromide with 2 minims of Fowler's Solution). Local treatment is of little use, but in the earlier stages alkaline lotions may give relief. Two suitable formulæ are:—

- ℞ Sodii Bicarb. ʒj
 Aquæ ʒxxx
 M. f. Lotio. To be freely applied.
 ℞ Liquor Plumbi Subacet. ʒiv
 Lanolini ʒij
 M. f. Ung.

Oleate of bismuth ointment has also been recommended.

ALCOHOLISM.

Definition.—A term applied to the morbid results of excessive or prolonged use of alcoholic liquors. The pathological changes produced vary according to whether a large quantity is consumed at once or at short intervals. Under this term are included acute alcoholic gastric catarrh, coma, insanity, delirium tremens, etc.

Symptoms.—The successive mental and physical phenomena of acute intoxication are well known. Un-easy sensations in the epigastrium, vomiting or retching, giddiness and headache with some visual abnormalities follow. The tongue is furred, appetite absent, and thirst constant. The urine is at first copious and pale, but afterwards is scanty and loaded with lithates. In the comatose stage the patient is quite insensible, with slow pulse, clammy skin, and low temperature. The chronic forms of the poisoning begin with muscular tremors, especially on first rising in the morning, dull headache, and occasional vertigo; foul breath, slightly jaundiced conjunctivæ, watery eyes, and flabby features with pap-ules of acne rosacea around the nose and mouth, are also common appearances. In more advanced stages there is increased insomnia and nervous dread, uncertain and stumbling gait, loss of will power, etc. The premonitory symptoms of delirium tremens are inability to take food, anxiety, restlessness, muscular trembling, cool skin and extremities, and a soft weak pulse; with these there is also pronounced inability to sleep.

Treatment.—The gastric catarrh of alcoholism is one of the principal symptoms which is likely to come under notice. The acute form may be combatted by a mixture as under:—

R	Bismuthi Carb.	ʒiij
	Acid. Hydrocyan. dil.	ʒj
	Mucilagin.	ʒiiss
	Liquoris Morphinae	ʒij
	Aquæ Chlorof.	ad ʒiv
	M. f. M. One teaspoonful to be taken every hour.	

Against the chronic vomiting sometimes met with, creasote in capsules or 10 grn. doses of bismuth with half as much heavy magnesia are useful. Good buttermilk turned acid is said to form the best food at this stage. When the digestive trouble has assumed a chronic character, the buttermilk diet (either alone or mixed with soda water), or koumiss, carefully prepared meat soups, beef juice, or jelly are the most suitable. Alcohol, for

which there is commonly an intense craving, should of course be rigidly denied.

As a rule, the treatment of chronic alcoholism should begin with the complete withdrawal of all alcoholic stimulants; the prejudice against this course is stubborn, but contrary to the teaching of experience, and, save in exceptional cases, the best course to pursue is to cut off the stimulant at once.

To allay the alcoholic craving, a number of mixtures have been recommended, of which the three following are specimens:—

℞	Spiritus Ammon. Arom.	. . . . .	ʒiij
	Tinct. Cinchonæ	. . . . .	ʒiij
	Tinct. Capsici	. . . . .	ʒj
	Misce. One teaspoonful in half a tumblerful of effervescing potash water hourly.		
℞	Extract. Cocæ Liq.	. . . . .	ʒiij
	Tinct. Card. Co.	. . . . .	ʒiij
	Tinct. Cinnamom.	. . . . .	ʒj
	M. f. M. One teaspoonful in water every hour.		
℞	Tinct. Nuc. Vomicae	. . . . .	ʒij
	Aquæ Camphoræ	. . . . .	ʒxii
	M. f. M. One tablespoonful to be taken every hour.		

The last-mentioned preparation is associated with the reputation which strychnine has made as a specific remedy in alcoholic poisoning.

Against the insomnia of chronic alcoholism, bromide of potassium is in general the best, though chloral is more certain in its effect; the latter should, however, be very rarely resorted to. Opium also must be used only with extreme caution.

Finally it may be pointed out, that as a prompt and powerful "pick-me-up" to counteract rapidly the symptoms of the acute stage of drunkenness, the solution of acetate of ammonium in doses of a wineglassful every 15 minutes, will often prove exceedingly effective. The kola nut, coca, very strong coffee, and the alkaloids of these drugs will also produce the same results, but act much more slowly and less satisfactorily.

ANAL PRURITUS.

Definition.—An abnormal condition of the innervation of the skin about the anus, or a reflex result of the irritation of intestinal worms, or due to congestion of the hæmorrhoidal veins.

Symptoms.—An extremely annoying and often persistent itching in the anal region, especially when heated in bed, or after taking stimulating drinks; it may keep the sufferer awake for hours. Friction makes the condition worse, excoriating the skin, and leading to fissures with a dry, harsh, and leathery state of the skin.

Treatment.—Local irritation from worms must be suitably treated, and very frequently this will be sufficient to get rid of the troublesome itching which they produce. When, however, the symptom is of neurotic origin, tonics, especially quinine and arsenic, are indicated. Acetanilid and antipyrine have also proved beneficial. Measures should be taken to ensure regularity of the bowels; and the general health, as already indicated, requires attention.

As regards local treatment, every effort should be made to avoid friction. A very valuable sedative ointment in all such cases as well as in the pain and uneasiness of rectal and anal diseases generally, accompanied by abrasions, ulcerations, or fissures, is the Unguent. Conii of the B.P. Add. The combination

℞	Creasoti vel Acid. carbol.	. . . . .	ʒj
	Adipis . . . . .	. . . . .	ʒij
	Camphor. . . . .	. . . . .	ʒj
M. f. Ung.			

is a safe and often effectual remedy.

Other plans sometimes successful are the constant application of a piece of cotton-wool soaked in oxide of zinc lotion; or the part may be kept smeared with a dilute mercurial ointment. It is recommended that cleansing with soap and water should be regularly practised after each evacuation; and a small enema of 3–5 ozs. of cold water at bed-time often has a magical effect. The for-

mulæ for the zinc oxide lotion referred to, and of others which answer in some cases are

℞	Zinci Oxidi	ʒiv
	Glycerini	ʒj
	Aquæ	ad ʒxx
M. f. Lotio.		
℞	Chloral. hydrat.	ʒij
	Aquæ Rosæ	ʒx
M. f. Lotio.		
℞	Glycerin. Boracis	ʒj
	Aquæ Ment. Pip.	ad ʒxx
M. f. Lotio.		

Other lotions, with carbonate of bismuth, borax and morphia, or carbolic acid, are sometimes recommended.

APHTHÆ

(ἀφθα, from ἀπτω, to set on fire).

Definition.—The small white ulcers, spots, or vesicles of the mouth characteristic of the infantile disease also termed aphthous stomatitis, and, popularly, thrush. Is also sometimes met with in old age and in the later stages of wasting complaints; is due to the presence of a microscopic fungus (*Oidium albicans*).

Symptoms.—The tongue and other adjacent parts become studded with small whitish flakes, which can easily be removed, but are soon reproduced. Sometimes the spots coalesce and form soft, thick, large patches. If ulcers form they are small, flat, circular, or oval, and occur in clusters; their bases are soft and smooth, and the margins well-defined. The favourite seat of these ulcers is the fore part of the tongue and the lips; they are accompanied by sensations of increased heat and congestion of the mucous membrane. Active gastric or intestinal irritation is also generally present.

The fungus forms delicate hyphæ, apparently homogeneous in structure, from which short articulated pedicels arise. The uppermost cells of these pedicels are ex-

panded oval bodies which fall off, germinate, and become new filaments. The true aphthous ulcer is always accompanied by this fungus, and should be distinguished from that which is simply due to stomatitis and intestinal irritation, and may therefore be characterized as dyspeptic.

Treatment.—All cases of thrush, as a rule, soon yield to the local application of glycerine of borax, which, if it is to adhere to the mucous membrane, must not be too thin; the preparation of the Pharmacopœia is not suitable owing to the addition of water. A little of the anhydrous glycerole brushed upon the mucous membrane destroys the fungus in an hour or two, and so arrests the disease; a 2 per cent. solution of potassium chlorate is recommended as equally effectual. These remedies, however, themselves produce irritation if persisted with after the disease has been relieved, though this is easily arrested by discontinuing the application.

Any ulcers which may have formed are treated with borax and honey; or a small quantity of a powder consisting of borax and sugar may be frequently dusted on. If they be deep, or show signs of spreading, it is advised to just touch the ulcers with lunar caustic, nitric acid, or a strong solution of copper sulphate, or of alum. In severe cases where these measures fail, the food of the infant should be changed, or a healthy wet-nurse obtained. Prostration, if present, is treated with small doses of grey powder, and diarrhœa with quinine and minute doses of iron. The addition of boric acid to the milk is also recommended.

ASCARIDES

(*ἀσκαρίς*, a kind of worm).

Definition.—A class of parasitical worms inhabiting the bodies and especially the intestines of most animals. There are two true species of *Ascaris* found in man, viz., the common round worm or lumbricus (*A. lumbricoides*); and the moustached or margined round worm (*A. mystax*). The latter is rarely met with in the human subject, but

is very frequently found in the cat; according to most helminthologists this is only a variety of *A. marginata*, a species found in the dog.

Ascaris Lumbricoides

(THE ROUND WORM).

Characters.—Elongated cylindrical worms 4 to 20 inches in length, 2 to 3 lines in thickness, and tapering at each end. They are elastic, greyish red or yellowish white in colour, and transparent when recently voided, so that their viscera can be seen through the parietes.

The round worm occurs singly or in small colonies in the small intestine; the parasites seem, however, to have a tendency to wander, and have been found in the nose, pharynx, liver, and pancreatic ducts. It is further on record that they occasionally penetrate the intestinal walls.

Symptoms.—The presence of *Ascarides* may give rise to disturbances of the system as a whole, evidenced by fever and sometimes by more or less delirium. The presence of the parasite or some portion of one in the excreta is generally the only means of decisively diagnosing the cause of the symptoms.

Treatment.—This, of course, simply consists in expelling the worm by the administration of anthelmintics. The most favoured for round worms are santonin, or santoninoxime (1 grn. for a child, or 4 grns. for an adult); turpentine (5 to 10 ms. in mucilage) was largely used a few years ago, but seems to be falling into disfavour. A worm syrup for children may be kept prepared according to the formula:—

R	Santonini	grn. lx
	Olei menth. pip.	gtt. v
	Spiritus ammon. arom.	ʒiv
	Spiritus tenuioris	ʒiv
	Syrupi	ad ʒx
M. f. M.	Half a teaspoonful (ʒ grn. of santonin)	
	is the dose for children of 1 to 3 years, one	
	teaspoonful for 4 to 7 years, and so on.	

Among the many formulæ for worm-powders the following is highly recommended :—

R	Santonini pulv.	. . . . .	5vj
	Sacchari lactis	. . . . .	5ij
	Glusidi	. . . . .	grn. vj
	Scammoniæ rad. pulv.	. . . . .	3ss
	Glycyrrhizæ rad. pulv.	. . . . .	5vj
M. f.	Pulvis.	For one year, 2 grains; two or three years, 3 grains; four to six years, 4 grains, and so on.	

Prof. Demme, a well-known authority on the treatment of children's affections, recommended recently the use of slightly sweetened olive oil with the addition of half a grain of santonin, given in the morning. No harm is done by the administration of this remedy, even in suspected cases which turn out negative. If, however, the indications justify the diagnosis, a second dose is given in the afternoon. When the number of parasites is very large, the santonin is given in combination with castor oil or with calomel, thus :—

R	Santonini	. . . . .	gr. $\frac{1}{8}$ — $\frac{1}{3}$
	Hydrarg. subchlor.	. . . . .	gr. iij
	Sacchari	. . . . .	gr. viij
M. f.	Pulvis.	One to be given on each of three following mornings.	

Ascaris Mystax

(THE MARGINED ROUND WORM).

This species of *Ascaris*, as already pointed out, occurs but rarely in the human being. The instances in which it has been undoubtedly found are under a dozen.

Characters.—The worm generally resembles the ordinary round worm, but is not so large; the male is usually 2 to 2 $\frac{1}{2}$ inches in length, and the female 4 inches or more.

Treatment.—Precisely the same as for the *A. lumbricoides*, given above. Santonin is *the* remedy *par excellence* for these parasites.

ASTHMA

(*ασθμα*, from *άω*, I blow).

Definition.—An affection in which severe difficulty in respiration recurs periodically, frequently at night, and generally accompanied by cough and bronchial secretion with sensations of constriction and suffocation. The causes that induce an attack of asthma have been classed as direct, *i.e.*, immediately affecting the mucous membrane of the lungs (dust, vegetable, chemical, and animal emanations, climatic influences, bronchial inflammation), and indirect, *i.e.*, acting through the nervous system or the blood.

Asthma is distinguished from croup largely by the age of the patient; in the latter affection, also, the difficulty is chiefly pronounced in the inspiratory stage, while in the former it is most marked in the expiratory stage of respiration. In contradistinction to bronchitis, the physical signs are transient, the dyspnoea spasmodic, and the expectoration scanty; further, the breathing in this affection, if at all difficult, is hurried, in asthma it is slow and laboured.

Symptoms.—Spasmodic asthma sometimes gives premonitions of an attack, and thus comes on gradually; but in many cases the first symptom is a sensation of constriction and almost of suffocation either about the throat, the sternum, or epigastrium. In order to make the most of the chest capacity, the patient fixes the shoulders and head; and every muscle of respiration, ordinary and extraordinary, is brought into play. The respirations are however slow (from ten to thirty a minute), as is also the pulse; the temperature does not exceed 98°–99° F.

The expired air is almost entirely destitute of oxygen; carbonic acid gas may increase to more than 10 per cent., and the nitrogen varies from 89 to 93 per cent. A paroxysm may last from half an hour to several days; its termination is generally marked by expectoration and followed by sleep.

In many cases the intervals between the attacks are

not characterized by any distinctive symptom, the patient being quite free from dyspnoea and even from wheezing; the latter condition commonly becomes established when the attacks follow one another closely.

Treatment.—This may be divided under the two heads (*a*) prevention, and (*b*) alleviation. The former necessitates the ascertaining of the cause of the irritation; if this be direct, removal of the patient from the unfavourable conditions or treatment of the local inflammation will be all that is necessary to effect a cure. The latter end (subduing bronchial inflammation) is secured by salines, expectorants, and some antispasmodic. Thus Williams prescribes:—

R	Potassii iodidi	ʒij
	Liquor. Fowleri	ʒj
	Vini ipecac.	ʒiv
	Succ. hyoscyam.	ʒiv
	Aquæ chlorof.	ad ʒviij
M. f. M.	One tablespoonful in water to be taken three times a day after food.	

Arsenic is especially serviceable in asthma associated with eczema, psoriasis, and other skin affections.

Attention must be given to diet, animal food being allowed only sparingly; in some cases a vegetarian regimen will effect a cure. In all circumstances meals should be regular and the amount of food taken evenly distributed among them. When heredity is a factor, gymnastic exercises, as a means of expanding the upper part of the chest, cold sponging, a change of environment, outdoor life, with walking and riding in moderation are indicated. Constipation should be sedulously avoided.

For the treatment of attacks themselves a multitude of remedies has been suggested, of which the most favoured are such as act directly upon the bronchial tract, viz., inhalations. One of the most popular remedies, and one that is often effectual, is nitre paper, made by soaking thick bibulous paper with a 20 per cent. solution of potassium nitrate and drying. The vapour arising from the combustion of this paper soon affords relief; the paper must be used in sufficient quantities at a time, if

good results are to ensue. A modification of the nitre paper contains also iodide of potassium with or without a little chlorate.

Of stramonium asthma powders, that of Sir J. Sawyer has proved reliable:—

R	Fol. stramon.	.	.	.	.	.	ʒij
	Fruct. anisi	.	.	.	.	.	ʒj
	Potass. nitrat.	.	.	.	.	.	ʒj
M. f.	Pulvis. The leaves are coarsely powdered, as also the aniseed and nitre.						

To this powder mullein, tea, and tobacco are sometimes added, as also a minute proportion of arsenic. A better method of preparation than the simple mixing, is to dissolve the nitre and arsenic (two or three grains per lb. of the powder) in a minimum quantity of hot water, mix the leaves with this, taking care that they are all uniformly wetted by it, dry, and reduce to a coarse powder.

Pyridine has been warmly recommended, but its nauseous odour is a serious disadvantage. Nitrite of amyl is sometimes of great value, though its effect is transient. Other remedies used by inhalation are chloroform (also transitory in effect and not free from risk), ether (safer but less effective), ethyl iodide, and steam, either alone or in combination with antiseptic essential oils, tinctura benzoini composita, etc.

Internally chloral hydrate is very highly spoken of by some authors; doses of 15 to 20 grains repeated every four hours until the spasm is relieved will often prove permanently beneficial. Other remedies of the same class are iodide of potassium (5 to 8 grains every four hours) sodium or potassium nitrite (in small repeated doses), alum (10 to 15 grns. placed dry on the tongue), stramonium or belladonna extracts ($\frac{1}{6}$ – $\frac{1}{2}$ grn. before the expected attack), extract of gelsemium, grindelia, euphorbia (1 grn.), liquid extract of quebracho (15 minims), nitroglycerine, apomorphine ($\frac{1}{12}$ grn.), antipyrine (30 grns.), caffeine, hyoscine, morphine, strychnine, quinine, etc.

Antispasmodics are also largely used; it is recommended to try each in succession, in the hope that the successful remedy will be hit upon after repeated trials.

BALDNESS, PREMATURE.

Definition.—Loss of hair due to other causes than senile change, such as exhausted nutritive power of the skin, nerve paresis, syphilis, and local injury. It may be circumscribed (*tinea decalvans*), or general (*alopecia*).

Symptoms.—These consist simply in the thinning or complete falling out of the hair in patches of more or less extent. It may occur in the whiskers and beard, as well as in the hair of the head. The skin thus exposed has a pale, poorly-nourished appearance, and is somewhat less sensitive than normally; the hairs bordering the patch are altered in structure, clubbed, and broken off.

Treatment.—On the one hand, nerve power and nutrition generally must be strengthened, and on the other, local stimulation is indicated. The first object is to be attained by food which stimulates nerve nutrition, such as phosphates, whole meal, fats, and by such medicines as phosphorus, arsenic, strychnine, cod liver oil, and pilocarpine.

Of local stimulant agents, next, perhaps, to galvanism, comes cantharides. The principle to be borne in mind in the application of these irritants is, that the affected area is to be kept for a prolonged period in a condition of congestion, stopping short of actual blistering. Well-approved combinations are given under:—

R	Cantharidini	gr. j
	Ætheris acetici	ʒijss
	Olei ricini	ʒiiss
	Olei lavandul.	ʒss
	Spiritus vini rect.	ʒv
M. f.	Solutio. To be applied every third day by means of a small sponge, and the head washed after a short time.	
R	Tinct. Cantharidis	m. xxx
	Tinct. Cinchonæ	ʒj
	Aquæ Coloniensis	ʒj
	Spirit. vini (95 p.c.)	ʒv
M. f.	Lotio.	

These are to be well rubbed into the roots of the hair night and morning. It is recommended to suspend the applications for a day or two occasionally.

Among the many drugs put forward at different times as specifics, pilocarpine (or jaborandi) and paraffin oil have found numerous advocates. A pomade containing the two was devised by Whitla as follows:—

R̄	Pilocarpin. Hydrochlor	gr. xx
	Aquæ destillatæ	ʒij
M. f.	Solutio et adde	
	Lanolini puriss.. . . .	ʒꝰ
	Olei Petrolei ("snowflake")	ʒvi
	Olei Bergamot.	ʒʒs
	Olei Verbenæ	ʒʒs
M. f.	Unguentum.	

In the treatment of alopecia due to syphilis, constitutional medication is of course necessary, and a mercurial pomade is generally prescribed containing one-sixteenth of white precipitate.

The formation of scurf on the scalp and the weakening of the hair is assumed, says Dr. St. Mierzinski, to be dependent upon a loss of suppleness in the horny substance of the skin, due in its turn to a deficiency of the natural epithelial fat. For this reason vaselin, paraffin, and other fatty substances prove so beneficial. Manifestly, however, the desired effect would be much more fully and satisfactorily attained by the application of the natural epithelial fat itself, and this is possible by the use of lanolin, which, as Professor Liebreich has shown, is the fat which naturally gives the skin its flexibility and suppleness. When lanolin is rubbed into the skin of the head, for instance, it becomes turgid, and the hair assumes a stiffer character, its nutrition being furthered, and parasitic life of any kind prevented from developing. For this reason lanolin is far superior to any other fat for cosmetic purposes, as, for instance, in the above formula for a strengthening pomade.

On the assumption that the falling out of the hair may in certain cases be due to the action of parasites, various mixtures have been devised containing agents intended to destroy such forms of life. Thus:—

R.	Acidi Carbolici	gr. 45
	Tinct. Nucis Vom.	ʒij
	Tinct. Cinchonæ	ʒiiss
	Aquæ Coloniensis	ʒvj
	Olei Cocos nucifer.	ʒvj
M. f.	Lotio. To be rubbed in twice daily with a soft sponge.	

The following "quinine wine" is also probably based on the same assumption:—

R.	Quininæ tannat.	gr. xxiv
	Vini Hispanici	ʒv
	Solve et adde	
	Quininæ sulphat.	gr. ij
	Spiritus Rosmarini	ʒij
	Spir. Vini Gall.	ʒss
M.		

Preparations of turpentine and of iodine are also much valued by some specialists.

BOILS.

Definition.—A localized inflammation of the skin and subcutaneous connective tissue, attended by the formation of the usual products of the degradation of tissue, and terminating by the expulsion of the dead matter forming the core. Boils generally develop in the fat glands of the skin; sometimes in those of the eyelids, forming the so-called "stye." Males are more liable to suffer than females, and in middle life more than during the extremes. A diet too rich in nitrogen, or too suddenly changed, is liable to predispose to boils; and they may manifest themselves in any condition associated with impoverished blood (*e.g.* diabetes).

Symptoms.—The formation of a boil is generally preceded by itching; then a reddish pimple appears, which sometimes has a minute blister at the summit from which a hair arises. The pustule gradually increases in size, assumes a hard character, and is surrounded by a purplish red area. The stinging pain at first felt becomes throbbing until, finally, the boil breaks, pus exudes, and pain abates. The discharge continues for a day or two, and at

length the core, a shred of dead tissue, is expelled, the inflammation and suppuration cease, and healing rapidly takes place. If the gangrenous process extends beneath the skin, and several small pustules are formed at the surface which exude a slimy pus, the affection is described as a carbuncle; while if no pustule forms, but only a hard, red, and very painful elevation which subsides after a long time, the term blind-boil is applied. Boils have a tendency to occur in successive crops, which may be limited in area or extend over the greater part of the body.

When due to general vital exhaustion, the formation of boils is accompanied by great prostration, stupor, more or less delirium, and disturbance of the digestive and intestinal tracts. If arising from local irritation, little or no constitutional disturbance is produced.

The so-called carbuncular boil of the face,—which especially attacks the lip, and is not unfrequently fatal, owing to blood poisoning,—is happily rare; its chief characteristic is the rapid extension of the inflammatory process, which involves the veins and lymphatics; the sore assumes a blackish-violet colour, and the surrounding parts an indurated character. The first symptoms of blood-poisoning are violent and repeated shivering.

Treatment.—The general health is given tone to by a generous but unstimulating diet; unless the patient is very greatly enfeebled, alcohol in small quantities may, however, be allowed. The free consumption of onions has been recommended.

Of more direct medicines, iron and quinine, in quantities sufficient to produce their full physiological effect, are chiefly favoured. Tablespoonful doses of "barm," three or four times a day before meals are said to prevent the repetition of boils. Some writers speak highly of the value of small doses of calcium sulphide (up to $\frac{1}{2}$ grain three times a day).

The local treatment depends of course upon the stage which the boil has reached when it comes under observation. When just forming (*i.e.* at the itching stage), the process may be often arrested by plucking out the hair of the involved follicle. If the inflammation has already

extended to the surrounding tissues, the best plan is to apply some soothing sedative preparation such as glycerol of belladonna, or belladonna or opium plaster, a small hole being perforated in the plaster if the boil comes to a head, to allow of the escape of pus. Pain generally ceases at once, inflammation is reduced, and the necrosed centre is discharged painlessly.

If the pain is stinging and the inflammation diffused, with restlessness and headache, warm poultices of starch or of linseed meal sprinkled with dilute solution of lead acetate or smeared over with boric acid ointment are useful; poultices should be discontinued as soon as the hardness gives place to doughiness. In all these applications it is necessary to avoid irritating the adjacent skin (*e.g.* by impermeable coverings). After the slough has separated, the surface may be dressed with Peru balsam, or any antiseptic ointment, and protected from injury by pads and the like.

The carbuncular boil of the face, if ever met with, should be at once handed over to the regular practitioner; its treatment lies outside the domain of minor medicine.

BRONCHITIS

(*βρονχος*, the windpipe; *itis*, inflammation).

ACUTE.

Definition.—By bronchitis is indicated inflammation of the mucous membrane which lines the bronchial tubes. It may be acute or chronic. Most frequently attacks the young or the old, and is a fairly constant accompaniment of influenza.

Symptoms.—These vary somewhat according to whether the larger or smaller tubes of the lungs are affected. Only the former will be dealt with here in detail, as the latter is a very grave and dangerous form.

Acute bronchitis of the larger tubes, then, is usually preceded by the symptoms of catarrh. The larynx becomes affected, as evidenced by difficult and hoarse speech, and the bronchial tubes are gradually involved. Chills

and shivering, slightly increased pulse rate and lassitude are also commonly observed. A cough appears early; it recurs at intervals, the attacks being often severe and violent. There is also generally some amount of pain, which is intensified on drawing in a deep breath. Difficulty of breathing is not generally very marked; only in graver cases are there sensations of oppression and tightness about the chest.

The temperature may rise a little, but not much; and though there is commonly a feeling of pronounced depression, the appetite is not greatly affected. Expectoration becomes more viscid, opaque, and purulent as the disease progresses.

The acute bronchitis of the smaller tubes (capillary bronchitis) is distinguished by its severer symptoms, marked difficulty of breathing, almost continuous cough, high fever, and rapid pulse.

Treatment.—In most cases of acute bronchitis it is desirable to confine the patient to one room, kept at a temperature of about 60–65° F. and more or less saturated with steam. If, however, this be impossible, a hot bath at bed-time, followed by a large mustard poultice and one dose of compound ipecacuanha powder or a small quantity of morphia. This mode of treatment is, of course, applicable only to mild cases.

In order to promote a free action of the skin, warm drinks and diaphoretics are given. Carbonate of ammonium is a most valuable remedy in all stages of the affection; but in the use of any drugs care must be taken not to give anything which will prejudicially affect the appetite. Opium should be avoided, but chloral hydrate with oxymel of squills is safe and useful, not only in relieving cough but in procuring sleep.

Other useful methods of combatting the cough are sprays and inhalations of various kinds, especially of carbolic acid 2 per cent., of sublimate solution ($\frac{1}{2}$ per mille), turpentine oil (10–15 drops), and an aqueous solution of tincture of eucalyptus.

Among expectorants, tartar emetic in $\frac{1}{12}$ th grain doses (or 4 minim doses of the wine for young children) is

perhaps the best, combined with suitable doses of ipecacuanha wine. A warm bath is often beneficial in aiding the action of the expectorant, which shows itself in rendering the cough moist and loose. When this has been effected, the following mixture may be substituted for the antimony :—

℞	Ammon. carbonat.	. . . . .	ʒj
	Spirit. Ammon. Co.	. . . . .	ʒiv
	Aquæ Chlorof.	. . . . .	ad ʒvj

M. f. M. One tablespoonful in water to be taken every four hours.

At this stage, when the acute symptoms have passed off, the ammonio-citrate of iron or the liquor ferri perchloridi in combination with ether or spirit of chloroform is of service.

One of the chief indications in the treatment of bronchitis, is to support and enhance the strength. This is ensured by a strengthening diet and small doses of quinine, brandy, and wine. Beef essences and juices may be given continuously in small doses, with oysters, fish, soups, etc.

CHRONIC.

Definition.—Differs from the form described above in its less violent characters and prolonged duration. It is often a sequel of repeated acute attacks, or may be due to continuously breathing an atmosphere loaded with irritating particles or to chronic alcoholism.

Symptoms.—These resemble those of the acute form of bronchitis, the most marked signs being pain in the chest, cough, expectoration, more or less difficulty in breathing, and sometimes a certain degree of emaciation.

Usually chronic bronchitis is characterized by a winter cough more or less severe, especially in the morning, often recurring in violent paroxysms and accompanied by expectoration very variable in character, from scantiness and viscosity to abundance and looseness. Further, it may be mucopurulent to purulent and yellowish-white to dark green; the sputa sink in water, and are sometimes foetid, when the affection is distinguished as foetid bronchitis. Similarly the general health is variously affected; early in the history of a case no effect may be discover-

able, but subsequently appetite generally falls off and is followed by more or less emaciation; in this the lack of sleep owing to the cough also plays a part. The chief risk in these cases, especially if the patients are at all advanced in life, is the incidence of an acute attack of inflammation of the bronchial tubes.

Those forms of the affection in which (1) the excretion of mucus and the like is excessive or (2) absent or scanty are generally made into two distinct classes and treated on somewhat different lines.

Treatment.—It may be accepted as a general rule, that the treatment of chronic bronchitis is outside the scope of minor medicine; and the best advice the reader can give when called upon to recommend "something" for this condition, is to refer the applicant to a medical *confrère*. Under some circumstances, however, and in mild cases, this rule may be for the time disregarded. Since the general tendency of the affection is to lower vitality and the resistance of the patient to influences which militate against health, the principal indication is to support strength and to improve nutrition. The diet should therefore be nutritious and easily digested; a moderate amount of alcoholic stimulant is generally included. Among direct remedies cod-liver oil takes a prominent part, especially in cases accompanied by much emaciation. Quinine, iron, and tonics generally are also serviceable, and with them almost any of the expectorants may be given, especially potassium iodide, but not sedatives or opiates. Inhalations are useful, creasote, iodine, terebene, chloride of ammonium, eucalyptus oil, carbolic acid, or mixtures of these, are most frequently resorted to; they may be advantageously employed with a respirator worn for hours during the day; the latter measure by itself will often be found to give relief.

Counter irritation has proved one of the most effective means of treating chronic bronchitis. The moderate and prolonged effect indicated is preferably secured by painting a large area of the chest with iodine or by the application of liniments.

Sometimes good follows the exhibition of a few doses

of a hepatic stimulant with a saline aperient; and if gout be present, or the patient exhibit the uric acid diathesis, the usual specific remedies against that condition will be found useful.

BRUISES

(Fr. *briser*, to break).

Definition.—An injury to the soft parts of the body by a blunt weapon or by collision. In spite of the derivation of the word given above, it is regarded as one of the characters of a bruise that the skin or covering is not broken.

Symptoms.—The appearances of a bruise are well known. Immediately after the injury there is more or less redness, followed by swelling. If no treatment be adopted, the swelling subsides, but the site of the injury is characterized by more or less discoloration, passing from purplish-black to yellow and slowly fading away. The injury bursts the vessels of some of the more delicate vascular tissue, in consequence of which blood and serum escape into the connective tissue of the skin, producing the discoloration. Their final re-absorption determines the disappearance of the bruise.

Treatment.—The chief indications in the treatment of bruises are, to reduce the swelling, alleviate the throbbing pain not infrequently felt, and to prevent discoloration; the latter can only be effected if the bruise comes under notice before the extravasation of blood has begun. The application of ice, of spirit lotion, of a cold saturated solution of ammonium chloride, of leeches, etc., have been all warmly recommended for the treatment of bruises; but an application which is simple, convenient, and practically unfailing is made as under:—

R. Tinct. Arnicæ ʒj
 Liq. Plumbi Subacetat. dil. ad ʒj
 M. f. Lotio. To be dabbed on with a piece of
 lint, or applied by means of lint saturated
 with it.

Although objections have been repeatedly made to the use of arnica, as likely to cause erythematous rashes, or even erysipelas, very extended experience has shown that the lotion prepared in this way is perfectly harmless and may be used in the treatment of all bruises proper (*i.e.* where the skin is not broken) without any fear.

The same lotion applied on lint, covered with oiled silk and bandaged with moderate tightness, gives good results, even when the discoloration has already commenced. If the re-absorptive process do not proceed fast enough, it may be hastened by the application of mild counter-irritants such as lin. camphoræ co., etc.

BUBO

(βουβών, the groin).

Definition.—Inflammation and swelling of the lymphatic glands of the groin, usually following on some irritation of the genitals, such as the primary sore of syphilis or gonorrhœa. The term has also been loosely applied to similar morbid processes in other lymphatic glands.

Symptoms.—The appearances presented by a bubo depend upon whether it be simple, *i.e.*, due to local irritation of the genitals (erosions, herpes, boils, etc.), or specific, *i.e.* produced by the poison of venereal sores. There is further very considerable variation in the severity of the symptoms. Urethritis, balanitis, or simple erosion lead to slight swelling and tenderness of the glands, which spontaneously subsides in a few days. If the bubo be associated with chancre, which however is acting simply as a local irritant, the swelling is more marked, there is redness locally, with tenderness, varying from a sense of mere discomfort to actual pain, which is increased by walking. The termination of this form of bubo may be spontaneous subsidence of the symptoms, suppuration, or the permanent enlargement and hardening of one or more glands.

The specific bubo, if due to syphilitic inoculation, may appear in either groin (generally that side corresponding

to the position of the initial sore) or sometimes in both. It is marked by non-inflammatory enlargement, frequently without any pain or tenderness, sometimes with a feeling of discomfort in walking; the overlying skin presents no abnormal appearance. The glands, one or more, occasionally a whole chain, reach their maximum size in a week or two, and, after a period of stagnation extending over weeks (possibly months), slowly decrease again, though sometimes they do not regain their normal characters at all.

Lastly there is the so-called virulent bubo, due to absorption of pus from a sore. It is much more rarely met with than the simple bubo. Beginning like the latter, it rapidly extends, breaking down the tissues and leading to the formation of a large ulcer, which may after a short time heal up; but more generally the process continues and involves wide gaps of skin, or burrows underneath the integument and does widespread damage to the tissues.

Treatment.—The simple form of bubo is treated like threatening abscess (see under Abscess). Rest, warm baths, fomentations, or the glycerole of belladonna,

℞	Extracti Belladonnæ	. . . . .	ʒj
	Glycerini	. . . . .	ʒj
M. f. Pigment.			

are the best applications, and will frequently be effective in subduing inflammation. Free application of a strong solution of nitrate of silver has been said to be useful in preventing suppuration; but less heroic measures are preferable. Other means are the local use of ice or evaporating lotions.

If ulceration has taken place, the sore should be cleaned with 2 per mille sublimate and dusted over with iodoform, or treated with an ointment of the same substance.

℞	Iodoformi	. . . . .	ʒj
	Ung. Lanolini	. . . . .	ad ʒj
M. ft. Ung.			

The bubo of syphilitic origin does not call for any vigorous treatment. Rest in the recumbent posture for a

few days will be generally all that is necessary, though occasionally a few warm baths may be indicated to relieve tenderness. If the patient be anxious about the enlarged glands, a simple carbolic-acid ointment, to be lightly rubbed in daily, will set his mind at rest and do no harm.

With the treatment of bubo where pus has already formed and the use of the knife is called for to give it exit, and with that of virulent bubo, the non-professional reader should decline to have anything to do, as these forms, especially the latter, require skilled methods, with special adjustments of treatment according to the development of the symptoms.

BURNS AND SCALDS.

Definition.—By burns are understood the localized effects of severe dry heat resulting in more or less destruction of tissue; scalds are due to the localized action of moist heat.

Symptoms.—The appearances presented by burned or scalded areas vary according to the intensity of the heat to which they have been exposed; but attention may be confined here to slight and moderately severe superficial burns. Injuries of the former class are characterized by severe pain of the distinctive kind described as “burning,” redness of the surface, followed by the appearance of blisters. Higher degrees of heat, or longer exposures to such as produce slight burns, cause intense pain and more or less complete and immediate destruction of the skin, which is followed by severe inflammation, further necrosis of tissue, and suppuration.

More or less pronounced constitutional symptoms are also observed as the result of very severe and extensive burns and scalds; but injuries of the degree which come under consideration here will rarely be accompanied by such an amount of shock or collapse as to lead to serious results or to cause apprehension.

Treatment.—As means of relieving the pain of burns, various modes of procedure have been recommended.

Some writers have obtained the best results by immersion in cold water; others employ the same liquid, but hot; and yet another method consists in the somewhat homœopathic procedure of exposing the injury to the fire. More recently it has been stated that the application of ice not only alleviates pain, but causes the prompt re-absorption of serum from blisters. A saturated solution of bicarbonate of soda, or a paste of the salt and water, if applied immediately after a burn, is said to relieve pain almost instantly, and to prevent the formation of blisters or the destructive inflammation of the part. If vesicles have formed, it is best to prick them, and evacuate the serum, leaving the cuticle as a protective covering; the latter may be kept in place by a coating of collodium, but care should be taken to avoid closing up the punctures. Powdered iodoform and various non-irritating antiseptics, either alone or mixed with French chalk or zinc oxide, are also applied in putting on the first dressing to burns.

On the whole, the old-fashioned Carron Oil, with perhaps a certain proportion of carbolic acid to keep the affected areas aseptic, is the best all-round dressing for burns. The application may be made as follows:—

R	Ol. Lini vel Olivar.				
	Aquæ Calcis			āā	3vj
	Acidi Carbol.				ʒij
M. f.	Emulsio.				

The burn is covered with strips of lint soaked in this oil, slightly warmed, which are allowed to remain until the discharge becomes offensive or a sensation of discomfort in the injured part is felt by the patient.

Other dressings are vaselin, pastes or creams of chalk (whiting) and water or oil, iodoform ointment (3 per cent.), carbolic oil (5 per cent.), turpentine on lint, and salicylic oil (1:60 olive oil). Moderate pain is relieved by most of these applications, and they will generally suffice of themselves to combat this symptom; if, however, it be very acute, a 5-per-cent. solution of cocaine may be painted on.

It may be regarded as a general rule, that the separation of dead tissue and the processes of repair take place more

slowly in the case of burns than in that of other lesions of the same extent, and involving an equal destruction of tissue. Changes are no doubt produced in the vitality of the tissues, which are long in regaining their normal tone and healthy condition.

CATARRH

(κατὰ, down, and ῥέω, I flow).

Definition.—The term catarrh is applied to inflammation of the mucous membrane in any part of the organism. Thus we may have gastric catarrh, intestinal catarrh, nasal catarrh, pulmonary and vesical catarrhs, according as whether the mucous membrane of the stomach, the intestines, the nose, the bronchial passages, or bladder is involved. The following paragraphs deal exclusively with the inflammatory affection of the upper parts of the air passages, due to exposure to cold or to cold dampness.

Symptoms.—A feeling of malaise and chilliness, headache, specially in the forehead, and dryness of the throat generally, usher in an attack of catarrh, which at its height is characterized by running at the nose and eyes, more or less soreness of the throat, and general restlessness and discomfort; the pains in the head persist (generally increasing at night), and there is often aching in all parts of the body.

The catarrhal discharge is at first thin, watery, and acrid, but as the attack develops it becomes mucous, and is often very copious. As the inflammation extends to the various parts of the upper air-passages, the special senses related to these are affected, and hence loss of smell, taste, and more or less deafness (due to implication of the Eustachian tube), are common symptoms of catarrh. The neck as a whole may be affected during the attack, some amount of pain and stiffness being experienced.

Besides these local symptoms, there is usually some constitutional disturbance. The failure of appetite is one of the first indications of catarrh; and occasionally the digestive organs may be so much affected as to lead to

nausea and vomiting. The tongue is usually pale, the bowels confined, the skin dry, and the urine scanty and high-coloured.

The tendency of catarrh is to spontaneous subsidence after running a course of two or three days, leaving the patient somewhat weak, and not infrequently with a cough. Of itself a cold is not a very serious affair; but in some constitutions and states of the system, or under certain conditions, it may develop into bronchitis or other graver pulmonary affections.

Treatment.—The old-fashioned remedies of hot foot-baths, with or without the addition of counter-irritants and of demulcent and sudorific drinks, will generally be found sufficient. As the “throwing off” of the attack depends in a considerable measure upon establishing a free action of the skin, spirit of nitrous ether (1–2 drms. in gruel) may generally be usefully given. Minute doses of aconite frequently administered (one drop of the tincture every hour) are often useful in reducing any fever which may be present; and anodynes may be indicated if the cough is very troublesome.

As catarrh in its initial manifestations is a local affection, a considerable number of remedies have been suggested, which, by attacking directly the affected mucous membrane, may cut short the symptoms at an early stage. Ferrier’s famous snuff is prepared as under:—

℞	Morphinæ hydrochlor.	. . . . .	gr. ij
	Bismuthi subnitrat	. . . . .	ʒvj
	Acaciæ gummi	. . . . .	ʒij
M. fiat Pulvis. From one quarter to one half of			
this quantity may be taken in the twenty-			
four hours.			

Cocaine, menthol, silver nitrate, or zinc sulphate in solution, are recommended either for application by painting or by means of cotton-wool tampons. Most of the inhalations mentioned as serviceable in bronchitis may also be resorted to in acute catarrh with satisfactory results; in the treatment of the chronic form, inhalations of ammonium chloride are said to be most beneficial.

CHAPS.

Definition.—Cracks or fissures in the skin, due to its becoming infiltrated and indurated. The term is generally confined to the form of cracking which is met with on the hands and wrists in cold weather, as a consequence of the irritation produced by the low temperature; generally moisture as well as cold plays an important part in the causation of chaps.

Symptoms.—The skin of the affected area is reddened, rough and dry; it is also traversed by fissures, which tend to ulcerate. The whole surface is very irritable and sore; and the condition, when once established, is likely to become aggravated unless properly looked after.

Treatment.—Chaps may very generally be prevented by preserving the skin from atmospheric influences, and taking the precaution, after wetting the hands, of thoroughly drying them either with warm towels, or with an ordinary towel, followed by rubbing them assiduously together until all parts of the skin are smooth and polished.

As applications to the hands, cold cream, vaselin, and diluted glycerine are largely in use; pure glycerine should of course not be used, owing to its irritant action. The application of zinc ointment is another well-tried remedy, and the use of superfatted soaps for the toilet is recommended. An ointment made as under is said to be excellent, both as a cure and preventive of chaps:—

℞	Mentholi	.	.	.	.	.	gr. xii
	Saloli	.	.	.	.	.	gr. xvi
	Olei olivar.	.	.	.	.	.	gtt. xx
	Ung. Lanolini	.	.	.	.	.	ʒj

M. f. Ung.—To be rubbed on the skin twice or more often daily.

Another admirable preparation is the following:—

℞	Glycerini	.	.	.	.	.	ʒj
	Tinct. Benz. Co.	.	.	.	.	.	ʒij

M. f. Linim.

Some form of the so-called "glycerine jelly" is a use-
D

ful and popular preparation for the prevention of chaps and other effects of exposure to cold and damp. A good formula for such an emollient is the following:—

R.	Tragacanthæ pulv.	. . . . .	ʒiij
	Aquæ calcariæ	. . . . .	ʒiv
	Glycerini	. . . . .	ʒx
	Aquæ rosæ	. . . . .	ʒiij
	Olei amygd. æth.		
	Olei aurant. flor.	. . . . .	āā ʒss
	Tinct. Benzoini	. . . . .	ʒj
M. sec. art.			

CHLOROSIS

(χλωρός, green or yellow).

Definition.—The physiological value of the blood depends, among other factors, upon the maintenance of a normal proportion of the so-called red corpuscles—those minute, biconcave, flat disks (circular in man) to which are ascribed the oxygenating power of the blood. A deficient growth or development of these corpuscles leads to a peculiar habit of body (known as a “diathesis”) to which the term chlorosis is applied; it is commonly associated with some abnormalities of the arterial system. It is generally confined to young women, and is frequently associated with the menstrual functions.

Symptoms.—The most striking character of the “chlorotic” is a pallid yellowish skin, associated with debility, breathlessness, and frequently derangement of the nervous system and digestive organs. Generally, at least in pure chlorosis, there is no apparent wasting or loss of substance; on the contrary, there may even seem to be a gain, owing to the formation of a larger quantity of fat under the skin than is normally present. The difficulty in breathing after exertion, and the change of colour, are usually the symptoms which excite the patient’s attention or that of the friends, in conjunction frequently with menstrual irregularities.

The general characteristics of chlorosis pure and simple may be regarded as due to a lack of oxygen in the

system ; this is true, however, only so long as the affection does not involve the plasma, or fluid part of the blood, and thus develop into the graver anæmia.

Treatment.—The indication is manifestly to restore the number of red corpuscles to the normal, and this may, in the majority of cases, be effected by the administration of iron in any of the easily assimilable accepted forms. Blaud's pill, in doses of 10 grains three or four times a day, is a well-known remedy, as are also the various so-called "indifferent" preparations of iron, such as the albuminate and peptonate. Quite recently the value of manganese, especially in association with iron, has been extolled.

Some authorities make the administration of purgatives an essential part of the treatment of chlorosis; thus Sir Andrew Clarke prescribes :—

℞	Ferri sulphatis	gr. xxiv
	Magnes. sulphatis	ʒvi
	Acidi Sulph. arom.	ʒj
	Tincturæ Zingib.	ʒij
	Infus. Gent. Co.	ad ʒviii
M. f. Mist.	One sixth part to be taken twice a day.	

If an acid mixture be contra-indicated or badly borne, the iron sulphate is given with bicarbonate and sulphate of soda and tincture of ginger, infusion of quassia and spirit of chloroform (ʒj in ʒviiij) being substituted for the compound infusion of gentian.

It is also believed that there is some analogy between chlorosis in the human subject and etiolation in the plant, and consequently an important point in the combatting of the diathesis is made of a free supply of sunlight.

The diet must be nourishing and digestible, and should be taken in small quantities at frequent intervals. There is not infrequently a dislike to animal food, which, however, must not be humoured, as meat offers the best means of introducing the albuminous elements that are lacking, in the most assimilable form.

COLIC, INTESTINAL

(κῶλον, the large intestine).

Definition.—By this term is understood what is popularly described as “stomach-ache,” which is in fact due to irregular contractions of the intestines, accompanied by more or less severe pain, but not by fever. The cause of the symptoms is generally irritation of the intestines, but mechanical or structural abnormalities of the bowel, nervous disturbance, and blood poisoning may also give rise to the same effects.

Symptoms.—Abdominal pain, without alteration in the normal temperature, is the characteristic feature of intestinal colic. The location of the pain is not well defined, being somewhat shifting in character; and it generally occurs in spasms, periods of intense pain being separated by intervals of relief. Firm pressure upon the abdominal wall moderates the severity of the pain; it is thus distinguished from that due to inflammation, which is made worse by pressure. The features of the patient express the severity of the pain suffered, and there is generally anxiety and depression. A deficient supply of blood to the extremities is evidenced by pallor, and the skin is cold, and more or less covered with perspiration. The pulse may exhibit no abnormal characters, though occasionally it will be found weak or slow.

When the attack is due to undigested or partly digested food, or to the presence of other irritating substances in the intestine, vomiting and diarrhoea may appear among the symptoms. Constipation and flatulence also play prominent parts in producing colic of the intestines; and it is noteworthy that the former may also figure as an after result of the affection.

As a rule, the attacks do not last very long; but in rare instances they may persist for several days. No serious results need be feared, however, unless there are evidences of inflammation or obstruction. In infants the cause is generally injudicious feeding; it must be promptly remedied, or grave results may follow.

Treatment.—This must be modified to some extent

according to the cause of the attack; if this be suspected to be irritating food—*e.g.* high game, pork, preserved meats, shell-fish, unripe fruit—the indication is to get rid of the irritant by a sufficient dose of castor oil (ʒvj to ʒviij) in combination with sedatives. Good will also be effected by a course of some saline aperient until the bowels act freely. Among other remedies taken internally to allay the pain of intestinal colic, chlorodyne (15 to 30 minims) takes a chief place, and is undoubtedly a valuable preparation in such cases; the essential oils of peppermint, cloves, or caraway (3 to 5 minims), the tinctures of asafœtida, cardamoms, or ginger, sal volatile and ether are all useful on occasion, either alone or in various combinations.

With the internal treatment a number of methods of relieving the pain by external applications are recommended. The most simple and readily applied are the warm bath, or some of the many means of applying heat to the abdomen, such as hot-water bottles, hot fomentations of water or turpentine, the sand bag, large poultices, etc.

Due importance must be ascribed to proper regulation of the diet in preventing attacks in those subject to them. Food which is known to be digested with difficulty should be avoided; and when the colic is associated with the fermentation of the ingesta and accumulation of gases in the intestine, the precautions detailed under Flatulence should be observed.

In Infantile Colic opium is contra-indicated; two or three drop doses of oil of aniseed with a dose of castor oil (1 to 2 drms.) will be found sufficient to give relief. A useful carminative is:—

R	Magnes. carb. levis	. . . . .	ʒj
	Spt. Ammon. foetid.	. . . . .	ʒj
	Olei Anisi,		
	Olei Carui,		
	Olei Anethi	. . . . .	aa m. v
	Syrupi Zingib.	. . . . .	ʒvi
	Glycerini	. . . . .	ʒss
	Aquam	. . . . .	ad ʒiv
M. f. M.	Given in doses of 10 and 20 drops, a half and one teaspoonful to infants of one, three, six, and twelve months respectively.		

Permanent relief from the attacks is only to be secured by a change of diet, and the selection of a readily digestible food, not likely to give rise to the formation of insoluble caseous curd in the intestines.

COLLAPSE AND SHOCK

(*Collabor*, to fall together).

Definition.—By collapse is understood the result of failure of nervous force characterized by extreme depression and prostration, the vital functions being more or less completely suspended. Although for practical purposes collapse and shock may be considered together, some authorities make a clear distinction between them, which may be best expressed by saying that collapse is always a sequel to previous nervous exhaustion, while healthy persons are liable to sudden shock.

Symptoms.—In severe collapse the patient presents the appearance of a dead person; and signs of the persistence of life will only be recognisable on close investigation. Examination of the pulse at the wrist gives negative results; respiration is feeble and slow, and loses all regularity, assuming frequently a sighing character; the skin is extremely pale, cold, and clammy; sensibility is diminished, and voluntary motion entirely wanting. At the same time consciousness and sensory impressions may be almost normal; and in this respect collapse differs from syncope, in which consciousness is absent. The loss of animal heat, particularly in the extremities and the surface of the body, is a characteristic of collapse.

Treatment.—The only variety of collapse which is likely to come under the notice of the reader in circumstances when his aid will be required, is that due to the violent impression on the nervous centres produced by severe injury, *i.e.* what is more often termed shock. In all such cases medical aid must of course be immediately sought; but, in some instances, more or less delay may occur before such aid arrives, and, in the meantime,

certain measures may be adopted without any risk, and probably with much benefit.

The two most important things to be done, are to stimulate the action of the heart, and to artificially make up for the falling off in the natural heat of the body. The patient must be placed in a horizontal position, and packed in hot blankets, hot-water bottles, etc. If swallowing is possible, brandy or whisky should be administered, or hot draughts of meat extract and water. Ammonia to the nostrils is also recommended.

Gentle friction of the body may be added to other means of restoring the natural warmth; and if the patient be unable to swallow, enemata of brandy or other alcoholic preparation are valuable means of administering the necessary stimulant.

COMEDONES

(*Comedo*, I consume).

Definition.—Cylindrical plugs of epithelial and sebaceous matter which accumulate in the follicles of the skin. At the surface they appear as small round black spots, and have hence been termed black-heads. They form in almost all parts of the body, but are chiefly met with on the face, neck, and chest. When recently formed they are soft and white, but if allowed to remain *in situ* for prolonged periods assume a yellow tint, with the translucency and hardness of horn.

Treatment.—The accumulation of this substance is due to a deficiency in the power which the skin normally possesses of throwing off waste products; it is therefore a symptom of weakness, frequently not only of the skin, but of the individual, and calls for the administration of tonics and the adoption of a nourishing diet. The circulation of the affected skin is stimulated by the application of soap and water with plenty of friction; the best soap to use is *sapo mollis*, and it may be applied every twenty-four hours. On retiring at night sulphur ointment is rubbed in. This treatment is said to be unfailing as a cure if

persisted with. It must be remembered, however, that the susceptibility of the skin to irritants varies in different individuals, and that the rubbing in of soft soap and sulphur ointment every day may in some cases lead to an undesirable degree of congestion, and even inflammation of the skin; in such cases the treatment should be suspended for a day or two, and some soothing ointment applied.

Erasmus Wilson recommends a lotion of perchloride of mercury in emulsion of bitter almonds (2 grs. to an ounce), and spirit of wine; the preparation is an astringent, and invigorates the debilitated skin.

CONJUNCTIVITIS

(*Conjunctivus*, connecting; *itis*, inflammation).

Definition.—Inflammation of the mucous membrane covering the anterior portion of the globe of the eye, and known as conjunctiva. It is divided into various groups according to its characters; but all the forms merge the one into the other, so that no definite lines of demarcation can be drawn between them. Infantile, simple or catarrhal, contagious, and diphtheritic, are the varieties generally recognised; the second and third alone need be here considered in detail.

Symptoms.—All forms of conjunctivitis are attended by the usual symptoms of inflammation, and all of them have a close resemblance so far as the initial manifestations are concerned. There is heat and redness, swelling and pain, accompanied by a mucous discharge, which latter may assume a purulent character. The conjunctiva commonly becomes more or less infiltrated, and may be to some extent everted.

The infantile variety (believed to be mostly due to inoculation with vaginal secretion in the process of birth), soon becomes purulent; the discharge is profuse and thick, drying up at the lid edges, and tending to glue the lids together.

The purulent form is characterized by great swelling

of the conjunctiva and of the lids, the discharge being abundant and contagious; if allowed to go on from bad to worse, this form may lead to sloughing of the cornea.

Diphtheritic conjunctivitis is scarcely known in this country. It attacks weakly and ill-nourished children, and is chiefly characterized by infiltration of the tissue underlying the conjunctiva, and the consequent formation of a firm swelling of the mucous membrane.

Treatment.—When cases of simple conjunctivitis come under observation, the eye-lids should be raised and their inner surface as well as the eye-ball carefully examined for foreign bodies. If no mechanical cause be detected, a mild astringent lotion applied every two or three hours will soon effect a cure. Nitrate of silver (1 to 2 grs. to the oz.) is the favourite application; but the sulphate (1 gr. per oz.) or chloride ($\frac{1}{2}$ gr. per oz.) of zinc, alum (6 gr. per oz.), or borax (4 grs. per oz.) may also be used. These, with rest to the eyes, and protection from cold, dust, and excess of light, will be alone required.

The treatment of the purulent form of conjunctivitis is similar in principle, *i.e.* local astringents are applied, the activity of which is adjusted to the severity of the case under observation. Where only one eye is affected, precautions should be taken to prevent infection of the other, by bandaging it over with a pad of cotton wool. Calomel, sprinkled into the eye with a camel's hair brush, is said to give splendid results, but it has to be continued for some time after the symptoms have subsided. The method most generally pursued, however, is to evert the lid, and brush over with a strong solution of silver nitrate (20 grs. to the oz.), or touch lightly with a pencil of mitigated caustic. Cases requiring this vigorous treatment, however, should be left to the experienced surgeon, as an unskilful use of the caustic is likely to lead to very unpleasant results. Milder cases may be treated by the application of solution of sodic bicarbonate (30 grs. to the oz.), or of very finely powdered iodoform.

It must be borne in mind in all cases, that powders designed for application to the eye, either *per se* or in the form of ointments, must be exceedingly fine, or they will increase the irritation and aggravate the condition.

CONSTIPATION

(*Constipo*, I crush together).

Definition.—Retention of fæces, generally followed by the formation of hard masses (*scybala*) in the intestine, owing to the absorption of moisture from the excreta by the bowel. The condition may depend upon local or general causes; the former may be considered as falling into three classes, viz.: (*a*) such as directly affect the intestines, (*b*) such as affect the abdominal walls, and (*c*) such as produce indirectly alterations in the intestinal nerve supply. Among general causes are sedentary habits, too great physical or mental strain, improper diet. Cardiac, gastric, and hepatic diseases, anæmia, diabetes, prolonged discharges have also constipation among their symptoms.

Symptoms.—Mere infrequency in evacuation of the bowels must not be looked upon as necessarily calling for medical treatment; considerable departures from the general rule may be regarded in many cases as due to mere idiosyncrasy, and are perfectly compatible with good health.

Constipation which is truly abnormal, is characterized by infrequent and insufficient evacuation, the passage of which is difficult and even painful; the fæces vary in hardness and darkness of colour, according to the length of time they have been retained; they are occasionally very offensive.

The condition generally shows itself in lassitude, headache, flushing and other of the signs of impaired digestion. The collection of fæces in the intestine leads to symptoms of local irritation, and, by pressure upon the pelvic vessels and nerves, may be the cause of abnormalities in the nervous and blood supply. In severe cases anæmia and loss of flesh are among the consequences of constipation.

Treatment.—An important factor in the treatment of constipation is, as a rule, regular and moderate exercise; and another is the formation of a habit of relieving

the bowels at a certain hour daily. It is one of the tendencies of the unnatural pace at which we live in these days, to neglect the calls of nature; in consequence of which the nerves of the intestine fail after a time to respond naturally to the stimulus of the collected excreta; another consequence is dilatation of the rectum and enfeeblement of its muscular fibres.

In re-establishing the natural habit, the patient should be warned against undue persistent straining, as this may lead to the formation of hæmorrhoids or prolapsus. Artificial aid will be required for the first few times; and this is best afforded by enemata of cold water, injected in the upright position. As a means of temporarily relieving the condition, injections of glycerine or suppositories of glycerine or soap are very effective. Although large warm injections may be valuable for the occasional relief of constipation, their repeated and constant use will only aggravate the condition.

Among drugs, the foremost place must be given to cascara. The rectal accumulations having been removed by an active cathartic, cascara is given in doses of 30 minims each night, or 10 minims three times a day after meals. These doses are not invariable, but must be adjusted to individual requirements, with the view of producing one soft normal motion each morning. After continuing the administration steadily for a few weeks, the dosage is gradually diminished, and, after a time, the remedy entirely discontinued.

In some cases cascara produces marked digestive disturbances and this may be observed in the same individual with different specimens of the extract. Occasionally this unpleasant action—showing itself in a furred tongue, eructations, nausea, and general malaise—is the only effect of the drug.

Other well-known and useful aperient remedies are aloes, colocynth, sulphur, compound liquorice powder, and (for children) manna. Any of these—which, like the cascara, must be given only in such doses as to produce motions at the natural intervals (and this may vary in different individuals)—may be combined with intestinal tonics such as belladonna, nux vomica, quinine and iron;

these latter are usefully maintained for a time after the aperient has been discontinued. A combination for chronic torpor of the bowel, favoured by Nothnagel, is made according to the formula:—

R	Podophylli resin	gr. iv.
	Ext. Aloes	gr. xl.
	Ext. Rhei	gr. xl.
	Ext. Tarax.	q. s.
M.	Divide in pilul. xl.	One, two, or three at bedtime.

The saline aperient waters, though useful as occasional adjuncts to the action of the other remedies mentioned are not themselves capable of affording permanent relief; in fact, their constant use makes matters worse.

Considerable attention has been given of late years to the employment of massage in the treatment of chronic constipation. One writer recommends the use of an iron ball weighing from 3 to 5 lbs., which is to be rolled to and fro upon the abdomen before rising in the morning. To prevent the uncomfortable coldness of the ball, it may be covered with a non-conducting material, or taken in the bed over night. The motion employed may be purely rolling, or with this the percussive may be combined.

CORNS

(*Cornu*, horn).

Definition.—The first result of constant friction or pressure upon an unyielding part of the frame is to induce hyperæmia, which is followed by a general thickening and induration of the epidermis known as a callosity. Such alterations in the character of the upper layers of the skin may take place in any part of the body, but will naturally be chiefly found upon the hands or feet. Occasionally, owing to causes not readily determinable, serum or sero-pus is formed beneath callosities which assume the form of blisters; the laminated epidermal tissue subsequently separates and a normal skin replaces it.

Callosities are the result of uniformly diffused pressure; but if the pressure bear upon a single point of the skin, the epidermis at that point thickens and forms in process

of time, an ovoid conical body, surrounded by epidermis in a state of callosity; the point of the cone rests upon the sensitive layers of the true derma, and hence pressure upon the corn produces more or less acute pain. The soft corn so-called, occurs generally between the toes, or where moisture is present; it has consequently a sodden appearance, being white and comparatively soft.

Treatment.—Quite obviously, all methods of removing callosities and corns will only afford temporary benefit, unless at the same time measures be taken to remove the cause, whether friction or pressure. It must be remembered that corns may be caused either by too large or too small boots; in the former case, by the friction of the foot against the leather; and in the latter, by pressure. Properly fitting boots are therefore an essential in the radical cure of corns.

Of the various caustics suggested from time to time for destroying the hardened core of the corn, salicylic acid has occupied the first place for a number of years; and when properly applied, it is without doubt equal to any of the agents available and quite safe. It does not appear, however, that the belief in the restriction of its effect to the hardened epithelium is well-founded; experience has shown that applied without discrimination, it may give rise to severe irritation, and more or less painful inflammation of the sound skin. This accident is however easily avoided by care in using the remedy.

Of the different methods in which salicylic acid may be used, that which depends upon its solubility in colloidium is the most popular. A typical example of the many formulæ (all modifications of the original idea) which have been recommended, may be quoted:—

R	Acidi Salicylici	ʒiv
	Ext. Cannab. Ind.	gr. xl
	Solve in	
	Spir. Vini rect.	ʒij
	Collodii flexilis	ʒiv

Soft corns are protected from pressure by means of the ordinary felt or amadou plaster with a central perforation. Some writers advise packing the hole with salicylic acid,

but as a rule this will be unnecessary; with the removal of pressure the difficulty is soon got rid of.

The effective use of the knife in the removal of corns requires considerable skill and experience, and after all is not superior to the removal of the hardened tissue by the salicylic acid applications. Ordinary caustic which is sometimes asked for as a corn remedy, should not be supplied without the warning that its use is painful and not free from danger.

COUGH.

Definition.—Coughing is a sudden and violent expiration following a deep inspiration and closure of the glottis.

The act may be regarded as a spontaneous effort on the part of the respiratory passages to free themselves from some foreign or irritant matter. Such an irritant, either mechanical or reflex, is always the immediate cause of cough; and the sensitiveness of the upper parts of the pulmonary apparatus is increased by inflammation and by the act of coughing itself.

Reference is made to cough as a symptom under Bronchitis, Whooping Cough; but cases may sometimes be met with in which a dry cough, persistent and very troublesome, is unaccompanied by any other evidence of abnormality in the respiratory tract. In some instances the source of the irritation may be malformation of the throat, an abnormal condition of the mucous membrane of the larynx or pharynx, affections of the ear, etc.; but in the majority of instances it is probably due to some abnormal condition of the bronchial passages. A variety of cough by no means rare, especially in younger patients, is due to gastric irritation, and is known as a "stomach cough."

Treatment.—When coughing is due to dryness of the bronchial mucous membrane, the appropriate treatment is evidently to stimulate secretion. The inhalation of steam or the sucking of ice will often relieve this kind of dry cough, and demulcents of all kinds are useful. The secretion of a larger amount of fluid may be secured by

the administration of expectorants, of which perhaps the best is tartrated antimony in small doses (see also under Bronchitis).

When the cough is spasmodic in nature, few remedies are superior to ammonium bromide, with which hydrocyanic acid may be combined. It may be accepted as a general rule, that sedatives should not be indiscriminately prescribed for the relief of cough, as in certain cases they may do serious harm, even though the cough be relieved. If, however, such agents are manifestly required, to avoid the dangers of a violent and persistent cough, morphia lozenges are perhaps the best and most valuable.

The stomach cough, due to gastric irritation, is easily relieved by remedies directed to the removal of the sources of irritation; the administration of sedatives like bismuth and hydrocyanic acid, is of course a purely symptomatic treatment of the condition.

Relaxed sore throat of a catarrhal origin may be very effectually relieved by inhalations or sprays of various antiseptics; iodine is specially useful when the condition is associated with a scrofulous constitution. Sulphurous and carbolic acids do good service in certain cases; and such sedatives as infusion of hops, henbane, hemlock, camphor, may also be applied in this way with satisfactory results.

None of the remedies named have any result in the relief of a cough due to the irritation of foreign bodies, or concretions of wax in the external canal of the ear. This, though rare as a cause of cough, is sometimes met with, and the obvious method of treatment is to remove the source of the irritation by syringing. It will often be observed that a cough of this kind is brought on by movements of the jaws which disturb the body which produces the irritation.

CROUP, FALSE

(Scot. *croup*, to croak).

Definition.—An inflammatory affection of the upper part of the respiratory tract, especially of children,

accompanied by spasm of the laryngeal muscles. It may be due to anything which lowers vitality, but most frequently is a sequel to exposure to cold, or follows on catarrh.

Symptoms.—False croup in children generally comes on quite suddenly and often at night. The child is awakened by a hoarse, hard cough, and the breathing is markedly difficult; the act of filling the lungs is accompanied by a loud cooing or crowing sound. The symptoms tend to spontaneous subsidence, the little sufferer being apparently well the next morning; they are, however, almost certain to recur.

Treatment.—The primary indication in the treatment of this form of laryngitis is to induce vomiting by any of the emetics, or by mechanical irritation of the fauces. Vin. antim. tart. in doses of 30 minims, may be given every quarter of an hour, until the desired effect be obtained, or drachm doses of ipecacuanha wine may be given with similar intervals. These agents have a prolonged after-action as expectorants, which makes them more serviceable than pure emetics.

In the meantime the child may be placed in a warm bath, and then, having been rubbed dry, wrapped in blankets, and a hot poultice applied to the neck. A somewhat simpler process of establishing counter irritation is also recommended, which consists in applying a sponge wrung out in very hot water, to the fore part of the neck; every few minutes, as the temperature of the sponge falls, it is re-heated in the same way and applied until pronounced hyperæmia of the skin is produced. The degree of counter-irritation obtained in this way will be insufficient in severe cases, and must be supplemented by a blister over the larynx; the blister, which should not be larger than a florin, is allowed to remain for one and a half to two hours and is followed by a warm poultice.

As a rule, however, if the emetics act efficiently, the acute symptoms subside, after the vomiting, with more or less promptness and the attack passes off. During the next few days the child must be protected from cold and changes of temperature; this is best effected by confining

it to one room, which should be maintained at a constant temperature, and kept fairly saturated with moisture by means of a suitable kettle. The clothing should be warm, but not too heavy, and the expectorants may be continued. After complete recovery precautions must of course be taken to prevent the little patient from taking cold, as the affection is very liable to be brought on again by even slight attacks of ordinary "cold." (See also LARYNGISMUS STRIDULUS.

DANDRUFF

(Welsh, *ton*, skin, and *drug*, bad).

Definition.—A disorder of the sebaceous glands of the head, in which an excessive amount of an oily secretion is produced, which forms a scaly deposit on the surface of the skin among the hair. Also described as an exfoliation of epidermis.

Symptoms.—The appearances of dandruff are familiar; a bran-like scurf is found more or less thickly covering the scalp and among the hair. There is generally, also, to a greater or less degree, some irritation of the scalp.

Treatment.—The principal indication in the treatment of this affection is to supply the skin with an excess of fat. Vegetable oils are not of much service, and the animal fats as a whole have an unpleasant odour which renders them unsuitable. All requirements, however, are met by a lanoline pomade, which, replacing the natural fat of the skin, is the most appropriate agent for effecting the fatty saturation which the scalp requires. It is advisable to thin the lanoline with some oil in order to facilitate its application, and to emphasize the importance of rubbing it well into the scalp; mere smearing of the hair with grease serves no useful purpose.

Some cases will no doubt be met with in which this simple procedure will not be sufficient to effect a complete cure. This being so, it will be necessary to thoroughly wash the head every week preferably with borax, which dissolves or breaks up the scurf, and ensures a perfect

cleansing of the scalp. After carefully drying, the lanoline pomade is again applied. Various shampoo washes, with yolk of egg, soft soap, etc., are also favoured by some writers instead of the borax.

This affection, like most skin troubles, has been ascribed to parasitic action, and on that basis treated with most of the antiparasitics suitable for the purpose; dilute solutions of hydrarg. perchlor. and sulphur lotions have been specially recommended. One of these formulæ is as follows:—

℞	Hydrarg. perchlor.	gr. x
	Liq. Potassæ	ʒiij
	Aq.	ad ʒvj
M. f. Lotio. To be well rubbed into the scalp twice a day.		

The value of this preparation is ascribed to the yellow mercuric oxide thrown down; and an occasional application after the unhealthy condition has been removed, will prevent a recurrence.

A method of more recent introduction may also be described. The head is first of all well washed with hot water and a soap made as under:—

℞	Sapon. mollis	ʒij
	Alcohol	ʒss
	Olei lavand.	m. x
M.		

This soap is carefully washed away with hot water, and the head thoroughly dried with a warm cloth. Then a glycerole of tannin (10 to 30 grs. to the ounce, according to the severity of the case) is rubbed into the scalp firmly and thoroughly. This process should be repeated two or three times a week; and after the dandruff has been completely removed, the daily application of the following oil is effective in preventing recurrence:—

℞	Olei olivar.	ʒj
	Phenoli absol.	gr. x
	Olei cinnamomi	ʒj
M. f. Solutio.		

If the glycerole of tannin fail to have the desired effect, a solution of resorcin is recommended:—

R	Resorcini	.	.	.	.	.	.	ʒi
	Olei olivar.	.	.	.	.	.	.	ʒi
	Ætheris	.	.	.	.	.	.	ʒi
	Alcohol	.	.	.	.	.	.	ʒviss
M. f. Solutio. To be applied twice a week.								

DENTITION, DISORDERS OF.

Observations.—There can be no doubt that the child is peculiarly sensitive to irritating agencies at the time when the milk-teeth are being formed. The nervous system is characterized by marked impressibility, so that external influences and peripheral irritation from what may be termed internal causes are both likely to produce very pronounced results. Some amount of fever is a common accompaniment of dentition; and the child, suffering from a high temperature, is predisposed to be affected by influences which generally would be without significance.

Cases are recorded in which one tooth has been cut *in utero*, but they are few; it is not, however, rare for dentition to commence at the fourth month, though more usually the process does not begin until the infant is seven months old. If development be normal, eight teeth should be through at twelve months, and the set of deciduous teeth—numbering twenty—should be all in evidence about the end of the second year.

With regard to the order of development of the teeth, no hard and fast rule can be laid down, but on the average the following order may be regarded as normal:—

Central incisors	.	.	.	Lower.
Central incisors	)	.	.	Upper.
Lateral incisors	f	.	.	
Lateral incisors	.	.	.	Lower.
First molars.				
Canines.				
Back molars.				

Constitutional influences are important factors in affecting the progress of dentition. A taint of tuberculosis or syphilis is believed to lead to early cutting of the teeth; while in rickets, which is associated with abnormalities in the development of the osseous system generally, the

teeth are formed very slowly. It does not always follow, however, that delayed dentition involves unusual difficulty or disturbance in the process; the contrary is not infrequently the case.

Symptoms.—Locally the irritation of teething is followed by swelling of the gums, which become hot and painful; some amount of general fever is common, associated with fretfulness and restlessness, which is frequently more marked at night. When the process of absorption is complete and the tooth appears through the gum, the symptoms naturally decrease in severity, and finally pass off entirely.

The febrile disturbance which generally accompanies dentition is frequently high (up to 104° F.) in the morning; this is almost characteristic of the pyrexia of teething, serving to distinguish it from that associated with the febrile diseases.

Other effects of the local inflammation which accompanies the cutting of teeth is not infrequently aphthæ (thrush), catarrh of the digestive or respiratory tracts, nervous disturbances, and skin eruption; none of these, however, are necessarily produced in the course of the development of the teeth.

Treatment.—This is to be confined to what may be called the complications of teething, *i.e.*, those symptoms which have been spoken of not necessarily characteristic of the process. The slight fever and local inflammation which are normally met with do not call for medical interference.

High fever and proportionate restlessness may be treated by bromide, which, even in full doses, is free from danger. Sweet spirit of nitre is a popular and undoubtedly useful remedy that may be combined with the bromide; its action is probably sudorific and antipyretic. A simple and effective syrup for teething children is made as follows:—

R	Tr. Anthemidis	ʒi
	Tinct. Card. comp.	ʒss
	Glycerini	ʒiiss
M. F. M. Dose: from 5 minims upwards according to age.		

The tincture chamomiles is made by percolating 1 part of the dried single flowers with sufficient rectified spirit to make 8 parts.

If there be inflammation or aphthæ of the mouth, it must be treated by the administration of rhubarb and soda, and by the local application of glycerine of borax (see also under Aphthæ). It is also important that the mouth should be kept clean by wiping out with a soft rag, moistened with warm water after taking food.

Catarrh of the digestive tract may require treatment, which must be based on the principle of first removing irritating secretions, and then administering agents which restore the irritated mucous membrane to its normal condition.

If the symptoms be gastric, an emetic of ipecacuanha, followed by small doses of carbonate of soda, is indicated; and if they be intestinal (diarrhœa), a dose of castor oil or syrup of senna will do good; the aperient is succeeded by an astringent mixture. In any case it is important to free the intestines from the irritating secretions, even when there is any bronchial catarrh.

Convulsions will sometimes be met with as the result of the irritation of dentition. A warm bath and cold applications to the head will generally cut short an attack; and benefit frequently follows the application to the nape of the neck of a poultice made with equal parts of flour and mustard. As soon as the internal administration of remedies becomes possible, an aperient should be given.

DIARRHŒA

(διὰ, through; ῥέω, I flow).

Definition.—An abnormally frequent and generally abundant evacuation of the fæces, which are more or less liquid in consistence and acrid in character. Diarrhœa may be directly due to irritation of the intestines themselves, to unhealthy surroundings, and to disturbances of the nervous system; it is also a symptom of a considerable list of diseases. The cause first named is un-

doubtedly that to which the majority of cases of diarrhœa have to be ascribed.

Characters.—For convenience of description, the various forms of the affection will be grouped according to their nature, as (*a*) acute, with the subdivisions irritative, choleric form, nervous, vicarious, and (*β*) chronic.

a. Acute Diarrhœa.

(1) *Irritative.*—A frequent premonitory symptom is severe griping pains; the evacuations are offensive, sometimes exceedingly acrid—excoriating the anus and adjacent parts—and tend to become more liquid and watery. There is rarely any fever accompanying this variety of diarrhœa.

If the irritant substances which produce the diarrhœa set up inflammation in the intestinal mucous membrane, the condition aggravates; and if the large intestine be involved the evacuations become mucous, more or less sanguineous, and are passed with much straining. The body temperature goes up, and the skin becomes dry and hot.

(2) *Choleric form.*—This form is generally met with in the hot season of the year. Vomiting of the stomach contents, mixed with mucus and some bile, occurs suddenly, accompanied by loose motions. Serum appears to be drained from the blood into all parts of the digestive and intestinal tract, so that the evacuations and the vomited matters become thin and colourless. At the same time the drain upon the blood brings about a state of collapse which simulates that characteristic of Asiatic cholera; the temperature falls, and the skin has a shrunken appearance and cyanotic hue; there is also intense thirst. The general presence of bile in the vomited matters and the discharges, and the absence of the true rice-water character of the latter, are, however, distinguishing features. This form of diarrhœa is most dangerous in the enfeebled, or patients at the extremes of life.

(3) *Nervous.*—Anxiety and worry may indirectly exert a disturbing influence upon the nervous supply of the intestines, especially at certain stages of rapid develop-

ment, when the nervous system as a whole is in an unstable condition. The disturbing influence shows itself in an abnormally rapid intestinal peristalsis, in consequence of which the food is passed along the alimentary canal at a rate which renders absorption impossible. Hunger is usually voracious, but great weakness may be produced.

(4) *Vicarious*.—One of the consequences of a “chill,” after exposure to cold and wet, is that a principal function of the skin—perspiration—is arrested. In consequence of this, its share of the excretory work of the body is thrown upon some other of the organs which are engaged in it, *e.g.*, the lungs, kidneys, or intestines. Such compensatory activity on the part of the bowels gives rise to vicarious diarrhœa. Of course a chill is not the only possible cause of such a diarrhœa, but it is the most usual.

β. Chronic Diarrhœa.

This form of the affection appears to be usually due to general debility, the system having been previously robbed of vigour and vitality by wasting diseases, unhealthy climatic influences, and the like. Manifestly, as the diarrhœa is at once a cause and an effect of the debility, the condition has a tendency to perpetuation, and may gradually drain away the strength of the individual and threaten to destroy life itself. Chronic diarrhœa is very frequently a symptom of the advanced stages of grave diseases, and as such is only mentioned here for the sake of completeness.

Treatment.—The consideration of the various modes of combating diarrhœa may be conveniently considered in the same order and arrangement as is adopted above, in describing the varieties of the affection.

a. Acute Diarrhœa.

(1) *Irritative Diarrhœa*.—It is important to disabuse the mind of the idea that all forms of diarrhœa call for the administration of astringents. In that, for instance, due to the presence of irritating substances in the intestines, the increased evacuations are only an evidence

of Nature's effort to get rid of the cause of the irritation. When, therefore, it appears on inquiry that the flux is a consequence of improper food (either solid or liquid), the indication is to assist the natural efforts at expulsion of the irritant by a mild dose of castor oil; saline purgatives are less suitable. Pain may be relieved by spirits or a dose of one of the carminative essential oils (*e.g.*, peppermint).

In young children irritative diarrhoea is generally due to masses of undigested casein, which, when passed, are pale grey or dark green, and like putty in consistence. There is frequently, also, some watery discharge which may be exceedingly acrid, attacking the skin of the anus and adjoining parts. When this condition is a consequence (as it is generally) of hand-feeding with cow's milk, this must be discontinued and substituted by goat's or ass's milk, or a wet-nurse must be secured. Occasionally milk may have to be withheld in every form, and grated or pulped raw meat substituted; some kinds of prepared food are also sometimes well tolerated when a milk diet is impossible. As soon as the new food is well taken, a dose of castor oil (ʒj) will be useful in removing all insoluble curds from the intestines.

In adults, this form of diarrhoea requires, as a rule, no treatment by drugs, beyond that indicated above. As to diet, the recognised plan of taking all food cold, or at the most lukewarm, and in small quantities, should be strictly followed, and farinaceous dishes are preferable to strong meat broths. Brandy, red wine, or mucilaginous liquids may be drunk with benefit. If the condition has already developed into—

Inflammatory Diarrhoea, the purgative (castor oil, or calomel followed by a saline) is still indicated, and ice or iced water given with it; as food, sterilized milk, which may also be peptonized, or soda and milk, appear to be most suitable. Among drugs, carbonate of bismuth and salol are specially recommended, combined with sedatives, such as opium or hyoscyamus.

(2) *Choleric Diarrhoea*.—Here again castor oil, with a small dose of opium, is most valuable, and may be repeated if necessary. Advantage follows the promotion

of vomiting (large quantities of warm water will often be sufficient). When the irritant substances have been removed from the bowels (the motions being free and quite liquid, and abdominal tension having passed off), astringents—bismuth or chalk, pulv. cretæ arom. c. opio, etc.—may be given, although there is a tendency to abandon these old-fashioned agents in favour of antiseptics, such as naphthalene, salol, resorcin, creasote. Naphthalene may be given even to very young babies in doses of $1\frac{1}{2}$ to 2 grs. every two hours, thus:—

R.	Naphtalini	.	.	.	.	.	̄ss-i
	Sacchari albi	.	.	.	.	.	̄ss-i
	Olei Bergamot	.	.	.	.	.	gtt. j

M. f. Pulvis et div. in chart. xx.

To adults, larger doses (10 to 15 grs.) can be administered. Resorcin (grs. $\frac{1}{2}$ to 2) is also given, but is said to sometimes cause vomiting. Salol also acts well; 2 grs. three times a day may be given to children six months old. Another of this class of remedies is sodium salicylate, in doses of 1 to 3 grs., according to age (three months to three years). A mixture made as under is credited with excellent effects:—

R.	Spiritus Ammon. Arom.	.	.	.	.	̄j
	Acidi Carbolic	.	.	.	gr. ivss-ix	
	Chloral hydrat.	.	.	.	gr. xv-xx	
	Tinct. Belladonnæ	.	.	.	m. xv-xxx	
	Syrupi	.	.	.	.	̄ss
	Aquam	.	.	.	.	ad ̄ij

M. f. Mist. One teaspoonful every second hour.

The compound decoction of aloes is highly recommended by some authors. "It may, in one full dose (̄j for an infant, ̄jss for an adult), cause a firm natural motion where watery stools have been the rule for many days, and it can be administered safely in the worst cases, as a morning dose, when the ordinary astringent remedies are being administered during the day" (Whitla, "Dictionary of Treatment").

(3) *Nervous Diarrhœa*.—Here, bromides are most suitable given before meals, if the attacks be brought on by food. Arsenic, given at the same time (m. ij of Liq. Arsenicalis), is also a most effective remedy, especially in

those forms of the affection due to increased activity of peristalsis. Since the products of fermentation may also play a part in maintaining intestinal irritability, a dose of castor oil now and then will be of service. Astringents are not indicated, but sometimes good results follow the administration of one of the milder antiseptic agents mentioned above.

(4) *Vicarious Diarrhœa*.—Here the indication manifestly is to restore the functional activity of the organ whose share of the excretory work of the body is being thrown upon the intestines. When this organ is the skin,—the diarrhœa following on a “chill,” or exposure to damp cold,—warm baths, or other means of stimulating free perspiration, will be, as a rule, all that is required to restore the natural balance of functions.

β . Chronic Diarrhœa.

Only a few words will be necessary for dealing with the treatment of this variety of the complaint, which, save in very rare instances, will not come under notice. A nutritious diet (generally almost exclusively animal) adapted to the digestive powers of the individual, tonics, saline purgatives in the early morning, various astringents and antiseptics have all been tried and recommended in chronic diarrhœa, as well as many special forms of dietary, such as those of milk and of raw meat.

In the treatment of all the varieties of diarrhœa described, experience has shown that no little depends upon keeping the body generally, and the abdomen especially, protected from changes of temperature; some form of woollen fabric should be worn next the skin, and a broad flannel bandage or belt round the loins. In some cases the progress of the disease will be favourably influenced by rest in bed.

DYSPEPSIA

(*dys*, difficult, and *πέπτω*, I concoct).

Definition.—A number of organs is concerned in the process of digestion, *i.e.*, in the conversion of food into

forms capable of absorption by the alimentary canal, and the assimilation of these transformed foods by the circulatory system. If any one or more of these organs performs its work imperfectly, some form of dyspepsia or indigestion results. Other varieties of the affection are produced by influences which disturb the nerve-supply or circulation of the digestive tract. The causes which may interfere with the collective functions of so many organs and appendages as are included in the term "alimentary system" are of course manifold. The more common which can alone be mentioned here, are anæmia, nervous disturbances (neurasthenia), insufficient mastication of food, irregular meals, unsuitability of food, excess of food generally, of sweets, of alcohol, of tea, and of tobacco, and derangement of the liver.

Symptoms.—Here again very many pages might be occupied in describing in detail every phenomenon by which dyspepsia manifests itself. There is a whole series of symptoms which may be classed as nervous, probably due to absorption of leucomaines or to reflex cerebral irritation. Of this latter origin (*i.e.* reflex or sympathetic) are also frequently such symptoms as headache, vertigo, visual aberration, cardiac irregularity, cough, numbness, etc. Locally the symptoms may vary in intensity from mere uneasiness ("sinking" or constriction) in the abdomen with eructation of a tasteless or acrid and bitter fluid, to pronounced pain and vomiting of food which has undergone more or less fermentation. The decomposition of the contents of the stomach, with the formation of lactic, butyric, and other acids, is frequently evidenced by a burning sensation in different parts of the œsophagus. There may be abnormal hunger or nausea; while constipation or diarrhœa, flatulence, difficulty in breathing, fainting fits, are all more or less common results of indigestion.

Besides these symptoms, dyspepsia, if persistent, usually produces effects which may be regarded as general, such as loss of flesh, a muddy and anæmic complexion, debility, drowsiness or insomnia, and various forms of temperamental change or aberration.

The condition of the tongue is an important symptom,

as the experienced eye can often learn much from its appearance as to the exact nature of the digestive disorder which is causing the disturbances.

Treatment.—A strict observance of hygienic rules is a by no means unimportant factor in the treatment of dyspepsia. Nerve tone may be imparted by cold baths in the mornings, or, when reaction is not readily established, by friction with a rough wet towel. The clothing should be warm and preferably woollen, and a sufficient amount of suitable exercise taken regularly, but not immediately before or after meals, as in this way the vital force and energy is more or less exhausted, which otherwise can be drawn upon by the digestive processes.

A few words may be said with regard to diet, though the scientific regulation of food to individual cases depends upon niceties of diagnosis and a very large experience, which necessarily appertain to the skilled medical man alone. In acute attacks of indigestion it is generally advisable to withhold food for several hours (allowing only ice to allay thirst), and then to give frequently small quantities of soda and milk, lime-water and milk, weak meat broths, and the like. In some cases it will be necessary for the patient to continue a similarly light, easily-digestible diet for several days, and return only by slow degrees to the ordinary food. In chronic gastric catarrh it is advised to limit the number of meals to three, and to rigorously abstain from eating in the intervals. Fish, mutton chops, boiled, roast, or grilled fresh meat, green vegetables and potatoes sparingly (the latter cooked in their skins, mashed with milk, and passed through a hair sieve) form the most substantial items in the diet. Tea and coffee are discontinued, and substituted by cocoa, soda and milk, weak spirit and water, or light wines. Hygiene, a proper amount of exercise, and recreation are equally important in this as in other forms of dyspepsia. In cases due to excess of alcohol, tea, etc., the indication is of course to prohibit the article which has been immoderately used, and to order a similar light diet.

Turning to the more strictly medicinal treatment, first of acute indigestion (characterized by nausea, cramp-like

pains, and retching), it is first necessary to ensure complete evacuation of the stomach contents, and to empty the intestines of any irritating matter by a smart dose of calomel (3 to 5 grns., followed by haust. sennæ), or of pil. hydrarg. c. colocynth. with a seidlitz powder the next morning. This is as a rule all that will be required, save the dietetic precautions indicated above. Of antacids bismuth appears to be one of the best; and if there be persistent vomiting, hydrocyanic acid is recommended.

In chronic cases carminatives and stimulants are required. A good mixture is made as follows :

R	Ammon. Carb.	. . . . .	ʒss-ʒj
	Magnes. Sulph.	. . . . .	ʒiij-ʒv
	Tinct. Bellad.	. . . . .	ʒj
	Tinct. Nucis Vom.	. . . . .	ʒj
	Spirit. Chlorof.	. . . . .	ʒij
	Tinct. Zingib.	. . . . .	ʒij
	Aq. Menth. pip.	. . . . .	ad ʒvi
M. f. M.	One tablespoonful to be taken every four hours.		

If eating give rise to a sense of fulness or pain, acids are indicated; and as in these cases digestion is slow, strychnine is also useful, thus:—

R	Acidi hydrochlorici	. . . . .	ʒj
	Liquoris Strychninæ	. . . . .	m. xl
	Infus. Calumbæ	. . . . .	ad ʒvi
M. f. M.	One tablespoonful to be taken after each meal.		

Atonic dyspepsia due to lack of nerve tone, is evidenced by a sinking sensation before meals, relieved for the time by eating; but subsequently succeeded by epigastric discomfort, gastric distension and a feeling of constriction at the throat. Here, valerianate of zinc (2 to 5 grs.) is specially recommended, as well as acids and nerve tonics.

Acidity, flatulence, hiccough, and gastric pain (gastrodynia) are specially treated as separate monographs.

EAR, DISEASES OF.

The diseases of the ear suitable for inclusion in this volume are only some three or four in number. No caution should be necessary against unskilled tampering with even the external ear; and it may be accepted as a general principle by the reader, that no measures should be taken more vigorous than the application of mild anti-septic lotions, fomentations, and syringing.

Accumulation of Cerumen in the external meatus is one of the simplest conditions that call for treatment. It is characterized by more or less impairment of hearing, by ringing or singing noises in the head, and sometimes by cough or cerebral symptoms. The treatment consists in gentle syringing with warm water containing about 10 grns. of bicarbonate of soda per ounce. Johnston recommends a 5 per cent. solution of papain containing $2\frac{1}{2}$ per cent. of sodium bicarbonate for the disintegration of obstinate concretions of this class; the solution (about 15 drops) is allowed to remain an hour, after which a warm solution of boric acid is used. In using the syringe, the auricle must be drawn upwards and backwards in order to permit the liquid to freely enter and flow from the meatus; the nozzle of the syringe must not be placed within the canal of the ear, but at a short distance from the orifice, or just resting upon one side.

The same *modus procedendi* will generally suffice for the removal of foreign bodies from the meatus; and if it do not, the case should be referred to the regular practitioner. Unskilled efforts to extract foreign bodies with instruments cannot be too strongly condemned, as in the majority of instances leading to aggravation of the conditions and sometimes to serious mischief. Live insects, though they very rarely enter the meatus, may as is generally known, be expelled or killed by filling the canal with warm water.

Ear-ache may be due to inflammation of either the external or middle ear. The pain may be relieved by dropping in every two hours a 10 per cent. solution of carbolic acid in glycerine. When due to the formation of small boils,

hot fomentations and instillations of a warm 4 per cent. solution of cocaine (alkaloid) in oil are recommended. A solution of 5 grns. of resorcin, and 25 grns. of cocaine in an ounce of water has been recommended for the same purpose. Other possible causes of ear-ache are acute catarrh of the middle ear, various affections of the throat and mouth, including the teeth, etc.

Chronic Otorrhœa is not infrequently brought under notice. The symptoms are well known; there is a fairly constant, generally painless, discharge of evil-smelling pus from the meatus, which frequently excoriates the parts of the auricle and even the cheek over which it oozes. Quite a long list of lotions and various combinations have been recommended, which are sometimes successful and sometimes not. Simple syringing with warm water, followed by the insufflation of boric acid or tannic acid, is occasionally effective, and various solutions of carbolic or boric acids, thymol, etc., have been successfully employed.

- R. Glyc. Ac. Carbol. ʒss
 Spirit. vini rect. ʒx
 M. Half an ounce in a wineglassful of warm water. Instillation.
- R. Pulv. Ac. Bor. ʒiss
 Spirit. vini rect. ʒiij
 Solve. To be used with three volumes of warm water, gradually decreasing the amount of water until the rectified spirit solution is used as it is. Instillation.

Some practitioners put their confidence in astringent lotions, either *per se* or combined with an antiseptic, *e.g.*

- R. Zinci sulphat. gr. xxiv
 Glyc. Ac. Carbol. ʒiss
 Aquæ ʒiv
 M. One tablespoonful to be used with a wineglassful of warm water.

Sometimes the local application, by means of a camel's hair brush, of a thin antiseptic tar ointment at regular intervals with frequent antiseptic syringing is useful.

ECZEMA

(ἐχζέω, to boil over).

Definition.—An inflammatory process which attacks the skin and mucous membranes, producing papules, pustules, scabs, etc., and usually characterized by the discharge of serum. The progress of the morbid condition is always tedious and irregular. According to the position of the diseased areas, or according as one or another symptom is more prominent, we get the so-called varieties of eczema, e.g., *E. erythematosum*, *E. humidum*, *E. hypertrophicum*, *E. palmare*, *E. papulosum*, *E. pustulosum*, *E. siccum*, etc.

Any irritant acting upon a susceptible skin is capable of producing eczema; and any influence which tends to lower the vitality of the organism may predispose to attacks of the inflammation. Thus disturbance of the nervous system, by interfering with the supply of blood and consequently with the nutrition of the skin, may be the primary factor in determining an outbreak. Just as the disease may be produced by what may be called nervous influences, so is it liable to be powerfully affected in its course and character by variations in the condition of the nervous system.

Symptoms.—The usual symptoms of inflammation—redness, swelling, heat and pain—are present, and in addition papules and vesicles form, from which serum oozes, crusts develop, chronic thickening and induration of the epidermis take place, followed by cracking and the formation of chaps or rhagadia. Itching is a pretty constant symptom of eczema and is especially severe in those forms of the disease which are characterized by absence or scantiness of secretion. Where the latter is more copious, the irritation of the peripheral nerves manifests itself in various forms of shooting and aching pain.

Experience has shown that not infrequently there is a close relation between eczema and certain general or visceral troubles. The interdependence of eczema and a gouty habit or tendency has been often observed; and a similar relation was discerned or guessed at between

the skin affection and other grave disorders, so that among the older school of practitioners it was an accepted principle that too vigorous measures in the curative treatment of eczema might prove seriously detrimental to the general health, or even to the life of the patient.

Treatment.—The observations made above as to the practice of the older school might be repeated here, since quite recently the view has been spreading that these old ideas are often correct; and the rule has been again laid down, that in patients of inveterate arthritic diathesis, or subject to bronchitis, melancholia or albuminaria, the cutaneous affection must be combated with great caution.

The rational treatment of eczema is both (1) general and (2) local.

1. Disturbances of digestion and assimilation will need appropriate treatment (see under Dyspepsia), and in general debility, quinine, nux vomica, cod-liver oil, mineral acids, or arsenic, are the most effective remedies. Where the digestion is disturbed (impaired appetite and coated tongue) the following mixture is recommended:—

R	Bismuthi carb.,	
	Magnes. carb.	aa ʒijss
	Tinct. Rhei	ʒiiss
	Syr. Zingib.	ʒi
	Spiritus Chlorof.	ʒij
	Aq.	ad ʒviij

M. One tablespoonful in water three times a day.

In gouty cases alkalies and salines are indicated; in acute attacks occurring in otherwise robust patients, Morris recommends ʒm. doses of antimonial wine three times a day. Another remedy employed in such cases is spirit of turpentine in 10m. doses three times a day (in mucilaginous emulsion).

In the constitutional treatment of the eczema of children, the same lines are followed. Thus, if there be constipation, small doses of hyd. c. creta every other night are said to give good results, while if there be diarrhœa, Crocker prescribes:—

R	Sod. bicarb.	ʒijss
	Spirit. Chlorof.	ʒss
	Aq. Anethi	ʒiv

M. One teaspoonful for a child one year old.

If the little patient manifest a scrofulous habit, cod-liver oil, syrup of iodide of iron or Syr. Ferri Phosph. Co. are appropriate remedies.

2. For the local treatment of eczema, the resources of materia medica have been well-nigh exhausted. As a routine treatment it is recommended to remove crusts by soaking in oil and poulticing; the kind of remedy to be applied varies according to the stage which the affection has reached. In *the acute form* they must be soothing, while in the chronic stages stimulant applications are indicated. Zinc oxide, either as powder or suspended in lime-water, or in the form of ointment, is one of the chief soothing agents; probably the best form is the ointment, as lotions have to be constantly applied and necessarily medication of this kind must be suspended at night.

The following formula has been recommended as of well-proved efficacy in acute eczema:—

R	Bismuthi subnit.	.	.	.	.	ʒij
	Zinci oxidi	.	.	.	.	ʒj
	Glycerini	.	.	.	.	ʒiiss
	Ac. Carbol. liq.	.	.	.	.	ʒss
	Ung. Lanolini	.	.	.	.	ʒij
M.	fiat Unguent.					

If an astringent be indicated, the Liquor Plumbi Subacetatis of the B.P. may be added in the proportion of one drachm per ounce. In such cases where the disease is moist in character a 2 per mille solution of nitrate of silver is applied on compresses for a few hours night and morning, bismuth or lead-plaster ointment being kept on the affected areas in the meantime. The ointment is carefully removed by washing each time before the compresses are renewed. Where there is much irritation (*e.g.* when the disease is situated about the anus and genitals) hot soapy baths are recommended, followed by the application of an ointment made as under:—

R	Cocaini oleat.	.	.	.	.	ʒss
	Olei olivar.	.	.	.	.	ʒj
	Lanolini	.	.	.	.	ʒv
M.	To be applied twice daily.					

Pastes are to a considerable extent replacing ointments for the treatment of eczema, as they take up the aqueous excretions of the skin, and so come into more intimate contact with it than ointments. One of the best known (Lassar's) is of the following composition :—

R	Amyli,				
	Zinci oxidi			āā	3j
	Acidi salicylici			gr.	xl
	Vaselini				3ij
M.					

A somewhat allied form of application is the glycerine jelly of Unna :—

R	Glycerini			3iiss
	Gelatini			3iiss
	Zinci oxidi			3iiss
	Aquæ			3ivss
M.				

Any active medicinal agent may be added to this mixture; painted on warm with a camel's-hair brush, it allays the itching of acute dry eczema. Other formulæ might be given for suitable applications in acute eczema, but the general principle of them all is the same; viz. to soothe irritation, and itching, and to subdue inflammation.

When the disease assumes a *chronic* character, more stimulating applications are required. The older favourite agents, lead, mercurials, and tar, still maintain their position as valuable remedies, but very excellent and even surprising results are recorded from the use of some of the newer remedies specified below.

Ichthyol in ointment or solution (5 to 50 per cent.) is reported by a number of observers to have given remarkable results; in the dry forms of the disease an ointment is better than the lotions, which are specially serviceable in the "weeping" stage. Compresses of creolin, resorcin, in ointment or glycerine solution, have also been highly spoken of, and seem to yield very satisfactory results in certain cases. Two or more per cent. of ichthyol, creolin, and other of the more recent remedies in chronic eczema are advantageously combined with the pastes and the

glycerine jelly described as specially suited for the treatment of the acute stage of the disease. Salicylic acid, sulphur, chrysophanic acid, eucalyptol, thymol, are also among the newer remedies which have been tried in chronic eczema. For the variety not unfrequently met with in young children, bismuth subnitrate ointments are recommended as follows:—

R	Bismuthi subnitratis	.	.	.	ʒij
	Zinci oxidi	.	.	.	ʒij
	Acidi Carbolici	.	.	.	ʒj
	Ung. Lanolini	.	.	.	ʒiiss
M. f. Ung.					

In certain cases half the quantities of the powders may be used, the proportion of carbolic acid reduced to a similar extent, and about 15 per cent. of glycerine added. Where there is much irritation and itching, the form recommended is:—

R	Bismuthi subnitratis	.	.	.	ʒiiss
	Glycerini	.	.	.	ʒvj
	Acidi Carbolici	.	.	.	gtt. xij
	Aquæ Rosarum	.	.	.	ʒj
M. f. Lot. To be well shaken and applied with a soft brush.					

The ferments of the pancreatic juice and of the sap of the Papaw (papain) have found place in the list of substances used against eczema, as they have been resorted to for the softening and removal of the indurated epidermis which forms on the palms of the hands as the consequence of eczema.

Finally, attention may be called to methods devised by different practical surgeons for avoiding the eczema which frequently appears on the hands of the operator after the extensive use of carbolic acid and iodoform. By some, lanoline ointment or creams are extolled as effective, while others speak highly of the use of powdered French chalk thickly dusted on the hands and renewed every hour, whenever they have been subjected to the action of the irritant antiseptics named.

EPISTAXIS

(ἐπι, upon ; and στάζω, I drop).

Definition.—Epistaxis is what is popularly known as bleeding from the nose. It may be due to direct local violence, the action of local irritants, or to constitutional causes. It is a common occurrence in children (particularly of the male sex) about the age of puberty. Further, as known, bleeding from the nose is a frequent result of marked diminution of atmospheric pressure, as is met with in ascending mountains, and sometimes may result from sudden access of heat.

Symptoms. Well-known.—The bleeding commonly takes place from one nostril only, and may be a steady flow or a mere oozing in drops.

Treatment.—In ordinary cases medical interference is not called for in bleeding from the nose. The hæmorrhage is looked upon as frequently salutary ; and as a rule it has a tendency to cease spontaneously. If, however, the flow continue for such a length of time as to cause apprehension, measures may be necessary to arrest it. The application of cold to the neck and spinal column is a familiar means of stopping bleeding from the nose, while also ice compresses on the nose itself are often useful. A very simple mechanical method of affecting the object in view is to apply local pressure with the finger of the hand of the opposite side to the bleeding nostril, while the other arm is raised above the head. Manifestly the pressure may be exerted by a second person, while the patient elevates both arms. A reflex effect upon the vasomotor nerves, which is followed by arrest of the bleeding, may also be attained in more severe cases by mustard applications to the abdomen, the calves of the legs, or ankles.

If such measures do not bring about a cessation of the bleeding, astringent lotions may be resorted to, being applied either by means of the nasal douch, or of small tampons of cotton-wool or lint. Alum, lead acetate, iron salts, tannic (or gallic) acid, are substances largely

employed, but hazeline will be found more agreeable in action and quite efficacious.

When the bleeding is periodic, small doses of liquor ferri perchloridi and other hæmostatics are recommended, but seem to be of doubtful efficacy.

ERYTHEMA

(*έρύθημα*, a blush).

Definition.—A species of inflammation of the skin, characterized by congestion or redness, which disappears when pressed with the finger, but reappears on the removal of the pressure. It may present itself in isolated circular patches, in diffused spots, or as wheals; it may or may not be accompanied by swelling and an itching or burning sensation. Its colour varies from bright rose to dark blue-red, but when it has disappeared the skin is either in its natural state or only slightly tinted.

Symptoms.—Erythema may be a disease in itself, or may be only a symptom of a disease or abnormal condition of the body arising from exposure to heat or cold, or accompanying various fevers in adults, and intestinal disturbances, such as teething, in children, or occasionally occurring after the administration of drugs. Cases in which erythema itself is the complaint, are, as a rule, the only ones which a pharmacist is called upon to treat.

One form of this is frequently seen in spring and autumn, and is distinguished by its localization, as it originates in the backs of the feet and hands, and often does not spread further, but it occasionally reaches also the shoulders and hips, and rarely the trunk. In appearance, it consists of a flattened papule of a dark hue, surrounded at first by a red band which disappears after a few days; the papule itself may enlarge, and form a ring or double ring, or segments of a circle, and may disappear at each transition stage.

Another form of erythema appears as pink swellings, varying in size from that of a pea to a hen's egg, painful when pressed. They occur on various parts of the skin,

but chiefly on the legs. After some days the pink colour gives way to an orange colour, then dark-red, and finally a livid hue; the redness never spreads to the surrounding skin, and the swellings, though always painful, never suppurate or itch. On disappearing they leave a yellow spot similar to that following a bruise, but from beginning to end the malady rarely exceeds four weeks.

Erythema is generally accompanied by a rise in temperature, and by slight symptoms of fever.

Treatment.—This consists chiefly in alleviating the symptoms by external applications of dusting-powders and lotions, endeavours being at the same time made to discover the cause, which is then combatted by suitable remedies, or removed altogether if it be practicable. A mild laxative is also given, and generally an alkali combined with a bitter tonic.

The following two mixtures are very serviceable in this direction :—

℞ Glycerini Purif. ʒij
 Tincturæ Rhei ʒvj
 Liquor. Magnes. Carb. ad ʒvj
 M. ft. Mist. A tablespoonful to be taken three times a day, midway between meals.

℞ Bismuthi Subcarbon. ʒj
 Potassii Bicarbonatis ʒiij
 Infusi Chiratæ ʒvj
 M. ft. Mist. Two tablespoonfuls to be taken twice a day.

A stronger laxative than the above may be given if necessary, as it is important that the bowels be not constipated. Tartar emetic, in minute doses, is said by some authorities to be almost a specific, and has acted beneficially in some cases when all other remedies have failed.

Externally, dusting powders, such as boric acid, oleate or oxide of zinc, calamine, or starch powder, often produce a sense of comfort to the patient; and in the form of erythema characterized by painful swellings, fomentations of poppies and chamomiles are soothing.

Sponging and bathing are frequently successful in

allaying the itching symptoms; but if they be purely local, a lotion of bicarbonate of soda, or borax, $\frac{1}{2}$ an oz. to the pint, is serviceable, or still better, a lotion prepared as follows:—

R	Liquor. Plumbi Acetatis	ʒj
	Spirit. Methyлат.	ʒiiss
	Aquæ Destillat.	ad ʒviij
M. ft. Lotio.		

It may be applied on cloths, which are allowed to remain on the part, or simply by a small sponge.

The following application is also recommended for the purpose:—

R	Zinci Oxidi	ʒij
	Liquor. Carb. Deterg.	ʒij
	Aquæ Coloniensis	ʒj
	Aquæ Destillat.	ad ʒx
M. ft. Lotio. To be applied as directed.		

In certain cases, ointments may be substituted for lotions with good effect, the Ung. Acid. Borici of the Pharmacopœia being especially useful.

The form of erythema characterized by painful swellings (*E. Nodosum*) is relieved by poppy and chamomile fomentations, and lead and opium lotions. Whitla recommends that the limbs be enveloped in several layers of warm absorbent wool, and then bandaged with moderate pressure, whilst the patient is placed in the horizontal position with the limbs elevated.

It is necessary that the part be kept scrupulously clean, so that if the malady be caused by an irritating secretion of sebaceous or other glands, or by a constant friction with other surfaces, the cause may be removed. Applications of the following ointment on lint, is a successful method of treating erythema in infants:—

R	Calamin. Præp.	ʒij
	Amyli pulv.	ʒij
	Ung. Zinci	ʒij
M. ft. Ung.		

FAVUS

(favus, honeycomb).

Definition.—An infectious parasitic affection of the skin, occurring especially among the hair, and characterized by yellowish concave scaly crusts, often penetrated in their centre by hairs. These distinguish favus from impetigo, for which it is sometimes mistaken.

Symptoms.—The appearance of these scaly crusts is indicative of the affection; at first only a minute opaque spot is visible beneath the epidermis, and this enlarges gradually into a cup-shaped favus. In size, it is about that of a split pea, concave on the external surface, and presenting a stratified appearance. Several favi are frequently crowded together into an irregular mass, when the distinctness of the separate favus is somewhat lost. Baldness, soreness, and swelling of the scalp are often results of severe cases.

Treatment.—Favus is most tedious and trying to both the patient and his medical adviser. The patient must be compelled to adopt a favourable hygienic régime—regularity in habits, good clothes and food, fresh air, and out-door exercise being most necessary. Tonics must be administered, to sustain the appetite; and nutritive medicines, such as malt extracts and cod-liver oil, with or without accompanying doses of quinine and iron, are very beneficial.

At the same time a regular course of local treatment is to be applied. Poulticing is first tried, to remove the crusts; but if not successful, oiling can be resorted to, or an application of strong alcoholic lotion. When this is accomplished, the next step is the destruction of the parasite, which is generally effected by one of the following lotions:—

R.	Acid. Sulphurosi	ʒij
	Aquæ Destillat.	ad ʒviij
M. ft.	Lotio.	

or

R̄	Hydrarg. Perchlorid.	. . . . .	gr. xij
	Glycerini	. . . . .	ʒi
	Spt. Tenuior	. . . . .	ad ʒvj
M. ft. Lotio.			

The part must be kept continually washed; and it is well to occasionally blister, with a view to making an in-road for the parasiticide.

An ointment is sometimes used instead of a lotion; and in that case the crusts are first removed by oiling, and then one of the following formulæ is prescribed:—

R̄	Sulphuris Iodidi	. . . . .	gr. xxx
	Huile de Cade	. . . . .	ʒiʒss
	Paraffin. dur.	. . . . .	ʒij
	Paraffin. moll.	. . . . .	ʒivss
M. ft. Ung.			

or

R̄	Hydrarg. Oleat.	. . . . .	gr. xxiv
	Paraffin. moll.	. . . . .	ʒj
M. ft. Ung.			

A number of other remedies are suggested by various writers, among which are eucalyptus oil, resorcin, carbolic acid, creasote, thymol, salicylic acid, each of which have their advocates, and may be tried when a change in the treatment is believed to be advisable. The parasite, like most others of its class, is most difficult to eradicate, owing to the minuteness of the filaments and spores, so that considerable patience and perseverance are indispensable to the treatment. It seems, however, to be a safe general principle, that the fungus cannot grow upon a perfectly healthy host, and therefore an important indication is to develop, by means of appropriate diet and hygienic surroundings, the vitality of the patient to the highest possible degree.

As one reason among a number why the kissing and fondling of cats should be forbidden among children, it is interesting that this disease seems to be generally contracted indirectly from mice through the domestic cat.

FEVER

(*Febris*, a fever).

Definition.—Animal heat is looked upon as due to the burning up of blood and tissue within the body; and the regulation of the combustion, as evidenced in the constancy of the normal temperature (37°C ., or 98.6°F .), as a function of certain nerve centres or ganglia. In almost any form of disease these heat centres become affected, and a rise of the temperature of the body is the result; the circulation is quickened, tissue waste increased, and the excretions more or less disordered. The term fever is applied to this rise of body-heat above the normal and its attendant phenomena. In by far the greater number of cases a more or less well-marked cause is either discoverable or soon manifests itself; but in a few instances the increase of temperature is the only symptom.

Symptoms.—An attack of fever produces a rise of temperature within the body before such a variation from the normal condition of things becomes evident at the surface; the patient, indeed, very frequently feels cold, and shivers. The pulse at this stage is increased in frequency, but otherwise its characters are the very antithesis of the full and bounding pulse of the second stage, when the skin is hot and the cold rigors have given place to a feeling of heat. The febrile condition appears, as a rule, to have a tendency to subside spontaneously, this termination being marked by a softer pulse and a falling temperature; very frequently it is preceded or accompanied by the outbreak of perspiration.

As already intimated, the excretions are more or less altered; perspiration may be profuse or altogether absent, and the urine is subject to similar variations; the relative proportions of its constituents may be said to be invariably changed, the solid organic substances being excreted in abnormally large quantities.

Treatment.—Simple fever, or febricula, as it is also termed, requires only quite simple treatment. A purgative is generally useful, and agents which promote a free

action of the skin are also indicated; among the latter, hot lemonade from fresh lemons and barley-water are most popular, and undoubtedly useful. The patient may be ordered to bed and only liquid food given. The only medicines proper necessary are diaphoretics, such as liquor ammoniæ acetatis, spirit of nitrous ether, etc. One minim doses of tincture of aconite every hour are also invaluable in the treatment of slight fever generally. Direct antipyretics should not be given in such cases.

FLATULENCE

(*Flatus*, a puff of wind).

Definition.—The results of the formation of excess of gases in the digestive tract, mostly due to the fermentative decomposition of food, which is itself generally a sequel to some functional disturbance of the digestive organs. Thus it is frequently a symptom of indigestion, disordered conditions of the liver, constipation, etc.

Symptoms.—These depend to some extent upon the part of the alimentary system in which the flatus accumulates. If this be the stomach, the condition of dilatation is likely to be accompanied by symptoms of indigestion, while, when the intestines are implicated, colic and constipation are commonly present. Flatulent dilatation of the stomach, by exerting pressure upon the thoracic viscera, may interfere with the action of the heart and lead to attacks of faintness, giddiness, and sensations of imminent death.

Treatment.—This is divided under the two indications of removing imprisoned flatus and preventing its re-formation. The former may be effected by gentle massage over the distended areas, by the administration of hot water, with or without spirits, of stimulants and aromatic carminatives, or, when principally affecting the lower intestine, by gentle aperients and enemata.

The prevention of the recurrence of the condition is manifestly dependent upon the completeness with which fermentation of food can be avoided. It is not easy to

do this without interfering with digestion, as the same agent that arrests the activity of the micro-organisms which bring about the fermentation, will almost certainly inhibit that of the organisms which are believed to play an important part in normal digestion. Charcoal (from the poplar), is perhaps the least open to objection; but the better method of combating the tendency to flatulence is to avoid foods likely to ferment, as well as hot beverages and liquids generally, with meals. Good results also follow the prescription of such a mixture as that given under:—

R	Magnesiæ carbon.	. . . . .	ʒi
	Bismuthi subcarb.	. . . . .	ʒi
	Tinct. Nuc. Vom.	. . . . .	ʒiiss
	Aquæ . . . . .	. . . . .	ad ʒvj
M. f. Mist.	One tablespoonful to be taken before food.		

Hydrochloric acid alone, or with a reliable pepsin essence, after food, is said to be a valuable adjunct to this mixture. (See also under "Colic" and "Dyspepsia.")

GASTRITIS

(γαστήρ, the belly; ἴτις, inflammation).

Definition.—Inflammation of the coats of the stomach. The term is generally made to include the forms acute, sub-acute, and chronic, and may be considered as synonymous with gastric catarrh.

Symptoms.—In acute gastritis brought on by indiscretion in food, alcoholic excess, irritants generated in the stomach itself, etc., nausea, vomiting, and depression are generally urgent symptoms. Appetite may be either present or entirely absent, thirst is frequently severe, and headache, drowsiness, and more or less prostration and malaise are fairly constant accompaniments of an attack. The epigastrium is frequently swollen and tender on pressure over a considerable area. Very frequently attacks of acute gastritis have a tendency to spontaneous recovery after the irritating contents of the stomach have been got rid of by vomiting.

Chronic gastritis, or gastric catarrh, produces changes of a more or less marked character upon the whole of the upper part of the alimentary canal, affecting the lips, which are sometimes cracked and dry, the gums, which often become red and spongy, the tongue, and the pharynx (frequently affected by a chronic inflammation with the secretion of a thick tenacious mucus). The more purely local symptoms are, occasional nausea, sensations of heat relieved by drinking, and of weight and fulness, sometimes of actual pain, tenderness in the epigastric region, and eructations. The more indirectly gastric symptoms are capriciousness of appetite (patients rarely enjoy their breakfast), great thirst between meals, drowsiness and sinking sensations after food, some amount of emaciation, and slight rise of temperature in the evening. A slight hacking cough, worse in the morning, headache, palpitation, and vertigo are also occasionally present.

The sub-acute form of gastritis is intermediate in its effects between these two extremes, and the symptoms are practically those of the chronic variety but less severe. Probably cases of the purely transitional stage rarely come under notice, as the symptoms are not sufficiently obtrusive to impress the patient with the necessity of treatment; he neglects the unpleasant subjective and objective sensations in the hope that they will soon pass off.

It is necessary to distinguish chronic gastric catarrh from those forms of dyspepsia due to purely nervous causes, not accompanied by morbid changes in the stomach. These latter are characterized by capriciousness in the appearance and disappearance of the symptoms, by the distress occasioned when mental or physical labour is attempted on a perfectly empty stomach, by the absence of well-marked local symptoms, of tenderness, of thirst, and of emaciation to any great degree. Nervous or functional dyspepsia with these symptoms is relieved by general sedatives and nerve tonics.

Treatment.—This, in chronic gastritis, is mainly the same as that indicated under dyspepsia in dealing with the chronic forms of the disease. Great importance is to be attached to hygienic and dietetic measures—includ-

ing the sipping of a tumblerful of water as hot as it can be taken, before breakfast—and the more carefully these are regulated the less is the need for resort to the long list of drugs sometimes recommended. Unpleasant local sensations after food are relieved by a mixture of Ac. hydrochl. dil. and Infus. calumbæ; and where the digestive process seems to be unduly delayed or prolonged, nux vomica or Liq. strychn. is indicated. Among the remedies most recently used with success in these cases are Kava-Kava (gr. $1\frac{1}{2}$ three times a day), tincture of lycopodium (gtt. xx. to xxx.), and fluid extract of pichi (m. xv to $\bar{3}j$).

In cases of acute gastritis, the principal indication is physical and physiological rest for the stomach; ice and milk in very small quantities should be given, nausea and vomiting having been first relieved by bismuth, morphia, or hydrocyanic acid. A fairly large dose of calomel taken with iced water is sometimes effectual in cutting short an attack.

GLEET

(Sax. *glidan*, to slip down).

Definition.—A turbid viscid discharge from the urethra, appearing as shreds floating in the urine, or as a drop at the meatus urinarius. It is scant in quantity, and is frequently one of the sequelæ of gonorrhœa, though it cannot always be traced to this origin; the complaint is sometimes considered to be a chronic stage of gonorrhœa, though this view is not accepted by the majority of authorities, as sometimes no gonorrhœa has preceded the attack.

Symptoms.—These vary somewhat according to the cause, but generally take the form of shreds in the urine, or a scanty discharge at the meatus, occurring several hours after micturition. There is a frequent desire to micturate, especially at night, the patient being frequently disturbed three or four times; the urine, however, does not commence to run quickly, and usually a few drops dribble off after the stream ceases.

The principal pain felt is a burning sensation, extending along the whole urethra, and most noticeable after micturition. Generally there is also a sense of weight or fulness in the rectum, and a dull pain in the perinæum, worse when lying down than in an upright position. The patient is easily fatigued by walking, which generally brings on the sense of fulness in the rectum.

As has been mentioned, gleet is most frequently an after-result of gonorrhœa, which may have preceded it by two or three months, or even two years, and, having apparently ceased for one or two months, returns again without obvious cause. In such cases the gleet is caused by chronic inflammation or congestion of the urethra; but it is sometimes caused by warts or granular patches, extending from the meatus all along the urethra, and in other cases by follicular sinuses which continue to discharge thin muco-pus, long after the gonorrhœa has subsided.

Treatment.—When the discharge is white and thick, and the resistance to the passage of a solid bougie or catheter is slight, the injection of one drachm of a nitrate of silver solution (1 grain to the ounce) two or three times will be found effective; if much pain is experienced, it is well to precede this injection with one of cocaine, a hot bath also being useful.

The following injection is a very beneficial one in the majority of cases, and may be recommended with safety :—

℞	Zinci Sulphat.,			
	Aluminis	.	.	āā gr. iv
	Acid. Carbolicæ	.	.	m. iij
	Aquæ	.	.	ad ℥viij
	M. f. Injectio.			

The strength of this may be increased, if thought desirable. After a few days this may be replaced with advantage by a permanganate of potassium solution (1 gr. to 1 oz.) or by any other injection containing some antiseptic. Creolin, iodoform, eucalyptus oil, acetate of lead, and sulphocarbolate of zinc have been found useful by various authorities.

While these injections are being used, the bougie must not be neglected, for this is a very important part of the treatment. It should be passed about every third day, and should be well smeared with an antiseptic ointment, such as—

R	Iodoform	gr. 60
	Lanolin	ʒvj
	Almond Oil	ʒj
M.		

or with carbolic oil.

Soluble bougies are sometimes recommended in this country, and are very extensively used abroad; they afford an excellent means of applying antiseptics in such a form that they remain in contact with the part for a long time, owing to the slowness with which the basis melts. They generally contain iodoform, tannic acid, or nitrate of silver, the basis being made of cocoa-butter, and a little Peruvian balsam, hardened with wax.

As has been intimated, local treatment is by far the most important, but at the same time the constitutional health of the patient must be sustained by tonics, the Syrup Ferri Quininae Strychn. Phosph. (Easton's), being most beneficial. Sulphate of quinine, in 2 to 4 grain doses, and tincture of iron may be taken instead.

The patient must be cautioned against any indulgence in spicy foods, stimulants (tea, beer, etc.), excessive smoking, or sexual intercourse, and in fact anything which tends to increase the discharge.

Moderate out-of-door exercise is beneficial in all cases, and so is sea-bathing, or cold baths indoors. On the other hand, over-fatigue is just as detrimental as spending too much time in bed.

GONORRHŒA

(γόννη, seed; ῥέω, to flow).

Definition.—The name, etymologically, denotes an involuntary discharge of semen, but is generally applied to a contagious inflammation of the urethra giving rise to a purulent discharge. Other parts of the body are

frequently involved in an attack, and complications, frequently of a rheumatic character, also accompany the malady.

Symptoms.—Smarting during micturition, a sparse, viscid discharge, and a redness of the parts are generally the first indications; and if severe some amount of inflammation shows itself very early. Feverish symptoms do not generally manifest themselves till several days later, and at the same time there is generally a swelling of the parts, especially of the urethra, accompanied by a copious yellowish-green discharge. Inflammation is manifested first in the urethra and surrounding tissues, and then vesical inflammation is excited by sympathetic irritation when the neck of the bladder is attacked. In the most acute stage of gonorrhoea there is uniform congestion; and as the inflammation becomes subdued it is replaced by granulations, which sometimes develop into warts, causing abscess or gleet.

The habits of the patients lead to great variation from the usual symptoms and duration of the attack; but in all cases a relapse or return of the acute stage is common, generally terminating by a gleet, which may last for almost any length of time—up to eighteen months or two years. The first attack itself subsides gradually in from four to six weeks; but if any neglect of proper precautions against irritation takes place, the attack will be prolonged for some weeks longer.

Treatment.—This disease, from its peculiar character, is very frequently entrusted for its cure to quack doctors and advertisers of secret remedies. It is impossible to warn patients of the dangers to which they thus expose themselves; but a strict avoidance of, in any way, recommending nostrums will contribute to this desirable end.

The patient must be warned against taking excessive fatigue, riding being especially injurious at this time; rest is very important, and should be strictly enjoined. A light farinaceous diet should be adhered to, as far as possible, milk and eggs being also suitable; indulgence in stimulants should be forbidden, any form of alcohol being very injurious, and even strong tea or coffee or

much meat food being deleterious. The most suitable beverage is effervescing potash water, to which fresh lemon juice has been added; the citrate of potash so formed being one of the best possible remedies for the irritated urinary surface. (Whitla.)

The remedial treatment must be of two classes, local and internal, both are equally important for the well-being of the patient. If advice is applied for before any definite symptoms display themselves, a simple injection should be given, such as of creolin (30 minims to an ounce), permanganate of potassium ($\frac{1}{2}$ grain to an ounce), carbolic acid (5 minims to an ounce), or, in fact, almost any drug that is antiseptic, and at the same time, not astringent. Perchloride of Mercury ($\frac{1}{2}$ grain to 16 ounces) is recommended very highly by many authorities, and numerous cases are on record of the efficacy and reliability with which the drug has acted; but it is preferable that the reader should use the less harmful preparations mentioned above, unless in exceptional cases when, perhaps, the services of the physician should be applied for.

All injections should be used slightly warmed; and the most convenient form of prescribing, is a double strength solution with instructions: "To be diluted with an equal quantity of hot water before using." This gives about the right temperature with but little trouble.

If the circumstances of the patient admit of it, injections should be used dilute and more frequently—this being much more effectual than using a stronger solution only occasionally. When the attack has become well developed, the strength of the injection may be increased, and used more often, the same drug being used as at first. Upon the later stages of the attack being reached, when a more copious discharge takes place and the patient is comparatively free from pain, the injection may be changed for one more astringent, and the following is often beneficial:—

R	Zinci Sulph.	.	.	.	.	.	gr. iv
	Aluminis.	.	.	.	.	.	gr. vj
	Aquæ	.	.	.	.	.	ad ʒij
M.							

A large number of remedies are in use, which may be used in place of this solution, such as lead acetate, zinc acetate, chloride, and sulpho-carbolate, tannic, boric, salicylic, and carbolic acids, silver nitrate, and strong solution of perchloride of iron; each of them have their advocates; probably any one will be found to answer well if properly used.

Soluble bougies, containing these antiseptic drugs in a basis of cocoa-butter or gelatine, are often used, and have an advantage in that their application is prolonged, because the melting of the bougie is gradual; further, the oleaginous character of the base often has a curative and palliative effect upon the irritated surface of the urethra.

Turning now to the internal treatment, the two principal remedies are santal oil and balsam of copaiba, both of which act similarly; but the former is the more pleasant, and less likely to cause disagreeable eructations than the latter. The capsular form is, of course, convenient, because of its portability and the comparative pleasantness with which it can be taken; but if not at hand, the remedies may be prescribed in emulsion, or as an electuary, in the latter case made up with powdered cubebs.

A useful prescription for a copaiba mixture is this:—

R	Balsam. Copaibæ	ʒj
	Liquor. Potassæ	ʒss
	Sp. Æther. Nitros.	ʒss
	Tinct. Hyoseyam.	ʒij
	Aquæ	ad ʒviij
M. ft. M.	A tablespoonful to be taken three times a day after meals.	

If santal oil is used instead of copaiba, a similar formula may be used, but the dose must be smaller,—from 15 to 20 minims, instead of the 30 minims of balsam ordered in above prescription.

The copaiba or santal oil treatment is continued for two or three weeks, and is then succeeded by a course of perchloride of iron, given in doses of 10 to 15 minims three or four times daily, until the symptoms finally pass off.

If the attack be a very acute one and febrile symp-

toms are prominent, it is well not to give the santal or copaiba until the fever has subsided, a mixture of tincture of aconite, antimonial wine and solution of acetate of ammonia being administered instead, in the interim.

A painful erection of the penis, a symptom termed chordee, is occasionally severe during the acute stage of gonorrhœa; and the treatment must be directed to the alleviation of the pain. Warm baths are very useful, and an enema of warm water often affords relief. Suppositories of camphor and morphine ($\frac{1}{2}$ grain), or opium may be recommended; or, in severe cases, a subcutaneous injection of cocaine may be used.

Gonorrhœa is frequently complicated by inflammation of the bladder and of the eyes, as well as by acute rheumatic pains; and when such is the case, the patient should be urged to seek medical advice, or the foundations of some chronic disease may be laid.

GOUT

(*gutta*, a drop).

Definition.—The name gout is of very considerable antiquity, and its origination proportionately obscure. The disease itself is characterized by the presence in the blood and fluids of the body of excess of uric acid or of alkaline urates. A certain amount of uric acid, so minute as to evade ordinary tests, is a constant bye-product of various nutritive processes; but under normal conditions this is excreted by the kidneys or destroyed in the body. If, however, instead of being thus got rid of, it accumulates in the system, the symptoms of gout are developed, and uric acid can be obtained, even sometimes in the crystalline form, from the blood and from the fluids that diffuse from it into the vascular and non-vascular structures of the organism. As the chief causes of gout are regarded heredity, error of diet with deficient exercise, and lead poisoning.

Symptoms.—Acute gout of the joints generally attacks the great toe in the first instance; but the disease

may first appear in any of the smaller joints of the foot or hand. There is redness and swelling locally, accompanied by severe pain, which commonly increases in intensity, especially towards evening, and tends to diminish during the day. General symptoms, as fever, disturbances of digestion, scanty, high-coloured urine, restlessness, and more or less sleeplessness are also commonly present. The duration of the first attack is uncertain, varying from four or five days to weeks. Recurrence is common, the intervals between the attacks becoming gradually shorter and the number of joints implicated larger. The disease tends to involve all the joints, and as they become the seats of morbid deposits and changes more or less deformity of the limbs is general.

Thus the disease gradually assumes a chronic character, all the joints becoming changed in form, stiff and crippled in movement. The deposits of urates about the joints produce pressure upon the skin, which may give way, indolent ulcers, without any tendency to heal, being formed, from which the deposits may be discharged. The patients sometimes exhibit general feebleness and lack of tonicity; but not infrequently the reverse may be the case, the system appearing to become habituated to the abnormal condition of the blood.

When the disease attacks the viscera, the vascular system, or any part of the organism other than the joints, it is spoken of as irregular; but these varieties of the affection need not be considered in detail here. In practice it is a customary proceeding to treat almost any affection occurring in a person known to be of gouty diathesis by specific remedies; and although the assumption that the gout is at the bottom of all such affections is obviously unjustifiable, yet the number of cases in which benefit follows treatment based on that view is very considerable.

Besides the local and general symptoms already mentioned, chronic gout is frequently accompanied by persistent skin diseases, by catarrhal affections of the respiratory passages, and by the formation of gravel and urinary calculi.

Treatment.—A great feature in the treatment of gout

is diet; excess of food must be avoided, meals taken regularly, and very frequently the amount of meat consumed should be diminished, as all food rich in nitrogen is known to aggravate the disease. Beef especially is to be avoided, as also pork, dried and salted meats, and rich foods of all kinds. In the selection of vegetables, as indeed of all articles of diet, it is important to avoid such as contain much woody fibre and other indigestible matter. It seems to be further advisable for gouty subjects to avoid saccharine substances and salt, while celery and orange or lemon juice are believed to be especially useful. Ordinary water, potash or lithia water may be drunk, and among alcoholics spirits are better than wines or beer; malt liquors and the more potent wines should be given up, or at any rate taken in reduced quantities. Excess of every kind is to be avoided, and the patient must live under good hygienic conditions, not exposing himself to cold, draughts, the atmosphere of heated and crowded rooms, etc. Excessive mental strain, worry and anxiety of all kinds are injurious to gouty subjects, and liable to bring on attacks.

These may be classed as preventive measures; and there is little doubt that if rigorously followed, they are sufficient to arrest the progress of the disease and prevent the occurrence of acute attacks. Few patients, however, can be induced to persevere in habits of life so restricted and carefully regulated, so that after all acute attacks may have to be dealt with. When such occur in young robust patients, nitrogenous foods should be cut out of the dietary for a time. Of drugs, colchicum seems to be the most suitable; it may be advantageously combined with alkalis or in effervescing mixtures containing bicarbonate of potassium. The following formula may be taken as suitable,—

R	Tinct. Colchici	.	.	.	.	.	ʒij
	Potassii citratis	.	.	.	.	.	ʒiij
	Magnesii carbonat	.	.	.	.	.	ʒi
	Aquæ Menth. Pip.	.	.	.	.	.	ad ʒvj
M. ft. M.	One sixth part to be taken every four hours.						

Salicylate of soda has also been much used in doses of

30 grs. at the beginning of an attack, followed by 15 gr. doses every four hours; it seems to be of real service in assisting the elimination of the excess of uric acid. Another remedy of more recent introduction is piperazine, a base which possesses very remarkable powers of neutralizing uric acid and forming a readily soluble urate of piperazine. Given internally in daily doses of 15 to 30 grs., good results have been recorded in a number of cases, and the compound seems to be worthy of more extended trial.

Locally, the treatment indicated is such as relieves the pain. In some cases it will be sufficient to envelop the affected part in warm and dry cotton wool over which thin mackintosh or other impervious material is laid, so as to form a kind of local vapour bath. The limb is then lightly bandaged and placed in a horizontal or elevated position, according to which affords the patient most relief. If, however, the pain be unbearable, local applications may be resorted to, of which the best seem to be warm fomentations (especially of poppy and chamomiles), liniment of belladonna or aconite, glycerine of belladonna, and anodyne ointments. After the acute symptoms have subsided, stimulating liniments and other similar measures against stiffness, œdema, and venous enlargement may be cautiously employed.

When the disease has assumed a chronic character, the remedies already mentioned as useful in acute attacks,—colchicum, salicylate of soda, piperazine,—may be regarded as indicated. Besides these, other favourite drugs are iodide of potassium (5 grs. three times a day), guaiacum, phosphate and chloride of ammonium, and alkalies, especially potash salts.

HÆMORRHOIDS

(αἷμα, blood; ῥέω, I flow).

Definition.—A disease consisting of inflammatory swellings of the tissues connected with the anus, and occasionally eversion of the internal mucous membrane. It is caused by the hæmorrhoidal blood-vessels going to the

lower part of the rectum becoming dilated and varicose; according to the position of the swellings, inside or outside the sphincter muscles, the hæmorrhoids, or piles, as they are commonly called, are spoken of as internal or external.

Internal piles are not generally painful until they have developed to such an extent as to become protruded at each expulsion of the fæces. Their appearance varies at different times, being only like a soft tumour when not irritated; but when congested and protruded, after a heavy meal or an indulgence in stimulants, they form large tumid swellings, of a smooth surface and dark-red colour, very liable to bleeding. In number, they may be as many as four or five, or there may be only one or two.

External hæmorrhoids are swellings, which frequently contain a dark-coloured coagulum enclosed in a cyst, but may occur in a more developed form, the coagulum having been absorbed. They may be the result of ulceration of the rectum or stricture, or of an irritating discharge from the lower bowel, and vary in number from one to seven or eight.

Internal hæmorrhoids frequently co-exist with external ones.

Symptoms.—These vary according to the constitution of the patient and the stage of the complaint. Frequently no inconvenience is suffered from them unless they are irritated by a strong purgative or an unusually costive motion; or, as mentioned before, when they become congested by excess of stimulants. In fact, the formation and growth of piles seem to arise chiefly from a determination of blood to the rectum.

They cause occasionally a feeling of heat and itching at the anus, much increased by a costive motion, which frequently causes a bleeding from internal hæmorrhoids. These latter may become exceptionally painful from excessive growth, whereby they protrude from the anus, causing great irritation and soreness. It may be necessary for the patient to remain in a recumbent position, being exceedingly troublesome when standing or walking.

Strangulation of the hæmorrhoids sometimes occurs when they protrude and are not returned; they then often mortify and slough off, which seems to be a sort of natural process for relieving the patient of the disagreeable complaint.

Internal hæmorrhoids are sometimes given to bleeding, especially after defæcation, and this may be beneficial to the health of the patient, helping to ward off attacks of gout or apoplexy, and relieve congestion of the kidneys and liver. On the other hand, hæmorrhage may be a bad sign; and, if excessive, the advice of a physician should be taken upon the subject, as it may lead to complete derangement from loss of blood, and general weakness and loss of strength.

The amount may be only a few drops mingled with the fæces at each evacuation, but may amount to even several ounces at a time, when it should be at once attended to by a medical man.

Treatment.—This must be directed towards improving the hygienic condition of the body generally, as well as to affording relief by local applications and otherwise.

The patient should be advised to take active open-air exercise as much as possible, and to avoid sedentary habits, though at the same time avoiding over-fatigue. The lower extremities must be specially protected from damp or cold, and the clothing, though warm, must not be excessive.

Attention should be paid to the diet, which, whilst regular and varied, must be plain and moderate, all tendency to excess or indulgence in alcoholic stimulants being avoided. It is well, if possible, to take such food as tends to keep the bowels slightly relaxed, as this obviates the necessity of taking constant purgatives.

But sometimes it will be necessary to take a laxative, as it is important that constipation shall be prevented, and for such a purpose, Compound Liquorice Powder, Liquid Extract or Elixir of Cascara, Confection of Senna, Confection of Pepper, or similar vegetable preparations are to be recommended in preference to mineral. Anal injections of glycerine are frequently productive of very

beneficial results, both as regards removing the constipation and soothing the irritated surfaces.

As regards local treatment, absolute cleanliness and frequent sponging with luke-warm water should be enjoined, whilst an occasional injection of 6 or 8 ounces of cold water frequently is followed by curative results. At different stages of the complaint, such remedies vary in their effect, at one time cold injections or ice being beneficial, and at others hot water and poultices; sometimes wet applications afford most relief, and at other times dry.

The ointment that is most frequently used is that of galls and opium, and is very useful as a local anodyne and astringent; Whittle always uses an ointment of conium, made by combining a concentrated juice with lanoline, to which is added sulphate of iron (15 grs. to an ounce).

Tincture of hamamelis with lanoline is often effective, and astringent injections such as alum, tinctures of hydrastis or hamamelis, iron perchloride or sulphate, or hazeline are also beneficial. Of course, suppositories, when convenient, can be substituted for other forms of medication.

HEADACHE.

Definition.—Any pain or uneasiness in the head, general or local, and arising from any cause. In character headache is exceedingly variable, as also in position. It has been laid down as a general rule, that when due to digestive disturbance, headache affects the fore part of the head, while purely cerebral headache is felt at the top, and that of anæmia at the back. On the other hand, of course headache in these positions may be due to other causes; thus, for instance, eye strain gives rise to frontal headache.

Symptoms.—These consist in pain in the head, sometimes localized, and sometimes more general. In some forms the face may be more or less flushed and a giddi-

ness, especially on stooping, is not uncommonly present occasionally the vision or hearing is also affected.

Treatment.—In the great majority of cases headache is purely a symptom, and the treatment must be directed to the putting right of the abnormal conditions which give rise to it. When due to anæmia or debility, the aromatic spirit of ammonia, strong tea, coffee or other stimulants should be taken; iron and quinine between the attacks are also indicated. The so-called congestive headache is relieved by aperients and counter irritation of the lower limbs. The value of lotions, iced water, eau-de-Cologne, are well known, and in certain cases bandaging the head tightly or holding the arms high above the head affords relief.

Nervous or sick headache is described under Migraine, but it may here be pointed out that antipyrine is not unfrequently effective in dispelling headache not of the character generally classed as migrainous, and may therefore be resorted to in obstinate cases.

HERPES

(ἔρπω, I creep).

Definition.—An eruption of vesicles occurring in groups upon inflamed areas of skin. Persons of gouty or rheumatic tendency seem to be especially liable to herpes, and it is often brought on by chill or by irritation of the mucous membrane. According to the position of the diseased patch, herpes is divided into different varieties, *e.g.*, herpes labialis, præputialis, facialis, etc. Herpes zoster is another well-known form of the affection.

Symptoms.—The inflamed area on which the vesicles of herpes form may be single or multiple, and varies in size from an inch or less in diameter to several inches. The patches appear to follow the direction of the principal nerve, as for instance in herpes zoster where, appearing over the intercostal nerves, a semicircle is formed round the trunk.

The vesicles appearing in groups vary in number and size. They contain a fluid which, at first transparent, be-

comes gradually opaque and purulent, and may assume a purplish colour owing to the presence of blood; after running a regular course of ten to twenty days a scab is formed which on falling away often leaves a permanent cicatrix.

The disease is characterized by burning, tingling and pricking sensations, and sometimes by severe pains of a neuralgic character.

Treatment.—As in the case of most skin diseases, constitutional and local measures are both indicated, although in slight cases the latter alone are sufficient to restore the skin to a healthy condition. When general medicines are given they should be tonic and stimulant to the digestive organs; quinine and anodynes may also be required when the pain is severe. Phosphide of zinc in small doses ($\frac{1}{10}$ grn.), frequently repeated, is said to diminish pain and shorten the course of the disease. Neuralgia following the disease may be effectively combated by quinine, antipyrine, and colchicum.

Locally, ointments of lead and zinc, and containing cocaine if necessary, are serviceable, the main design being to prevent the vesicles from friction until the spontaneous re-absorption of their contents. When vesicles have already formed, Unna recommends sulphur applied in the form of a gelatinous paste; while, if they have not yet broken out, he applies dilute ichthyol or a strong paste of zinc and resorcin, applications which are often effective in preventing the appearance of the pustules. Another plan, which is well spoken of, is to lay cotton-wool soaked in 90 per cent. alcohol on the affected parts and cover over with oiled silk; a few per cent. of resorcin, tannin, thymol, or other mild antiseptic dissolved in the alcohol is said to increase its efficacy.

HICCOUGH.

Definition.—Hiccough is a sudden closure of the glottis following on an inspiration caused by the spasmodic contraction of the diaphragm. The characteristic sound is due to the impact of the incoming air upon the

partially closed glottis. It may be produced by direct or indirect irritation of the nerve which supplies the diaphragm, the membranous envelope of the heart, that of the lungs, etc. The most common cause is distension of the stomach; but the use of certain irritant foods will produce it in some persons, and too hurried eating or drinking infallibly induce the spasms in others. Rarely, hiccough may be symptomatic of grave disease, such as peritonitis, gastric cancer, and it is also sometimes met with in the course of typhoid fever and cholera. Lastly, it seems sometimes to be of purely nervous origin.

Treatment.—Holding the breath, and drinking all round a cup without stopping to take breath, are popular methods of arresting hiccough; and it is generally known that a sudden fright will stop it in children, though resorting to methods based on this principle cannot be recommended. Sneezing has frequently the effect of cutting short an attack of hiccough, so that a pinch of snuff may be useful in some cases. Occasionally it may be necessary to relieve the stomach of irritating contents by inducing vomiting; but this is rarely called for. Sedatives, nitrite of amyl, ice, vinegar, strychnine, and other remedies have all been given with varying success; but the great majority of cases can be cured by quite simple methods.

HOARSENESS.

Definition.—Harshness of the voice, due to some abnormal condition of the larynx or throat. Such condition may be due to overstrain of the throat, as in singing or prolonged speaking, to exposure to cold and damp, to the formation of small tumours or indurations of the chord, to syphilis, etc.

Symptoms.—Well-known. The voice has a harsh, more or less croaking sound, or may be reduced in volume as well as changed in character. At the same time there is also frequently some amount of uneasiness in the throat, which may amount to actual soreness. The con-

dition of the larynx depends of course upon the cause of the hoarseness.

Treatment.—For the hoarseness due to overtaking the voice, as in singers and public speakers, the obvious indication is rest. In some cases, however, this measure cannot be at once adopted, but some means is required of enabling the patient to fulfil an engagement. Here, constant gargling with a $2\frac{1}{2}$ per cent. solution of glycerine of borax, with half as much tannin and under 1 per cent. of tincture of capsicum, will often do wonders. There is also a considerable variety of lozenges, tablets, and the like which are perhaps equally serviceable in many cases, and which have the advantage of being non-intermittent in action.

Inhalations of various kinds have been recommended for the relief of hoarseness; and there is evidence that chloride of ammonium is often of real service in such cases. Some years ago a good deal was written about the value of hydrogen peroxide and ammonia in strengthening and clearing the voice, but this does not seem to have been supported by experience.

Hoarseness due to the other causes specified will require distinctive treatment adjusted to each case. Those varieties of the trouble which are the consequences of organic changes in the vocal chords need not be treated here. When due to syphilitic lesions of the pharyngeal mucous membrane, specific general treatment is called for and the use of a simple chlorate of potash gargle, or a combination like the following:—

R	Potassii chloratis	.	.	.	.	ʒj
	Glycerini Boracis	.	.	.	.	ʒijss
	Aquæ Rosar.	.	.	.	.	ʒv
M. ft.	Gargar.	To be used frequently.				

IMPETIGO.

Definition.—This term seems to have been employed at one time to designate almost every form of inflammation of the skin attended by the formation of pustules. At present "Impetigo" is applied to eruptions of small

pustules with little redness or inflammation, and that merely superficial. The condition is symptomatic, as a rule, of defective nutrition, and indicates a debilitated condition of the skin. It occurs more frequently in children and women than in men.

Symptoms.—The vesicles of impetigo occur isolated, or in groups, being most apt to appear, at least in children, on the face, hands, and feet. The pustules vary in size from that of a pin's head to a quarter of an inch in diameter. The contents vary in appearance, being cream-coloured, yellowish, or colourless. After a day or two they dry up, leaving behind a crust which may retain its yellow colour, or be more or less changed and darkened by the presence of blood.

Treatment.—Generally a nutritive readily digestible diet and hygienic surroundings and manner of life are important factors in the cure of impetigo, which may always be regarded as an indication of a low condition of health. Various disordered conditions of the digestive tract may be the cause of the skin affection, and these must be put right by the appropriate remedies; tonics, such as iron, quinine, and cod-liver oil will be required after the local symptoms have been got rid of. The affection may be regarded as a form of eczema, associated with excretion of pus, and the treatment adjusted accordingly. The remedy selected depends somewhat upon the quantity of the discharge and the sensitiveness of the skin. Crusts are removed by warm fomentations, or, if this be rendered difficult owing to their hardness, oxide of zinc ointment or a lotion of lime-water and zinc oxide may be applied.

When the seat of the disease is the scalp, somewhat different measures are necessary. The application of bread poultices and assiduous sponging must be kept up until all scabs are removed; then the hair of the diseased patches and adjacent parts is cut short and the remedies applied. In the so-called impetigo contagiosa, which exhibits few features of a distinctive character except the infectious property of the fluid contained in the pustules, a diluted form of the ointment of ammoniated mercury, or

white precipitate, is recommended. A combination of one part of this ointment with three or four of unguentum zinci is a suitable application.

INDIGESTION.

(See DYSPEPSIA.)

INFLUENZA

(Latin, through Italian, meaning "an influence").

Definition.—A specific contagious epidemic affection of the mucous membrane of the respiratory tract; attended by febrile and inflammatory symptoms, a mucopurulent secretion, and prostration, and often followed by grave complications.

Outbreaks of epidemic catarrh have occurred repeatedly, being recorded from the middle ages down to the present time. Those which have appeared during the past two or three years have attracted a large amount of attention; and the various forms, symptoms, and sequelæ of the affection have been exhaustively studied and described.

Four distinct forms are generally recognised, which are described as (1) simple catarrhal fever; (2) nervous influenza; (3) the pulmonary form; and (4) the gastrointestinal form. Although the symptoms are generally severe, the disease cannot be regarded as particularly dangerous of itself.

Symptoms.—For the sake of clearness and convenience of arrangement, these may be considered under the sub-divisions given above, especially as they present considerable differences according to whether the attack be of the one form or the other.

(1) The greater number of cases met with in England comes under this class. The incubation period is believed to be two days; and frequently there is a feeling of indisposition for a longer or shorter time before the attack. Some of the earliest symptoms are dryness of the upper parts of the respiratory passages, a sensation of so-called

“tightness” about the chest, and a cough unaccompanied by expectoration. This latter, however, soon begins to be excreted, and at the same time copious nasal catarrh sets in; the chest symptoms become more marked, respiration being more or less difficult and painful as well as accelerated. Cold shivering occasionally giving place to a general feeling of heat, frontal headache, pain behind the eyes, lassitude and restlessness are also usual phenomena. In many cases dull aching pains are felt all over the body. As a rule, appetite is absent, there is constipation, and the urine is at first high-coloured and scanty; the skin at the outset may be hot and dry but soon becomes cool and moist.

(2) The nervous form is distinguished by the intensity of the pains in the head and spine; the remaining symptoms do not differ essentially from those described above.

(3) The pulmonary variety, which is characterized by the pronounced nature of the lung symptoms, or, perhaps it should be said, of the lung complications. The “tightness” of the chest and soreness of the throat are more severe than in the other forms, and respiration is more or less impeded. The exact nature of the lung affection may vary; commonly it is capillary bronchitis, bronchopneumonia, or intermediate varieties of these affections. Commonly the pneumonia is a sequel of capillary bronchitis, and differs from the ordinary lung trouble, so called, in being of shorter duration and in undergoing resolution more rapidly.

Influenza complicated by capillary bronchitis is marked by slight but frequent cough with scanty expectoration, and increased pulse-rate. As the disease progresses the difficulty of breathing becomes more marked, the expression of the patient’s countenance anxious, and the sputa increase in quantity. These cases appear to be more fatal than those in which the pulmonary affection takes the form of pneumonia, even though the latter may be associated with serious rheumatic and digestive disorder.

The onset of the pneumonia in influenza is usually marked by more or less local pain, which subsequently diminishes and can scarcely be regarded as a prominent

symptom. The difficulty of breathing, lividity and anxiety of the bronchitic form are also absent, and respiration does not exceed about 30 per minute. Some amount of delirium is not infrequent, and the weakness and other general symptoms of the affection are also present.

(4) The gastro-intestinal form is ushered in with vomiting, sometimes, but not always, associated with colic-like pains and diarrhœa. The catarrhal symptoms may be entirely absent or may only appear when the gastric symptoms have nearly subsided. The vomited matters are frequently tinged with bile, and the patient may present well-marked signs of the bilious condition. Pain is generally most severe in the head, and may assume an intermittent character, being more distressing at night and subsiding in the morning. The pulse exhibits frequently great irregularity, and may be either abnormally fast or slow.

Treatment.—It is scarcely necessary to emphasize the importance of avoiding any depressing measures in the treatment of a disease itself marked by severe prostration. Stimulants and the most nutritious foods are necessary in all the severer forms; but in the simpler, which alone need be considered here, the medicinal treatment called for is slight. The patient should have a warm foot-bath, take some diaphoretic, and go to bed. If the cough increases in frequency or severity, stimulating expectorants are useful, and counter-irritation to the chest gives relief. Nausea, or sickness, is met by effervescent with or without such local gastric anodynes as morphia or hydrocyanic acid. Quinine is a valuable remedy, and salicylate of soda and salicin have been largely used.

Among the new remedies recommended as more or less specifics in epidemic influenza, antipyrine and its derivative salipyrin have taken a prominent place, while phenacetine, exalgine, and phenocoll have also found supporters.

An important point is to induce the patient to remain in the sick room until the great prostration, which is one of the chief characteristics of the disease, has been overcome. There can be no doubt that many serious compli-

cations, and even fatalities, have been due to exposure before convalescence was fully established.

INTERTRIGO

(*inter*, between, and *tero*, I rub).

Definition.—A slight cutaneous inflammation or erythema, occasionally proceeding to actual lesion, produced by the friction of adjacent parts. Friction, however, is not the sole, and perhaps not even the chief cause, but moisture and heat play important rôles in the causation of the condition; it is of course made worse when irritating secretions are present. Frequently met with in infants about the perineum and in any deep folds of the skin, though sometimes occurring in adults, especially of corpulent habit; in the latter cases it will be found in the arm-pits and about the joints.

Symptoms.—The earliest signs of the irritation which gives rise to intertrigo are redness and heat. Then exudation appears, a muco-purulent excretion is poured out, and excoriations, rhagades, or fissures are liable to form, the disease assuming the characters of an eczema. There is indeed a tendency to regard the affection altogether as a form of eczema, and to treat it accordingly.

Treatment.—This is very simple and rapidly followed by good results if commenced sufficiently early. The opposing irritated surfaces are carefully washed with warm water and soap, dried as thoroughly as possible, and dusted with any soft drying powder, such as fuller's earth, zinc oxide, and the like. If, however, the surfaces are very moist with exudation, it is desirable to avoid washing, merely wiping the affected area with a soft cloth before each application of the remedy selected. Pastes or stiff ointments generally act better than lotions; and among ointments the unguentum zinci either alone or made stiffer by the addition of bismuth carbonate usually plays the chief part.

LARYNGISMUS STRIDULUS

(λαρυγγίζω, to vociferate; *strideo*, to creak).

Definition.—Spasms of the laryngeal, diaphragmatic, and other muscles of respiration leading to a more or less prolonged fit of suffocation. When breathing is resumed, on the abatement of the spasm, a shrill crowing sound characteristic of the affection is produced. As Laryngismus stridulus, or false croup, is purely a nervous affection, no local changes of any kind can be found in the air-passages. It appears to be often associated with the irritation of dentition, and has been brought on by a sudden fright, or by any agent which irritates the larynx.

Symptoms.—Sometimes an attack of Laryngismus is preceded by symptoms characteristic of general lack of nervous equilibrium, such as spasmodic movements of the limbs, sometimes it comes on at night without any warning. The child suddenly gives signs of impending suffocation, breathing becoming very difficult, and accompanied by the crowing sound alluded to. The duration of the attack is variable, as also is the intensity of the symptoms; in severe cases respiration may be entirely suspended for a time, so that the attack seems to be on the point of terminating fatally when the spasm relaxes and respiration is resumed. Death does occur rarely as the immediate result of the suffocation produced by the spasmodic arrest of respiration. From acute inflammation of the larynx, which in some forms resembles true Laryngospasm, it is distinguished by the absence of febrile symptoms, by the more pronounced interference with respiration, and by the absence of the croupy cough which is a common and conspicuous phenomenon in acute Laryngitis.

Treatment.—During an attack the child should be placed as soon as possible in a warm bath, while an emetic will also be useful in some cases. The use of a small quantity of chloroform vapour is generally recommended but is rarely necessary. It may sometimes happen that, although the spasm has passed off, breathing

is not re-established ; in such cases it will be necessary to resort to the usual methods of stimulating the respiratory muscles by reflex irritation, such as dashing cold water on the chest, applying ammonia vapour to the nostrils, etc.

For the prevention of the recurrence of such attacks, the chief indication of course is to restore the tone of the nervous system. Any disturbance of function in the digestive organs must be treated by appropriate remedies and the hygienic surroundings of the child made as perfect as possible. Some authorities recommend the persistent use of bromides or of chloral. Antipyrine in small doses (1 grn. every hour for a 12 months child) has also its supporters.

LARYNGITIS

(*λάρυγξ*, the larynx ; and *ίτις*, inflammation).

Definition.—Inflammation of the mucous lining and subjacent cellular tissue of the larynx. It may be acute or chronic in nature, and the appearance presented by the affected organ varies somewhat in the two cases, as also do the more subjective phenomena. Other varieties of laryngitis are commonly recognised, but need not be taken into detailed consideration here. The affection is frequently a sequel to ordinary catarrh, and is also commonly present in the so-called exanthematous fevers.

Symptoms.—The development of laryngitis from catarrh is accompanied by restlessness and anxiety, as well as by general evidences of the onset of a graver affection. The pulse rate increases, and the temperature rises slightly. Locally the usual symptoms of inflammation are discernible (though not always without the laryngoscope), the voice and respiration are altered in character, and there is some cough, occasionally of a croupy character. Swallowing is painful, and more or less difficult. If the case goes on from bad to worse, all these symptoms become aggravated, and respiration more and more difficult, until, being insufficient to effect the neces-

sary oxygenation of the blood, semi-coma is produced, and a fatal issue may result.

The chronic variety may be due to injudicious care of the throat and voice after an attack of the acute form. Habitual straining of the voice, as by singers and public speakers, is also a common cause of the affection, especially when simultaneously the patients are great smokers, or addicted to alcohol.

Symptoms.—Hoarseness, and more or less pronounced loss of voice, especially after an unusual call has been made upon the vocal powers, are prominent symptoms. There is, further, dry cough, with slight pain in the throat, which is also felt during swallowing. Embarrassment of respiration is only experienced after any exertion of more than ordinary severity.

Treatment.—This may be most conveniently considered under the two subdivisions adopted in describing the symptoms, namely (1) acute, (2) chronic.

(1) *Acute.*—An important indication in the treatment of an attack of acute laryngitis is to act promptly and vigorously. Even slight symptoms call for confinement to a uniformly warm room, and the application of anti-phlogistic agents, both externally, in the forms of compresses or poultices, and directly as vapours. The affected part must be as completely rested as possible, and in most cases it is advisable to forbid the use of the voice at all. Warm soothing drinks of a sudorific character should be given; and small doses of the hydrochlorate of morphia and solution of acetate of ammonium are recommended. If the symptoms become aggravated in spite of all these measures, no delay should be made in summoning competent medical aid, as operative interference may be called for. In the majority of simple cases, however, this will not be necessary, and the symptoms will soon abate under careful treatment of the kind indicated; a weak tannin gargle with mel rosæ will be found useful in the later stages of the affection.

When the patients are children, an emetic is considered indicated, followed by warm applications to the throat externally.

(2) *Chronic*.—Here again rest for the larynx is an essential feature in the treatment; and some importance attaches to the improvement of the hygienic surroundings of the patient as far as possible. Of local remedies nitrate of silver is the most favoured; a solution of the strength 10 to 20 grains to the ounce may be brushed daily over the larynx, and its action supplemented by various sprays or vapours, especially of the terebinthinate balsams, of eucalyptus, creasote, menthol, carbolic acid, etc. Astringents are also sometimes useful, and chloride of ammonium does good service in many cases.

LIGHTNING INJURIES.

Remarks.—The number of injuries due to lightning which come under notice are not numerous, but with such as are occasionally produced by atmospheric electric discharges may be classed those, becoming more common, which are connected with the increasing use of electricity for economical and technical purposes. The effects produced by the force under both conditions differ only in severity; they may be considered as mechanical and nervous.

Symptoms.—Shock or collapse is a common effect of injuries by electricity. The patient is often insensible for a longer or shorter period, and all the vital functions are greatly retarded. After the return of consciousness the nervous effects of the shock become apparent in partial paralysis of some of the limbs, or in sensory aberrations. After lightning stroke, the cerebral functions are sometimes affected, and delirium is on record as having followed such accidents. Very frequently in these cases the body is more or less marked by the passage of the current, lesions of the skin being especially evident at the points where the fluid entered and left the body. The surface will be reddened, and even scorched in places, and effusion of blood under the skin will lead to the development of discoloured patches.

Treatment.—This resembles that described under COLLAPSE and SHOCK so far as the preliminary measures

are concerned. The chief object, of course, is to re-establish the normal activity of the heart and organs of respiration by the application of cold (with warmth to the extremities), and the use of alcoholic stimulants and ammonia by the mouth. When by these means the vital functions have been restored, the objective symptoms may be attended to, burns being treated in the methods described in the chapter dealing with them, and nervous symptoms by appropriate treatment under skilled medical guidance.

LUMBAGO

(*lumbus*, the loin).

Definition.—Pain in the lumbar region of a neuralgic or rheumatic nature. Generally affects the muscle which maintains the upright position of the spine (erector spinæ), but sometimes the smaller bundles into which it subdivides. It may be mentioned that in neuralgia affecting these parts, the seat of the pain is well-defined, while in lumbago proper, though the muscles are painful when compressed by the hand or fingers, the sensation is not acute or localized. Lumbar pain is a frequent accompaniment of sciatica and rheumatism of the hip-joint.

Symptoms.—In common with other forms of muscular rheumatism, lumbago is attended by some amount of fever. The affected muscles are painful only when in a state of contraction—a state which they are apt to assume on the slightest movement, a kind of cramp setting in, which is exceedingly painful. General symptoms depend upon the severity of the case and the amount of febrile disturbance present; they may be scarcely appreciable or well-marked, with constipation, loss of appetite, and malaise. Sometimes the patient is obliged to lay up, but more frequently can get about with difficulty, assuming a familiar stooping posture.

Treatment.—The application of heat in various forms is the most effectual means of relieving the pain. Good service is done by hot baths (about 110°F.), Turkish baths, hot compresses, the application of a hot laundry-iron (the

skin being protected by stout brown paper), etc. Anodyne liniments may also be applied warm, various combinations of the liniments of chloroform, belladonna, and aconite being the favourite applications. They are advisedly sprinkled freely on spongio-piline, and this fastened *in situ*. Belladonna plaster, or a composite plaster of equal parts of belladonna and opium, is effectual in slighter cases. The plasters are of special service when the acuter stage is passed, and some amount of movement becomes possible again.

Internally a number of remedies have been recommended, as for muscular rheumatism generally. Soda salicylate, or salol, antipyretics, effervescing potash salts, and diuretics are all in turn useful, while ten-drop doses of the tincture of gelsemium every few hours will frequently exert a magical effect.

As in all affections of a rheumatic character, great care must be taken after recovery to avoid conditions likely to bring about recurrence. The loins should be carefully protected from cold; but at the same time it is not wise to recommend the constant wearing of flannel or other bands, save perhaps in chronic cases. Exposure to damp and draughts is, of course, to be avoided.

MEASLES

(Dut. *maseln*, small spots).

Definition.—Measles, or Rubeola, as the disease is also commonly termed, is a specific infectious exanthematous fever, generally occurring epidemically, and probably never appearing twice in the same person. Measles is most fatal to children under two years of age, but is rarely regarded as meriting the name of a grave disease. The period of incubation is from ten to twelve days, during most of which period the contagious principle seems to be given off.

Symptoms.—The first stage of measles resembles an ordinary cold; fever, pains about the body, and perhaps sickness, are followed by catarrh, and the usual symptoms of a cold in the head, which increase in severity; the

lymphatic glands of the neck will be found to be enlarged. By the third day a few spots appear on the forehead and cheeks, while by the fourth its appearance is unmistakable. The temperature goes up, and delirium is general. As the rash develops these symptoms abate, and the stage of decline is entered upon. The chief danger here is fall of the temperature below the normal; sometimes the cough reappears, and is followed by the development of lung symptoms, such as pneumonia. Inflammation of the auditory apparatus is not an uncommon accompaniment of the later stages of measles.

The rash of rubeola is deep red, slightly raised above the general surface, and rough, feeling like shot beneath the skin, and frequently arranged in groups with the outline of arcs of circles of varying size. The integument of the face swells to some extent, and is the first seat of the rash in the majority of cases; the eruption spreads to the neck and chest, and over the greater part of the body, becoming more sparse at increasing distances from the head. Within about twenty-four hours the swelling of the face goes down, and the spots are no longer elevated above the surface; they gradually fade away,—leaving a mottled coppery discoloration of the skin where they were most marked,—in the reverse order to that of their appearance. Organic changes in the structure of the integument do not seem to be produced by the eruption of measles.

It is well to bear in mind that a high temperature (105°F . in children, or 104° to 104.5°F . in adults) during the second, or eruptive, stage of measles is not dangerous or indicative of a serious course; but in the third, or abating stage, such a degree of fever is only the result of complications. As already intimated, the most common of these are lung affections, especially in cases where patients are in crowded rooms with defective hygienic surroundings.

Treatment.—All the specific fevers of the class known as exanthematous require to be treated on the same general lines. The administration of drugs is unnecessary, and of little use, at least, in the earlier stages. Subsequently troublesome symptoms may be met by appropriate

remedies ; but in general, rest, pure air, a uniform moderate temperature, and abundance of liquid nourishment are the most important factors in the treatment. The first requisite is ensured by putting the patient to bed, the second and third by selection of a large airy room, with an open grate and sufficient means of maintaining the temperature at 60° to 65°F. By placing screens round the bed ventilation can be ensured without subjecting the patient to draughts. Owing to the swelling of the eyelids, and inflammation of the conjunctivæ, there is more or less intolerance of light, and the room should therefore be moderately darkened. The absolute exclusion of light sometimes effected is, however, quite unnecessary, and can do no good. The bedding should be of the simplest nature—a hard palliasse on a spring mattress is the best—and the bed-clothes sufficient, but light. All unnecessary furniture should be removed from the room, and generally the fittings arranged to offer as few surfaces as possible for the lodgment of infectious particles. The air of the room may be occasionally freshened by spraying ozonized water, aromatic vinegar, or essential oils of the pine or eucalyptus kind. The excreta should be passed into vessels containing suitable disinfectants.

These are the most important factors in the treatment of measles ; the patient is placed under conditions favourable to the running of a mild course by the disease, and the risk of complications is reduced to a minimum.

It must be remembered that nothing is gained by checking the fever which precedes and accompanies the rash ; but that, on the contrary, accidental influences that may produce such a result (*e.g.* a chill) must be avoided as positively dangerous. With the full development of the rash the febrile temperature falls, appetite returns, and the patient regains to a large extent the normal brightness and cheerfulness.

So far we have considered in outline the course of a mild and favourable case of measles. Something may now be said of individual symptoms, which in certain instances require special consideration and treatment. Thirst is met by diluent drinks, which may be taken

freely; the popular prejudice against allowing liquids to fevered patients has no sound foundation. If very distressing, this symptom may be combated by allowing the patient to suck small pieces of ice frequently.

Occasionally the cough may be very troublesome; in that case a bronchitis kettle and warm compresses externally will be useful. Symptoms of croup or bronchial troubles are met by treatment of the kind described in previous chapters; diarrhœa in the last stage of the affection does not call for treatment unless excessive and debilitating. The condition of the eyes requires watching, and any local troubles in the ears or mouth should not escape attention; any of these symptoms require treatment on the general lines laid down in the special articles dealing with them.

With respect to the diet during the course of the disease little need be said. Liquid food is most appropriate if the ordinary meals cannot be taken; milk and meat broths may form the staples. Wine and other stimulants are by no means always necessary, but when the full appearance of the rash is followed by symptoms of weakness, depression, and restlessness, with lack of appetite, wine is often indispensable, and its administration produces the happiest results.

Finally, too much stress can hardly be laid upon the importance of watchful care and attention during the period of convalescence, and even when all danger is commonly believed to be over. Great variations of temperature should be avoided, and open-air exercise should be much restricted for at least a month after the attack. Anæmia may be met by iron and cod-liver oil, and all hygienic measures designed to give tone and vigour to the system (*e.g.*, cold bathing) are of service.

MIGRAINE.

Definition.—A neuralgic pain affecting one side of the head, generally periodical in nature. Migraine (syn. *megrin*, sick headache, nervous headache) is often preceded by some premonitory sensory disturbance, and

accompanied by symptoms of gastric disorder. Almost any influence of a depressing nature, such as mental strain or excitement, intemperate habits, or defective hygienic environment, may induce attacks of migraine.

Symptoms.—The sensory disturbances mentioned as frequently preceding attacks of migraine are generally visual, consisting of the appearance in the field of vision of wavy glimmering bands or patches, which enlarge and fill the whole area. At the same time some general symptoms are experienced, such as sensations of chilliness, etc. In other cases the visual symptoms are substituted by purely nervous phenomena, manifesting themselves as restlessness, gloomy presentiments.

These premonitory symptoms do not last long ; after a period extending over five minutes to half an hour, the headache sets in with slight pain in the temple, which rapidly becomes more severe, and has been described as piercing or boring. At first it is very localized and relieved by pressure, but gradually spreads over one side of the head. The visual phenomena disappear, but nausea and vomiting set in and the head-pains, involving the eyeballs, become (in severe cases) so intense that light is intolerable and the slightest movement aggravates the suffering. After some hours the attack is generally terminated by sleep, but the patient is left depressed and mentally worn out.

This may be said to be the course of a typical severe case of migraine. The symptoms are, however, liable to much variation. The pain in the head need not have the exact character described, nor is it always severe and of long duration. In the majority of cases it seems to be hemicranial, though all patients do not notice this unless it is pointed out ; in slighter cases it is not so severe as to necessitate the recumbent posture, and the gastric symptoms are not invariably present.

Treatment.—As soon as any premonitory evidences of an approaching attack are felt, the patient should assume the recumbent position, with the head low ; an alcoholic stimulant is recommended, and means should be taken to combat any chilliness. Where mental depression and

other nervous symptoms are more marked, valerian and asafoetida are indicated, 30–60 minims of the ammoniated tincture of the former or of the ammoniated spirit of the latter being a suitable dose. When the headache is slight little treatment is called for, but when it is severe local and general treatment is necessary. Cloths dipped in cold water or evaporating lotions, ice, sprays of volatile ethereal liquids, or on the other hand the application of warmth, anodyne liniments and ointments, and menthol are the principal forms of useful local treatment.

The number of remedies employed internally against hemicrania in all its stages is very great; but the success which attends their administration is uncertain. Idiosyncrasy and other little-understood factors play an important part in determining the influence of medicaments upon the affection. The older remedies resorted to during the headache were potassium bromide and ammonium chloride. Typical forms of prescribing these are:—

R	Potassii bromidi	ʒiiss
	Tinct. Hyoseyami	ʒiij
	Spirit. Ammon. arom.	ʒiij
	Aquæ Chloroformi	ad ʒvj
M. ft. M.	A sixth part to be taken every two hours.	

R	Ammonii chloridi	ʒiiss
	Spirit. Chloroformi	ʒij
	Tinct. Lavand. co.	ʒiij
	Aquæ	ad ʒvj
M. ft. M.	A sixth part to be taken every two hours.	

Of late years the field has been taken by the synthetical antipyretics and analgesics. Antipyrine, in doses of five grains two or three times an hour, either alone or in combination with bromide, caffeine, extr. cannab. Ind. and other adjuvants is very highly recommended, and regarded by a number of writers as capable of meeting every requirement. Exalgine (2–3 grns.), salicylate of soda (20 grains) in combination with effervescing caffeine preparations, chloral hydrate, guarana, nitroglycerine, are the principal variations upon the antipyrine treatment now general, and are all useful in certain cases.

Migraine is spoken of in the earlier part of the foregoing as periodic in character. Owing to this tendency of the affection to recur, various methods of preventive treatment are also adopted between the attacks, with the object of lengthening the intervals or of altogether curing the condition. Tonics, nutritives, and all measures calculated to raise the standard of health are important. Extract of Indian hemp ($\frac{1}{3}$ grn., night and morning) is well spoken of; but a long course of minute doses of arsenic ($\frac{1}{12}$ grn. of the arseniate of soda twice a day in pill) which may be combined with extr. cannab. Ind. seems to give the best results. Sometimes success follows the prescription of bromides in daily doses for a prolonged period, especially if the bowels are kept regular by the judicious employment of cascara.

MUMPS.

Definition.—An infectious, inflammatory, and febrile affection of the parotid gland or glands (hence also termed “parotitis”). Mostly met with in children, but not uncommon in adults; patients seem to be capable of communicating the disease during the later part of the incubation period, which extends over one to three weeks and for two or three weeks after the symptoms have subsided. The attack generally confers immunity from succeeding infection to which the individual may be exposed.

Symptoms.—The nature of the premonitory symptoms is variable. Commonly about a week after infection there is some amount of weariness, malaise, and shivering fits. The onset of the characteristic enlargement of the gland (one being generally affected at a time) is generally preceded by restlessness, which will be accompanied by fever and pain, or the two symptoms are concurrent. The temperature varies between 100° and 104° , but rarely stands very long at the latter high level; the appearance of the swelling of the glands is mostly followed by abatement of the fever, though this is not invariably the case. Local pain may be slight or severe, and does not mani-

fest any proportionate relationship to the extent of the glandular enlargement. There is, however, almost always great difficulty in opening the mouth; the acts of mastication and speaking are also attended with pain. The skin of the swollen area rarely presents any difference in appearance from that of the rest of the face, but it may be slightly hyperæmic.

These symptoms last for about a week, towards the end of which they begin to abate, and a few days later entirely disappear, leaving occasionally more or less induration of the gland.

As already pointed out, the glands of both sides of the face do not commonly pass through the morbid process simultaneously. More usually, the partial or complete subsidence of the symptoms on one side is followed by their recrudescence on the other.

Treatment.—When, as is usually the case, the patient is young, it is undoubtedly best to order rest in bed for a day or two during the acute stage of mumps. Though a slight affection, the discomfort and pain are sometimes rather distressing; and with quiet rest in bed it often runs a more favourable course, and the little patients the sooner recover their brightness and spirits. In any case, even when so mild as to render this measure unnecessary, confinement to one room kept at a uniform temperature is advisable, as well as avoidance of unnecessary exertion.

The general treatment called for is slight, being limited to the administration of simple afebrile remedies when there is much disturbance of temperature.

Locally, also, little interference is necessary. A pad absorbent wool held in position by a light bandage is generally sufficient; but if the pain be unusually severe, anodyne applications or soothing fomentations may be necessary. Cold applications are not advisable.

Occasionally the infection involves other glandular structures, such as the ovary or testis, the implication of these organs being marked by a rise of temperature and pain in the groins. The same mild treatment is indicated in these cases as in mumps proper. Warm

fomentation or bathing will be generally all that is necessary.

With regard to diet, it is only necessary to point out that, owing to the difficulty and pain of mastication, liquid food is most suitable while the glandular enlargement persists. Appetite returns often before eating becomes possible; but if there be any weakness after the attack has passed off, tonics are advantageously exhibited.

NEURALGIA

(*νεῦρον*, a nerve; and *ἄλγος*, pain).

Definition.—The simplest definition of neuralgia is implied in the derivation of the term; it signifies broadly nerve-pain. When spontaneous, and not a symptom of some other disease, neuralgia is regarded as being central in origin; but very little light has as yet been thrown upon its causation; and the changes (if any) in the anatomical structure of the nerves, which determine, or are produced by, the affection, are not understood. It is believed that in a few cases the inflammation originates in the nerve-sheath; but in a great number of instances even so much cannot be ascertained.

It is generally not so difficult to discover the influences which immediately lead to an attack of neuralgia, and act as "exciting causes." Defects in the nutritive processes, or anything which brings these about (malaria, unhygienic conditions of life, intemperance of all kinds), exposure to cold, especially moisture and cold, traumatic injury, syphilis, gout, and certain metallic poisons. Occasionally the affection is sympathetic or reflex in origin, as when, for instance, it is dependent on the irritation of intestinal parasites.

Symptoms.—Like many disorders of nervous character, neuralgia is preceded by some premonitory symptoms, mostly referable to the skin. At the onset of the attack the pain is slight and fleeting, occurring in "darting" paroxysms, with intervals of freedom from pain. These latter decrease in duration, until they are

scarcely, or not at all, appreciable, and the suffering becomes continuous.

The character of the pain is described differently by different patients; and of course it varies in intensity and duration under different circumstances. When a patient has suffered from repeated attacks, certain more or less well-defined centres of pain are distinguishable, which have been found to coincide with the position of a nerve-branching, or, in the head, with the point at which a nerve emerges from an osseous canal. The skin over the affected area is very commonly reddened; and when the pain is most severe it often radiates to some extent along the course of other associated nerves, by virtue of what is known as sympathy, but is never so intense as at the line of origin.

Neuralgia has a tendency to spontaneous exhaustion, the paroxysms becoming fewer in number and less severe as time goes on, until sleep ensues, and the patient wakes free from pain, but generally with some amount of cerebral weariness and discomfort.

Almost any large nerve-trunk may be the seat of "pain storms," as neuralgic attacks have been called, so that several varieties of the affection are recognised, such as trigeminal (so called because it affects the trigeminal, or fifth nerve, which supplies the eye, the upper and lower jaw, tongue, etc.), occipital (back and top of the head), brachial (neck, shoulders, arm, and hand), intercostal (about the ribs and spaces between them), lumbar, crural (thigh, knee, and inner aspect of the leg). Similar paroxysms of intense pain, nervous in origin (*i.e.*, not dependent upon organic or structural alteration of tissue), sometimes attack the internal organs; but these forms need not be more closely considered here.

Treatment.—The routine *modus procedendi* in all nervous affections, is to correct any abnormal conditions which lead to a departure from the standard of normal health, and by the aid of tonics, nutritious food, and hygienic surroundings, to strengthen and "tone-up" the general system. Anæmia, or chlorosis, for instance, must be appropriately treated; habits of over-work and ex-

cessive mental strain corrected, and means taken to relieve the pressure of grief, anxiety, or worry. The importance of warm clothing should also be insisted upon in those liable to repeated attacks. When the attacks are associated with rheumatism, they often yield to remedies regarded as specifically indicated in the latter class of affection, such as salicylate of soda, 20 grns. three or four times a day, or potassium iodide alone and in combination with quinine (3-8 grns. twice a day).

Phosphorus ($\frac{1}{36}$ grn. twice daily), or hypophosphites (5-10 grns.), chloride of ammonium, arsenic alone, or in combination with iron, strychnia, quinine, gelsemium ($\frac{3}{4}$ -1 grn. of the extract), croton-chloral (5 grns. every two hours), valerianate of zinc (in pills of 3-4 grns.)—these are a few of what may be termed the older remedies for neuralgia. As in the case of migraine, so here, the synthetical antipyretics have of late years been very largely employed. Antipyrine, acetanilide, phenacetine, salol, and exalgine, are the principal members of this class which have been employed, in the same doses as those mentioned under migraine, though they are not so successful in neuralgia as in hemicrania.

Local measures are similarly almost innumerable, a favourite *modus operandi* being to employ one of the many forms of counter-irritation available. Anodynes, again, of all varieties have been recommended, such as the ointments of aconitine, atropine, veratrine, sprays of chloroform, ether, methyl chloride, etc., camphorated chloral, and other combinations. Electricity is much used in advanced cases, and recently operative measures (nerve-stretching, etc.) have been resorted to, sometimes with striking success.

NIGHTMARE.

Definition.—A sensation of distress or suffocation coming on during sleep, attended with fright, unpleasant dreams, and sometimes with some amount of muscular incapacity. It is very frequently due to dyspepsia,

associated with and dependent on the taking of a heavy meal before retiring; but a condition closely allied to it is occasionally met with in persons who are subject to prolonged and severe mental strain.

Symptoms.—Well known, and needing little description. The exact form of nightmare differs under varying conditions. Sometimes the patient simply has terrifying dreams which do not awaken him; but in other cases he starts up in a condition of great nervous excitement from such dreams, and while still only partially awakened, the dream impressions are carried on into the waking state, and dimly-seen objects or imperfectly-heard noises become fresh sources of horrible images and ideas. Even after awakening is complete, the nervous excitement may persist, and the system require some time to regain the normal balance.

Treatment.—Manifestly it is of no use to prescribe medicines for the patient to take during an attack of nightmare, but some precautions are available in order to prevent the attacks. Thus, heavy suppers before retiring to rest should be avoided, soft feather beds should be substituted by hard mattresses; and where the attack is due to mental strain, the patient should divert the mind with some light cheerful literature for half an hour before retiring to rest. Where children are the sufferers, some watchfulness may be advisable to ensure their being thoroughly awakened when the nightmare begins, the mental excitement soothed, and, if necessary, vomiting induced, in order to free the stomach from irritating contents. Ammonia to the nostrils, and cold douching has been recommended, but are seldom necessary, save in cases where a patient is particularly subject to attacks.

NIPPLES, SORE.

Definition.—A condition of the nipples not uncommon in mothers nursing the first child, consisting in cracking of the integument and the formation of

fissures, which may ulcerate. In any case, great discomfort is produced, and suckling becomes impossible.

Treatment.—By the adoption of appropriate measures during the latter part of the first pregnancy, the trouble associated with this condition may be avoided. The indication is not, however, for the application of strong astringents, as these have the effect of hardening the skin and rendering it more liable to crack. A weak spirituous lotion (1 of S.V.R. in 4 of rose-water) may, however, be used, and if, at the same time, great cleanliness be observed, everything will have been done that is either advisable or necessary.

In certain cases, depression of the nipple, due to improper dress, leads to serious difficulty after a first confinement. The constant pressure of articles of clothing upon the breast forces in the nipple, so that the child is quite unable to grasp it. This condition, if noted early enough, may be remedied by constantly wearing for some months previous to confinement some form of the familiar shield. This, however, must be metal, or vulcanite (india-rubber being useless for the purpose), the idea being to cause the nipple to extrude by the pressure of the shield upon the areola and surrounding surface.

When excoriation has actually taken place, some of the mechanical contrivances introduced for the purpose may be useful, and healing may be accelerated by the application of the spirit lotion on lint. A 3-per-cent. solution of carbolic acid, glycerine of tannic acid, or of borax, are also useful applications. While the healing process is going on, it is advisable to allow the organ to rest, relieving tension by the use of a pump. In some cases even this may not be possible, and then it is necessary to avoid the dangers of over-secretion by the use of antagalactics locally and generally.

OTORRHEA

(*οὖς*, ὠτὸς, the ear; *ρέω*, I flow).

Definition.—A discharge from the external meatus of the ear, usually, but not essentially, purulent in

nature. The real origin of the discharge may be various in nature, but in a large number of cases it seems to arise from the organic changes produced in the blood by the exanthematous fevers (measles, scarlatina) of childhood. Otorrhœa is most frequently met with in scrofulous patients. Occasionally it may have a purely local origin, boils in the meatus, or inflammation of the walls of the canal leading to a discharge of pus or of mucus.

Symptoms.—Very frequently the sole important phenomenon of otorrhœa is the discharge. As already intimated, this may be either muco-purulent, or purulent and odourless, or highly offensive. In acute cases of ear disease, pain is also a common symptom. When the discharge has persisted long—and in some cases it may continue for many years if neglected—it has a pronounced irritant effect upon the skin of the surfaces over which it oozes, leading to excoriation and considerable discomfort. In these chronic cases there is almost invariably, or has been, perforation of the tympanum, and implication of the structures of the middle ear. The Eustachian tube also becomes more or less affected by the inflammatory changes, and some degree of deafness is usual.

Treatment.—It is advisable in all cases of otorrhœa to make a careful examination of the external meatus after gentle syringing. This can generally be accomplished fairly well without a speculum by drawing the auricle backwards and slightly upwards, having the patient turned towards a good light. In this way the condition of the canal may be examined, and the presence of foreign bodies, of polypi, etc., detected.

As a routine treatment, antiseptic lotions are the most satisfactory. Absolute cleanliness must of course be observed, and the lotions used frequently, to gently syringe out the meatus. Weak permanganate of potassium and boric acid are recommended as most suitable lotions for the purpose, and probably may suffice in quite mild cases. In chronic otorrhœa, however, such measures will be quite incapable of making any impression upon the morbid process. The effect the lotions produce is

quite superficial and transient. Very good results sometimes follow a single application of a fairly strong solution of thymol and carbolic acid; the writer has seen a chronic case of many years' standing cured at once by such an application. At the same time the warnings of some authors against the indiscriminate use of strong astringent solutions are perfectly justifiable, as there can be no doubt that they may do much and serious mischief.

Various ointments for painting in the meatus by means of a camel's hair brush, small pellets, or bougies consisting of cacao-butter, with an admixture of some antiseptic, and designed for insertion into the meatus, are also used to some extent, but their use is less satisfactory than that of lotions carefully and thoroughly employed.

OZÆNA

(ὄζη, a stench).

Definition.—A chronic ulceration of the internal structures of the nose, attended by the discharge from the nostrils of a highly offensive purulent excretion. It is most frequently a result of scrofula, or of syphilis, but sometimes is apparently purely idiopathic, *i.e.*, it is not dependent on antecedent disease or a symptom of such.

Symptoms.—It is found that the ulceration, which is the cause of the discharge, generally begins high up in the nasal cavities, and affects chiefly one side when of scrofulous origin and commonly both when a sequel of syphilis. In the latter case the general health of the patient is usually affected to a marked degree. The discharge itself, like all such excretions, is subject to great variations in quantity and nature; but in all cases it is exceedingly offensive, and usually leads to necrosis of the bones of the nose to a greater or less extent. Under these conditions the soft structures of the organ, lacking the osseous support, fall in, and great disfigurement is the result.

Treatment.—As in the affection which is described in the preceding monograph, the principal indication is to maintain perfect cleanliness in the surgical meaning of the word. The best means of effecting this, is the nasal douche, an appliance which in its simplest form consists of a rubber tube some three feet long, with a nozzle at one end to fit the nostril, and a metal fitting at the other to ensure its sinking to the bottom of a vessel of water. In the case of soft tubing, it will be necessary to insert a piece of U-shaped glass tube where the tubing, in passing over the edge of the vessel, would otherwise “kink.” The vessel, of about a pint capacity, and containing a weak saline or antiseptic solution, is placed on a shelf about two feet above the head of the patient, and the liquid started flowing through the siphon formed by the rubber tube. The patient keeps the mouth open, and allows the solution to flow in at one nostril by means of the nozzle; the opening of the mouth closes the communication between the nose and the throat, and the liquid is obliged to find an exit through the other nostril. The direction of the circulating fluid is usefully varied by introducing the nozzle into each nostril alternately.

The antiseptics available for use in this way are very numerous; almost any soluble agent of the class or of astringents may be employed. The chief are permanganate of potassium (2 grns. to a pint), carbolic or boric acid (2 drms. to a pint), creolin or tincture of iodine (40 minims to a pint), nitrate of silver or perchloride of mercury (2–4 grns. to the pint). Among the newer remedies, beta-naphtol has been chiefly employed in combination with borax and bicarbonate of soda (of each 1 drm. to the pint); one fl. drachm of a 10-per-cent. solution in 90-per-cent. alcohol is added per pint. Glycerine and Peru balsam are also recommended.

Benefit is sometimes obtained by following the thorough use of the douche with insufflations of antiseptic or drying agents. Of these, subnitrate of bismuth with French chalk, calomel and sugar (1 grn. : 1 oz., respectively) and more recently aristol, have done good service.

In the variety due to syphilis, specific treatment is called for; and this, if the patient be in good condition,

consists in the administration of mercuric chloride or potassium iodide. In low conditions of health this treatment is preceded by tonics and a good diet.

PEDICULI

(Latin for lice).

Definition.—The name of a genus of the sub-division *Ectozoa*, parasitic upon human beings. Three species are recognised, which are named according to the region of the body they frequent, thus *P. capitis*, *P. pubis*, and *P. vestimenti*.

Description.—The two first-named species infest the head and pubic region, attaching their ova very firmly near the roots of the hair. The ova or eggs are the source of the principal difficulty in the treatment of the cases, since they are much more resistant to the agents employed than the adult insects. Not uncommonly, the host is unaware of the presence of the parasites until they become so numerous as to cause irritation, and by that time scores of ova will probably have been deposited. There is no difficulty in destroying the adult pediculus, but it is often quite different with the eggs.

The species *P. vestimenti* is the largest, being between 1 and 2 lines in length, the female being the larger; the abdomen is distinct from the thorax and head, from which arise the two antennæ and the large black eyes. This species lays its eggs on the clothing, especially such as is of a woolly nature.

The head louse is somewhat smaller, but otherwise similar in form; it is semi-transparent, greyish-white in colour, and thinly covered with short hairs.

P. pubis (crab louse) is the smallest of the species; the abdomen is less distinct, so that the insect has a foreshortened appearance (hence the popular name). Like the variety mentioned in the preceding paragraph, it is semi-transparent, but darker as to the thorax. The ova are small oval bodies, dark-coloured and easily detected.

All the species of *Pediculus* have six clawed legs with

which they grasp the hair. They obtain nutriment from the host by means of a sucking apparatus with which the skin is pierced.

Owing to the irritation which the pediculi cause, and the consequent scratching excited, their presence sometimes leads to a kind of skin disease ("Phthiriasis," from $\phi\theta\epsilon\acute{\iota}\rho = pediculus$) characterized by excoriations and bleeding papules.

Treatment.—The staple application of the older school was the Unguentum Staphisagriæ of the Pharmacopœia, and this may be still employed with satisfactory results. White precipitate ointment is a popular remedy of service; its efficacy may be increased by the addition of paraffin or petroleum. The latter liquids may also be applied undiluted if the skin have suffered little. Pediculi pubis are sometimes difficult to entirely eradicate, owing to their position; but perhaps the most satisfactory application is a mixture of equal parts of chloroform and paraffin. This kills the parasites immediately, and if used thoroughly every other day for a fortnight should be successful. Chloroform itself strongly attacks the skin and should not be used; the mixture can, however, be employed by most individuals without risk. Ether is also applied for the same purpose, and has the advantage of being less irritating, though not free from inconvenient properties (*e.g.*, its high inflammability). A solution of mercuric chloride in vinegar (1 gr. to 1 oz.), calomel and iodoform ointments are other useful applications.

PEMPHIGUS

(πέμφιξ, a bladder).

Definition.—An eruption occurring on the skin in crops of bullæ, or small blisters. It may be acute or chronic and of indefinite duration. The disease is non-contagious. A number of varieties are recognised, of which *P. foliaceus* and *P. chronica* are the chief forms.

Symptoms.—Sometimes the disease forms without

any premonitory symptoms, and sometimes it is preceded by a determination of blood to the surface. In size the blisters vary from $\frac{1}{4}$ to $\frac{3}{4}$ of an inch in diameter, standing out from the surface about half as much. The nearly pure serum with which the bullæ are first filled becomes gradually purulent in character, the elevated layers of skin burst, and the contents discharged dry up into crusts. A noticeable character of the blisters of pemphigus is, that they are not surrounded by a ring of hyperæmic more or less inflamed skin. They seem to form simultaneously on various parts of the alimentary canal and of the respiratory tract. The disease is very apt to return again and again, and, if extensive, may be accompanied by febrile temperature and other symptoms of general disturbance.

The variety distinguished as "foliaceous" is very rare. The bullæ, relatively small in size, gradually spread over the whole body and do not heal. The skin becomes covered by the partly loosened layers under which the serum first formed; and from the scaly appearance thus assumed this form of pemphigus derives its name. It is always fatal.

Treatment.—This consists in aiming at restoring tone to the system by quinine, cod-liver oil, tonics generally, and nutritious foods, and administering arsenic (Fowler's solution). Locally, soothing applications are indicated, such as calamine lotion, zinc oleate ointment, dusting powders, etc. The disease is rare, and may be safely considered as best treated under skilled professional advice.

PERSPIRATION, EXCESSIVE AND FŒTID.

Definition.—An abnormally abundant secretion of the sweat-glands, accompanied, in some cases, by decomposition of the mixed excretions from the latter and the sebaceous glands (leading to the formation of higher fatty acids with an unpleasant odour). It may be either general or local; in the former case it is symptomatic,—as

for instance the sweating of intermittent fever, phthisis, acute rheumatism,—and this form will not be considered here. Locally, the affection is most frequently met with at the lower extremities and the axillæ.

Symptoms.—These do not require any detailed description. The excess of moisture in parts subject to friction is liable to lead to excoriation and tenderness, or even to the formation of ulcerating surfaces. In excessive perspiration of the feet a very common accompaniment is the acrid and unpleasant odour already alluded to, and it is for the remedying of this that advice is generally sought.

Treatment.—Great cleanliness is essential to all methods of treatment. Where the lower extremities are the source of the trouble, patients should be made to clearly understand that the feet must be washed with a bland neutral soap night and morning and the socks changed every day at least. Divided socks, with a separate compartment for each toe, are also recommended. The socks are well dusted inside with powdered boric acid before being put on. For the axillæ a boric acid ointment is better than a powder. Instead of boric acid, a 3-per-cent. salicylic acid powder with starch (10 per cent.) and French chalk is useful.

Of late years a solution of chromic acid (5 per cent. if the skin be broken, otherwise 10 per cent.), applied by means of a brush every three or four weeks, has been well spoken of and largely employed in Continental armies. The application does not appear to be entirely free from risk. Other forms of local treatment employ belladonna liniment, ungu. litharg., alcoholic solution of quinine (1 per cent.), lanolin, solution of oxalic acid (10–20 grains to $\bar{5}$ j). Precipitated sulphur internally (one teaspoonful in milk twice daily) combined with astringents if purging ensue has also been adopted at the same time as local treatment is pursued.

PERTUSSIS

(*per*, augmentative force; *tussis*, a cough).

Definition.—A contagious disease, mostly confined to the earlier years of life, and chiefly marked, at least in the second week, by a distinctive spasmodic cough. The course of the disease is six or seven weeks, and infection may be spread by a patient for six to eight weeks after the specific cough appears; the period of incubation is from three or four days to nine or ten. As with some other infectious diseases, whooping-cough may be conveyed from one to another by a third person who escapes. The affection is shown by statistics to be more fatal to girls, who also commonly suffer from a more severe form, than boys.

The local symptoms of the disease are chiefly seen in the larynx and bronchial tubes; and the agent of contagion, whether a micro-organism or not, is developed in the secretion which is formed at these parts. One attack of whooping-cough confers immunity against future contagion.

Symptoms.—The earliest symptom of pertussis is some amount of fever, loss of appetite, and general malaise. The so-called catarrhal stage lasts a week or nearly two weeks; secretion is at first scanty, but towards the end of this first stage becomes more abundant, and the catarrh implicates the large air-vessels. The cough, which is characteristic of the second stage, is probably preceded by a tickling sensation in the throat. The glottis is closed by the spasm, and air can be expelled only in sudden jerks; the loud prolonged "whoop" is produced during inspiration. This cycle of incomplete, spasmodic expiration and difficult inspiration is repeated generally until a quantity of mucus is violently expelled; during the interval the face of the child becomes swollen and livid, while the little sufferer may show symptoms of considerable exhaustion. The paroxysms may be accompanied by hæmorrhage from the mouth and nose, or diarrhœa and vomiting may be troublesome symptoms.

In the last stage the spasm subsides, and expectoration becomes easier. Favourable cases reach this point in about three weeks; but often the disease persists for two months or more with relapses, and convalescence is proportionately difficult.

Treatment.—Under favourable conditions the treatment of whooping-cough may be regarded as expectant; that is, attention is directed less to arresting the course of the disease than to relieving the more trying symptoms and preventing the appearance of complications. Hygienic surroundings and a nutritious readily-digestible diet are also important factors in the treatment. It is unwise to confine patients to a single room, though they should be protected from changes of temperature and isolated. Robust children may go out in fine weather, provided rain, the east wind, or too low a temperature do not render such a course manifestly dangerous. When the paroxysmal stage is established, the food should be liquid, or at most uniformly pulpy; and when vomiting is a constant accompaniment of the cough, it is given as soon *after* the attack as possible. The little patients require constant attention, not only for the reasons usually recognised in children's ailments, but because they are frequently much distressed during the attacks, and some one should be present to soothe and comfort them.

In the catarrhal stage, simple expectorants; in the spasmodic, anodynes; and in the latest stage, astringents and restoratives—this may be said to sum up the whole medicinal treatment of pertussis. A long list of remedies has been recommended in whooping cough, and some have been put forward as specifics; it is very doubtful, however, whether a substance possessing such influence on the course of the disease has yet been discovered. Among the expectorants, ipecacuanha, and sometimes antimonial wine are most suitable. Poulticing the chest and back also sometimes gives relief to the pulmonary symptoms. At the end of the first stage solutions of carbolic acid ($\frac{1}{2}$ per cent.) and peroxide of hydrogen may be given, and the use of sprays for the atmosphere of the sick room is frequently adopted; probably plenty of warm

fresh air is much better. At this earlier stage of the affection, quinine is sometimes valuable, in doses of about 1 grn. per year of age.

For the relief of the spasmodic cough, chloral ($\frac{1}{2}$ grn. per year of age every two or three hours) is the favourite of the older remedies, though belladonna, morphia, conium, and other antispasmodics are also classed with it as useful in certain cases. Of recently-introduced medicaments antipyrine (5 grns. for children up to 3 years of age 30-60 grns. for older children and adults), and bromoform (5-20 drops daily), take the chief places. The evidence in favour of the latter is considerable, and the compound would be worth more extended trial. The necessity of employing a pure quality is insisted on, as the impure specimens are themselves irritant to the throat. Chinoline tartrate ($1\frac{1}{2}$ grns.) and terpin hydrate (20-40 grns. daily according to age) are other products of the new remedy era which have been specially recommended. In some cases ouabain ($\frac{1}{2000}$ grn. every two hours) seems to have been effective. Resorcin in 1-per-cent. solution has found many supporters as a paint for the throat in pertussis.

Some medical men prefer to attack the affection by inhalations, as of turpentine, terebene, eucalyptus, and other essential oils. Quite recently naphthalene vapour has been highly recommended; only consumptive cases are said to resist the beneficial effects of the treatment. Sulphurous acid is also credited with wonderful cures.

In the later stages of the affection, change of air is a very valuable aid to convalescence; but if effected too soon, there is risk of spreading the contagion. Thorough fumigation of the sick room with sulphur, the patient being allowed to return after ventilation, has often a beneficial effect. Tonics (cod-liver oil, syrup of iodide of iron) are indicated; and embrocation of the throat and chest with liniments of oil of amber or of eucalyptus is frequently adopted with satisfactory results.

POISONING.

Symptoms.—No attempt will be made here to describe the symptoms of poisoning by all the agents which

may produce alarming results or destroy life, when taken internally. In the majority of cases some amount of history will be procurable according to which the treatment can be adapted; and in the absence of these, medical aid should be at once summoned in cases suspected to be those of acute poisoning. As, however, delay is under such circumstances to be avoided, it may be useful to mention one or two signs in commoner forms of poisoning which will often put the practised observer on the right track in the selection of an antidote.

Mineral poisons, when taken in a concentrated condition, produce local corrosion of the mouth and throat, which, in the case of sulphuric acid, is at first whitish; in that of nitric acid, yellow; and in that of hydrochloric acid, whitish or brown. The skin about the mouth may also be stained with the fluid. Vomiting is usually present, and in the later stages great difficulty of respiration and in swallowing. The patient experiences violent burning pains in the stomach and throat, which gradually extend over the whole abdomen. In the case of oxalic acid, the pulse rapidly fades away, and collapse ensues; the effects of this agent are very rapid in their onset and termination.

The same symptoms are observed in the case of the so-called irritant poisons (a class which includes the diluted acids), except that they are less intense. The burning pain and sense of constriction in the throat and œsophagus, followed by implication of the epigastric region (where the suffering is increased by pressure), are also experienced at shorter and longer intervals after the taking of the poison. If the irritant be not removed, these symptoms gradually get worse, inflammatory fever or collapse ensuing.

The poisons which destroy life by their effects upon the nervous system are commonly reckoned as a third class; they exhibit, of course, the greatest variation in action. Perhaps the most important of them are alcohol, opium, and strychnine. A characteristic symptom of the second is the equally contracted pupils, and of the third the intermittent convulsions.

Following is a list of all the poisons likely to be taken, accidentally or otherwise, and their appropriate treatment:—

Acids, Mineral.

Cases of poisoning by acids form a very large class; and considering the unrestricted and careless way in which most dangerous and powerful acids are distributed, this is only what might be expected. They are often supplied by unqualified persons in unsuitable vessels, and without any verbal precautions or label, and left about in an unguarded manner by the purchaser. It is not to be wondered at that many accidents ensue from such a careless system of dealing with dangerous agents, and therefore cases of unpremeditated poisoning as well as of attempted suicide with acids are only too frequent.

Of the three commonest mineral acids, sulphuric, nitric, and hydrochloric, statistics show that the latter, though very largely used for domestic and manufacturing purposes, is seldom met with as the cause of poisoning symptoms, whereas the former acid, sulphuric, is by no means uncommon. Nitric acid is used largely in the arts, but cases of poisoning with it are rare.

The symptoms are in each instance very similar, violent burning pains extending from the mouth to the stomach, which come on *immediately* after swallowing the acid, and which cause the body to be doubled up by their severity. Eructations of gaseous fumes then ensue, due to the chemical action of the poison, and there is a copious frothing at the mouth, followed generally by retching and vomiting. The mouth becomes excoriated and assumes at first a whitish appearance resembling soaked parchment, becoming after a time, in the case of nitric or hydrochloric acids, a yellow or brown. Both speaking and swallowing are extremely difficult and sometimes impossible, the throat quickly becoming choked with a thick viscid phlegm, and the tongue generally enlarged and swollen. Breathing even becomes difficult in some cases, the mouth and throat being almost blocked up with the swelling of the mucous membranes and the large

quantity of viscid frothy matter ejected from the stomach. The skin remains cold and clammy and is covered with perspiration; as a rule, the mental faculties are retained till the last.

In the diluted state, the symptoms of poisoning by these acids are very similar, though not so violent, and the local action is not so pronounced; the effect, of course, varies according to the amount of dilution.

In treating a case of this kind, it must be remembered that time is all-important, and what is to be done, must be done immediately: it is best not to give any emetic, but, if nothing better is at hand, copious draughts of water should be administered. Alkaline salts in solution are required as antidotes to the acid, and may be taken freely in a diluted state; lime-water or the official "chalk mixture" are very serviceable and are generally at hand. Magnesia triturated with water to form a thin paste, or the solution of magnesia, may be given with advantage, and soap and water, oils, milk, or other things of an emollient nature have been used with success. Taylor recommends bicarbonate of soda dissolved in water and milk to be given at short intervals; he has found this more serviceable than magnesia or other insoluble salts. The chief point to be considered is the time that it will take to prepare an antidote; and that which can be got ready first is the one to select.

Alcohol.

The condition of alcoholism which is attained by too frequent recourse to this much-abused liquid has been treated in a separate chapter earlier in the book. (See *Alcoholism*, p. 7.)

Cases of direct death caused by poisoning with alcohol are very rare; fatal results are generally caused by some complications produced in various parts of the system, only due indirectly to excessive indulgence in stimulants. The symptoms of alcohol poisoning are well-known—giddiness, confusion of thought, and stupor, frequently followed by vomiting.

Emetics may be given in very severe cases; but as a

rule it will be found that ammonia in its various forms is the best corrective. Large doses of spirit of mindereus (liq. ammon. acet.) and of sal volatile or carbonate of ammonium generally produce the desired result, especially if the patient can be induced to make deep inhalations of ammonia vapour. After this treatment, applications of cold water and finally sleep will generally be most effectual in restoring him to his normal condition.

Alkalies.

Caustic potash and soda, pearlash, and ammonia in its various forms are the poisoning agents most frequently met with, though cases of alkaline poisoning are generally rare and have been hitherto chiefly the result of accident.

The symptoms of poisoning by potash and soda are very similar, an acrid caustic taste being followed by a softening and corrosive action on the membranes of the mouth and throat, giving rise to a sensation of burning heat in the latter. This pain and heated feeling extends to the stomach and other organs of the abdomen, and is accompanied by purging and occasionally vomiting. The skin becomes cold and clammy, and the pulse quick and feeble, the lips, throat, and tongue becoming, after a short time, red, soft, and swollen.

Poisoning by *solutions* of ammonia gives rise to similar symptoms to those above described, with the exception that the pain and heated sensation in the mouth, throat, and abdominal viscera are much greater.

The *vapour* of strong ammonia produces a choking sensation and burning feeling in the throat, accompanied by violent inflammation of the larynx and lungs; the power of breathing is sometimes almost suspended.

The antidote to alkali poisoning is, naturally, diluted acids, such as acetic acid, or vinegar with water, tartaric or citric acids, in weak solution, or lemon juice. Demulcent drinks, such as milk, barley water, and gruel, should be given freely; and doses of olive or almond oil are attended with good results, as they help to soothe the irritated membranes and also act by a kind of saponifying process.

Alkaloids.

Treating them all as a group, the best advice that can be laid down is:—give a strong emetic of mustard (a tablespoonful in water), of ipecacuanha wine (two tablespoonfuls in water), or of sulphate of zinc (20 grains in water). Induce vomiting in any way possible, and then give the antidote especially suited to the alkaloid that has been the cause of the mischief. (See *Atropine, Morphine, and Strychnine.*)

As general alkaloidal antidotes, may be mentioned lemon juice and citric acid, iodine, tannin, tea and coffee; and it is always well to apply massage, or, at any rate, steady friction with a rubefacient liniment. It should be here mentioned, that if the symptoms be those of strychnine poisoning, no coffee or citric acid must be given, though they are suitable in all other cases. (See *Strychnine.*)

Arsenic.

This very powerful poison is met with in many and various ways in this country; and undoubtedly the number of fatalities arising from its accidental or premeditated swallowing is relatively large. The peculiar tastelessness of the drug, and the gradual way in which the effects of small doses are manifested, have opened a way for many a foul and cruel murder, though it has more frequently been accidentally taken in the form of a solution for killing parasites or weeds, in "sheep-dip," etc. It also occurs to a very great extent in wall papers, advertisement cards, and various kinds of paper, as well as in many colouring agents, green being generally considered especially dangerous. The restrictions for its sale in Great Britain are very stringent, though they are not always attended to; and thus arsenic can be obtained without any great difficulty for use for agricultural purposes. It is moreover used in some "fly-papers" as well as in "rat pastes," and "vermin killers," so that its presence in the household as well as in the farm is not at all uncommon. It is necessary that it shall have been pro-

cured in the form of a solution, if the symptoms are those of acute poisoning; but it is also believed that health is much impaired by the frequent presence of arsenic in domestic fabrics, as mentioned above, which leads to a condition of chronic poisoning and sometimes to an untimely end.

Cases of *chronic* arsenic poisoning are generally brought at once under medical advice; and the symptoms are so indefinite that they often baffle the skill of the most able physicians. Such cases cannot be classed under "Minor Ailments," and will not be considered. The symptoms of *acute* arsenic poisoning, however, are of great importance, as the drug acts very quickly, and prompt steps must be taken. Vomiting, depression, and faintness are manifested early, together with pain in the stomach, purging, and cramp in the calves of the legs. Breathing is painful, and there is a sense of dryness and constriction in the throat, with often intense thirst; pulse very feeble, and the skin cold and sticky.

The first point to be attended to in such a case, is to induce instant vomiting with emetics of mustard, ipecacuanha, or zinc sulphate, followed by draughts of lukewarm or greasy water, so as to reject the whole of the contents of the stomach. Then an antidote of iron in solution is given, either alone or accompanied by magnesia (as in the mixture detailed in the "Table of Poisons" at the end of this chapter), or magnesia may be given alone if no iron be at hand. The solution of dialysed iron has been used with success in several cases, doses of one-ounce being given at short intervals. Stimulants are desirable, as well as emollient and demulcent drinks, such as barley-water, white of egg, oil and lime water (linim. calcis), or linseed tea. The patient must also be kept warm by hot-water bottles, hot blankets, and massage, and poultices applied to the abdomen after the cessation of the more acute symptoms. Medical assistance must be obtained as early as possible.

Atropine.

The symptoms and treatment of cases of atropine poisoning are the same as those of belladonna, the latter

Cases of poisoning by belladonna berries are not infrequent; and the liniment, taken by mistake, has been the cause of a good many deaths.

The patient becomes very noisy and excited, the eyes prominent and sparkling, pupils widely dilated, and the face very flushed. The mouth and throat are very dry, and, at the same time, there is difficulty in swallowing, and great thirst. The skin is dry, sometimes bearing a slight feverish rash, and the muscular powers are much decreased.

Two grains of the alkaloid is a fatal dose; and one drachm of liniment of belladonna has also caused death. Cases are on record, however, in which recovery was obtained after even half an ounce of the latter.

Emetics are given at first (see *Alkaloids*), and then doses of tannic acid in solution, followed by stimulants, —alcohol, sal volatile, tea, coffee, etc.,—accompanied by external friction or massage. Hypodermic injections of pilocarpine and morphine are given in severe cases, but it is best that this should be left entirely to the medical attendant. Respiration must be maintained artificially for two or three hours if necessary, and a catheter passed to relieve the bladder.

Bromine.

Poisoning with this element is only likely to occur in a laboratory or manufactory, and, in fact, very rarely happens. The symptoms are great irritation of the throat and lungs, inability to swallow, and difficulty in breathing. A thin starch paste is given, which forms an insoluble compound with the bromine; or magnesia triturated with water to form a thin paste.

Cantharides.

This drug is said to be administered, in the form of powder or tincture, rather frequently in this country for illegal purposes; but deaths from it are of rare occurrence. Excessive doses cause a burning sensation in the throat,

with great pain in the stomach, salivation, vomiting, and diarrhœa; there is a constant desire to micturate, but very little fluid is passed at a time, and that contains blood or albumen (a leading symptom). An emetic is to be given at first, followed by thick mucilage, gruel, linseed tea, or other demulcents. A mixture containing camphor and opium is recommended, or morphine in subcutaneous injection, but no fats or oils in any form whatever.

Carbolic Acid.

This has been the cause of a great many deaths of late years, and cases of poisoning by it are met with more frequently than with any other acid. The symptoms are very similar to those which follow the swallowing of the mineral acids in a concentrated state—great pain extending from the mouth to the stomach, accompanied by corrosion of the membranes of the mouth and throat, and vomiting of frothy mucous matter. In this case, however, insensibility quickly comes on, followed by coma with stertorous breathing, showing that carbolic acid is really a cerebral poison. A dose of one drachm generally proves fatal, though cases are on record of recovery after this quantity.

Epsom or Glauber's salts (sulphates of magnesium or sodium) should be given at first, as these form harmless sulpho-carbolates in the blood. Then large quantities of dilute saccharated solution of lime, and plenty of stimulants—brandy, sal volatile, etc. Friction, and application of warmth externally is recommended, especially to the arms and legs, and also an interrupted current of electricity, if it can be conveniently obtained.

Carbonic Acid Gas.

This gas, which is known in mines as choke damp, is of such common occurrence that but little attention is ever paid to it. Poisoning symptoms have, however, been produced by it in overcrowded rooms, engine-houses with charcoal stoves, and similar places, if the ventilation has been insufficient; also by inhalation from a fermentation

The symptoms are great giddiness, drowsiness, loss of muscular power, rapid pulsation and respiration, and then insensibility.

Fresh air must be admitted to the patient immediately, artificial respiration carried on, and stimulants in moderate quantities; ammonia and smelling salts are applied to the nostrils.

Chlorine.

Cases of chlorine poisoning are extremely rare, and occur only in the manufacturing of some disinfectants and bleaching fluids, etc. The symptoms are similar to those of bromine, the only difference being that chlorine is, if anything, more irritating to the throat and mucous membranes. Doses of nitrous spirits of ether are administered internally, and inhalations of ether (Hoffmann's), chloroform, or very dilute ammonia. Plenty of fresh air also should be obtained.

Chloroform and Chloral.

Fatal results during the administration of chloroform as an anæsthetic are unfortunately only too common; but otherwise, poisoning with that liquid seldom happens. Excessive doses of chloral hydrate, taken as a narcotic, sometimes cause death; but unless taken accidentally and an alarm given, the patient generally passes away in a deep sleep, and no chance of applying antidotes is given.

The symptoms of chloral poisoning are stupor, sleep, diminution of pulsation and respiration, and finally death by stoppage of lung's action, or paralysis of the heart.

An emetic may be given at first, and then dry friction hot applications externally, and massage. The patient must be prevented from sleeping in every way possible; and placed in the open air. Cold effusion of the head is very beneficial, and effervescing drinks greatly assist the other treatment, which must be continued for some hours, until the patient has recovered from the drowsiness produced by the drug.

Chromates.

Cases of poisoning with chromates, although so extensively used in the arts, are exceptional; in the few cases recorded, the symptoms seem to have been violent pain, cramp in the limbs, vomiting and purging, and finally insensibility. Emetics, or the stomach pump, are followed by doses of olive oil, syrup of iron, bicarbonate of sodium or magnesium, and diluents—a course of treatment which has been effectual in saving life.

Colchicum.

This is generally taken in the form of the wine, in mistake for sherry, though it has been sometimes given for criminal purposes. The symptoms are described as "like malignant cholera," and are chiefly a burning pain in the abdomen and throat, and continued purging and vomiting, with prostration and muscular twitchings. An emetic is given at once, followed by half-drachm doses of tannic or gallic acids, repeated frequently. Demulcent drinks, and stimulants, if required, are advisable.

Copper Salts.

Poisoning generally results from the presence of copper in the form of some soluble salt in food, though the sulphate and subacetate have been taken in solution accidentally, or in order to procure abortion. The symptoms are griping and colic in the bowels, nausea, vomiting, purging, giddiness, and generally a very chilly feeling with nervous prostration. Doses of yellow prussiate of potassium (15 to 30 grains) are indicated, as also are egg albumen, and reduced iron and sulphur in syrup. Milk and eggs should be given freely, and any demulcent drinks; an emetic may be administered advisedly at the commencement of the treatment.

Creasote.

The symptoms of poisoning with this fluid are identical with those of carbolic acid, which forms such a large

be also mentioned, an aqueous solution of egg albumen.

Digitalis.

Poisoning has been found to follow a course of treatment with this drug, due to a cumulative action; but the toxic property must be admitted to be uncertain, as recovery has been known after taking two ounces of the tincture. The symptoms are purging, vomiting, headache, and convulsions, accompanied by severe pain in the abdomen, dilated pupils, and a cold, pallid skin, often covered with perspiration. Emetics are administered, and then 20 gr. doses of tannic or gallic acids every half hour; stimulants are also to be given frequently, and the patient kept in a recumbent position.

Ether.

Cases of poisoning by this drug only occur during its administration as an anæsthetic, when medical assistance is at hand. Loosen all the clothing, admit plenty of fresh air, and remove any obstacle to easy breathing; artificial respiration should be kept up for about two hours if necessary. Doses of solution of acetate of ammonium are given internally with good result, and ammonia vapour should be applied to the nostrils; alternate hot and cold douches for the head and chest are recommended.

Iodine.

Solutions of this element have been taken by mistake, but it very seldom happens, and recovery from large doses has been brought about by suitable measures. Great pain and heat in the throat and stomach is noticed, with purging and vomiting of yellow or bluish-coloured matter; sometimes also giddiness, faintness, and convulsive movements. Administer an emetic, and afterwards a chemical antidote in the shape of thin starch paste, or hyposulphite of sodium (30 grs. in 5 ozs. of water).

Ipecacuanha.

Large doses of this drug have been sometimes taken in the form of the wine or powder, and as they generally produce vomiting, bad results seldom ensue. Copious draughts of warm water should be given to assist the emetic action, and twenty-grain doses of tannic acid, in case the drug is obstinately retained. The toxic properties of Compound Powder of Ipecacuanha are due to the opium it contains, rather than to the ipecacuanha, and the patient must therefore be treated as for opium poisoning.

Lead Salts.

The effects of these may be manifested as *chronic* symptoms, caused by lead in drinking water and other articles of food, or *acute* symptoms caused by an excessive dose of a soluble salt taken at one time. The latter of these is the only one that requires notice here.

The acute symptoms of lead poisoning are colic, dryness of the throat, great thirst, constipation, and cramp in the bowels and legs. One ounce doses of the acetate, the most common salt, are sometimes fatal; but a patient may recover from even a larger dose. The treatment is commenced with an emetic, followed by doses of sulphate of sodium or magnesium ($\frac{1}{2}$ ounce), or dilute sulphuric acid ($\frac{1}{2}$ drm.) in water. Milk should be given freely, with demulcents, and finally a course of purgatives or iodide of potassium, to rid the system of the poison.

Mercury Salts and Preparations.

The Perchloride is, perhaps, the salt most commonly met with as the cause of mercury poisoning, and very small quantities (3 to 5 grains) of it have proved fatal. The symptoms and treatment in cases of poisoning by other mercury preparations are precisely similar, so one description suffices.

Great pain in the stomach is experienced, and a sense

is very violent vomiting and purging, with suppression of urine and decreased pulsation; the respiration also becomes very difficult, and the skin cold and clammy.

The emetic, given at first, is followed by doses of a mixture of iron powder, and precipitated sulphur (7 parts and 4 parts respectively), and also thin starch mucilage. Unboiled egg albumen should be given in large quantities, and stimulants if there be much depression.

Morphine and Opium.

The habit of taking this drug and its alkaloid as narcotics is frequently met with, when the patient is found to suffer from a kind of chronic depression, only relieved by doses of what his system craves for. But acute cases of opium poisoning are also met with, when rapid steps must be taken to ward off a fatal issue. The patient is in a kind of stupor, from which he is with difficulty aroused, but which, if allowed to continue, is only the beginning of the insensibility and gradual decline of functional activity which is the end. Four grains of the gum opium, one drachm of the tincture, or one grain of the morphine salts has generally proved fatal, though cases are on record in which recovery from larger doses was obtained.

The most important part of the treatment is to rouse the patient by every means possible, and prevent sleep coming on. An emetic is given, and douches of water poured over him constantly; vapour of ammonia is inhaled through the nostrils, though no alcoholic stimulants must be given internally. Purgatives should be administered unless the emetic has produced copious vomiting, and a hypodermic injection of 5 minims of the official solution of sulphate of atropine made, though preferably under medical supervision. This treatment will generally prove successful, but it is most important that no time be lost in commencing it.

Nicotine.

Poisoning with this alkaloid is generally effected by means of tobacco, of which it forms the active ingredient. The symptoms are vomiting and faintness, with great confusion of ideas, dimness of sight, and a clammy skin. Half-drachm doses of tannic acid in tea form the best antidote, and a tonic and stimulant treatment of nux vomica, or strychnine, with brandy, sal volatile, or chloric ether should be begun and continued. Vinegar, 5 drms., with water and sugar, is also recommended, the patient being kept in a recumbent position the whole time.

Oxalates.

Oxalic acid is, perhaps, the most frequently taken of all organic acids, as there is no difficulty whatever in procuring it in any quantities. Half an ounce is a fatal dose, and even less will often cause death; a violent burning pain in the stomach, with cramp, vomiting, and purging are the usual symptoms, sometimes accompanied by a constricted and sore feeling in the throat and mouth. Death generally ensues very rapidly, and the patient dies in great pain.

Saccharated solution of lime, or chalk mixture, should be given freely, with small doses of camphor. The compound spirit of ether (Hoffman's) is often administered with success, and the treatment is finished with a purgative dose of castor oil.

Phosphorus.

This substance is most frequently taken in the form of vermin killer, but occasionally by sucking the ends of common matches. The symptoms are great pain in the abdominal regions, tendency to hæmorrhage, bleeding from the nose and vomiting of blood, failure of intellect, sometimes delirium and convulsions. The breath generally smells strongly of phosphorus, and vomited matter may be luminous.

with water a mixture of chlorinated lime (*vide* "Table of Poisons") is used both externally and internally. Sulphate of copper in three-grain doses every five minutes is recommended by some authorities to induce vomiting, and also a half-ounce dose of Epsom salts. It is very important that no oil, milk, or alcohol be given, on account of the solubility of phosphorus in these fluids.

Prussic Acid and Cyanides.

One drachm of the B.P. acid is said to be a fatal dose. Insensibility comes on rapidly after taking the poison, the eyes becoming fixed, and the pupils dilated. The skin gets cold and clammy, the breath comes only in gasps, and the pulse very feeble.

An emetic is administered as quickly as possible, and good doses of alcoholic stimulants, either *per os* or *rectum*. Inhalations of ammonia by the nostrils and douches of hot and cold water over the head are indicated; hypodermic injections of camphor or of atropine ($\frac{1}{50}$ grain) may also be given. A very useful mixture for external and internal application is the *Mist. Calc. Chlorata*, prepared as directed in the "Table of Poisons"; means must be taken to carry on artificial respiration, if necessary.

Santonin.

The peculiar optical derangements, following excessive or even moderate doses of this active principle, are well-known, and there is no difficulty in diagnosing the case and determining the origin.

Emetics and purgatives are indicated, as well as small doses of chloral frequently repeated, and ether and chloroform, to counteract the cramp, which is generally exhibited in the bowels and extremities. Toxic symptoms, caused by santonin are comparatively rare, though even small doses give rise to visional and other peculiarities, which are apt to frighten the patient, unless prepared for them.

Silver and Preparations.

These are generally found to have been swallowed accidentally whilst making caustic applications to the throat, though cases are also on record of poisoning by solutions prepared for photographic purposes. The best antidote is common salt, dissolved in milk or water, which should be given in large quantities. Emetics are, of course, indicated, and doses of egg albumen, dissolved in water, taken freely.

Strychnine.

This alkaloid and the nux vomica seed, from which it is obtained, are only too frequently the cause of poisoning—the former being easily procurable in the form of “vermin killer.”

One of the most prominent symptoms of strychnine poisoning is “locked-jaw,” and partial paralysis of various muscles. Spasmodic convulsions, lasting from one to five minutes, and occurring at short intervals, are not infrequently a symptom, and the whole body is contorted by the muscular contractions. The eyes seem starting from the head, and the pulse becomes very feeble and rapid, and respiration much impeded. Three grains of the alkaloid is usually a fatal dose, and even much smaller doses have been known to cause death, though, on the other hand, larger quantities have been followed by recovery due to the prompt administration of an emetic.

Vomiting must be induced at first, or the stomach-pump used; and artificial respiration must be resorted to for some hours, if possible. Morphine and opium are the antidotes to strychnine, and may be cautiously administered in small doses; half-drachm doses of tannic acid, given at frequent intervals, are also indicated. Some authorities recommend half-ounce doses of bromide of potassium, with half a drachm of chloral hydrate, this quantity being repeated in an hour if necessary.

Sulphuretted Hydrogen.

This poison is usually met with as an emanation from

severe cases insensibility and laboured breathing.

The patient must be immediately placed in the fresh air, and stimulants given internally, ammonia and spirits of nitre being applied to the nostrils. The Mist. Calc. Chlor. (detailed under "Prussic Acid") is also recommended for application both internally and externally.

Tartar Emetic and Antimonials.

These poisons are generally taken in mistake for something else; and as vomiting usually ensues at once, there is every prospect of a speedy recovery, if proper means be employed. If, however, it does not occur naturally, emetics must be given to cause it, and copious draughts of tepid water. Half-drachm doses of tannic acid are indicated, as well as demulcents, white of egg in water, milk, etc., etc. The patient must be kept warm, and stimulants given in case of any collapse.

Tin Salts.

Toxic symptoms, occasioned by tin salts, are only met with in places where they are much used in the arts or manufactures. Vomiting is generally caused by the poison itself; but, if not, it must be induced by emetics (avoiding copper salts). Tannic acid is indicated, and also magnesia rubbed into a thin paste with milk; bicarbonate of soda may be given if the tannin is not at hand.

Zinc.

Generally taken in the form of the chloride, which is used in solution for disinfecting purposes. Great pain and incessant vomiting are occasioned, followed by increased

pulsation and respiration, partial paralysis, and finally coma. The mouth and throat are generally excoriated, owing to the corrosive action of the fluid. Tannic acid is given in frequent doses, and large quantities of eggs and milk; also dilute solution of the alkaline salts, or magnesia, triturated to a thin paste with milk or water. Linseed meal poultices are applied, and enemata of gruel or starch may be used, if there be much pain in the abdomen.

The following table may be useful for ready reference:—

NAMES OF POISONS.	NAMES OF ANTIDOTES.
Acids { Hydrochloric Phosphoric Sulphuric Nitric, etc.	Lime Water. Oxide of magnesia ground to a thin paste with water. Soap water. Milk. Mistura cretæ.
Alcohol.	Liquor ammoniæ acetat. Spiritus ammoniæ aromat. Emetics. Ammonia vapour to the nostrils.
Alkalies.	Acetic acid or vinegar diluted with water. Lemon juice. Tartaric Acid.
Alkaloids.	<i>Vide</i> the several alkaloids. Iodine. Tannin (if not available). Tea or coffee (none of these last three for any of the strychnine poisons). Citric acid. Lemon juice. Friction of skin with mustard lini- ments or ammonia.

	<p>Antidotum arsenici :— R. Liq. Ferri persulph. 8 oz. } Mixture (1) Aque 16 oz. } Magnesiæ oxidi 1 oz. } Mixture (2) Aque 16 oz. }</p> <p>To be mixed by adding (2) to (1). Two tablespoonfuls to be given at the commencement of poisoning every $\frac{1}{4}$ hour, later every 1 or 2 hours. The two mixtures should always be kept ready in every pharmacy.</p>
Atropine.	Tannin. Morphine.
Bromine.	Magnesia oxide. Starch paste.
Cantharides.	Camphor with Opium. No fat or oils.
Carbolic acid.	Sulphate of soda in solution. Liq. calcis sacchar.
Carbonic acid gas.	Fresh air. Ammonia Smelling salts } to the nostrils.
Chlorine.	Hoffman's spirit both to the nostrils and internally. Spirit. ether. nitros.
Chloroform and chloral.	Fresh air. Cold effusion of the head. Effervescing drinks.
Chromates.	Bicarbonate of soda. Carbonate of magnesia. Iron in syrup.

NAMES OF POISONS.	NAMES OF ANTIDOTES.
Colchicum.	Tannin.
Copper salts.	Iron powder and sulphur in syrup. Albumen in syrup. Yellow prussiate of potash in 15-30 grs.
Creasote.	Albumen in aqueous solution.
Digitalis.	Tannin.
Ether.	Vapour of ammonia to the nostrils. Solution of acetate of ammonia internally.
Iodine.	Starch paste, thin. Sodii thiosulph. (hyposulph.) 30 grs. in water, 5 ozs.
Ipecacuanha.	Tannin.
Lead salts.	Magnes. sulph. Sodii sulph. Dilute sulphuric acid and water. Milk. Emetics. Purgatives.
Mercury Salts and Preparations.	Mixture of Iron powder, 7 parts. Sulph. precip., 4 parts. Starch paste.
Morphine and Opium.	Application of cold water to the body. Purgatives. Atropine. (5 m. of the B. P. solution.) Cherry Laurel Water.
Nicotine.	Tannin. Vinegar, 5 drms., with water and sugar.

Nux Vomica	(Vide Strychnine)
Oxalates.	Mistura cretæ. Liq. calcis, sacch. Camphor. Hoffman's spirit.
Phosphorus.	Emetics. Terebene. Magnes. oxid. Mist. calc. chlorata (<i>v.</i> Prussic acid). <i>No milk, oil, or alcohol</i> , in consequence of the solubility of phosphorus in these liquids.
Prussic Acid (Aq. Lauro- cerasi, Potassic Cyanide).	Chlorine and ammonia to the nostrils and internally. Camphor injections. Cold effusion of the head. Mixture:— Calc. chlorata ʒj Aq. Dest. ʒvj Ac. Hydrochlor. dil. min. ʒ To be used internally and externally.
Santonin.	Emetics. Purgatives. Ether Chloroform } to counteract cramps. Chloral hydrate.
Silver and Preparations.	Sodium chloride (common salt) solu- tion. Albumen in water.
Strychnine.	Emetics. Tannin (no coffee or citric acid). Morphine and opium in small doses.

NAMES OF POISONS.	NAMES OF ANTIDOTES.
Sulphuretted Hydrogen.	Fresh air. Sp. ether. nitros. to the nostrils. Mist. calx. chlorat. (<i>v.</i> Prussic acid) internally and externally.
Tartar Emetic and Antimonials.	Tannin. Milk. Albumen in water.
Tin Salts.	Sodæ bicarbonas. Tannin. Magnesia oxide. Milk. Emetics, but for this purpose <i>no Copper Mixtures.</i>
Zinc.	Tannin. Magnesia oxide.

PRURIGO

(*prurio*, I itch).

Definition.—A chronic disease of the skin characterized by a thickened condition of the integument, regarded as due to nutritive abnormalities, and the presence of papules, which may be white or pale red. It appears usually on extensor surfaces; and the itching from which its name is derived has a somewhat distinctive burning and “crawly” character. The affection is not unfrequently met with in old persons (*P. senilis*), when it has a tendency to increase and may last for years.

Symptoms.—These have been already indicated in the preceding paragraph. In addition to the thickening of the skin and the irritation mentioned, another train of symptoms originates with the scratching, which the sufferer resorts to for the relief of the itching. In this way excoriations are produced and the papules, being

variably associated with mal-nutrition, the principal indication is, to bring up the standard of health by tonics and especially cod-liver oil. Quinine, strychnine, and phosphorus are also well-established adjuncts to the oil; and, as in nearly all skin diseases, arsenic is looked upon by some of the best authorities as indispensable. To ensure rest at night, sedatives are occasionally necessary, and of these, chloral and the bromides are chiefly selected.

Locally, warm baths, shampooing, and inunction with lanolin seem to give the best results. Lanolin itself, being too sticky, may be used in the form of the well-known Ung. Lanolini, or in combination with vaselin and olive oil. Severe irritation is relieved by adding 10 to 15 per cent. of menthol to the ointment. Scratching should of course be avoided.

PRURITUS

(*prurio*, I itch).

Definition.—By pruritus is generally understood those cases of itching in which no structural or organic alterations in the skin can be detected. It is a purely nervous phenomenon, which, in a number of cases, has no discoverable cause, but in others may be associated with diseased conditions of remote organs (*e.g.*, the uterus, stomach, or kidneys), with the presence of excess of certain substances in the blood (such as bile, uric acid, or urates).

Symptoms.—These are much the same as those of prurigo; in true pruritus, however, the patients itch at areas where the minutest examination reveals no alteration. All that can be said is, that they simply itch; there are none of the papules which accompany prurigo. It should be remembered, however, that the irritation of pediculi may simulate that of pruritus. The forms

P. genitalium and *P. ani* are the most frequently met with, and, less commonly, the so-called *P. senilis*, which, in most instances, appears to be due to the *Pediculus vestimenti*. The variety which occurs in the pubic region (generally of women) is often associated with uterine disease, pregnancy, or diabetes. *Pruritus ani* may be due in children to thread worms, in adults to piles, eczema, or excessive perspiration.

Treatment.—Alkaline baths are important means of combating pruritus; they are beneficially followed by the inunction of lanolin ointment, either alone or in combination with various adjuvants, as menthol (20–25 grains to the ounce), cocaine (about 1:500), creasote (15 minims to the ounce). Whittaker recommends the following:—

R	Creasoti (Beechwood).	. . . . .	ʒj
	Lanolini	. . . . .	ʒij

M. ft. Ungentum.

For the treatment of local forms he prefers the unguentum conii to all other applications. This ointment is prepared by triturating with lanolin (about 6 drams) two ounces of Succus Conii, evaporated slowly and under 150° F. to about 2 drs. To this ointment creasote (30 ms: ʒj) and cocaine may be added. In *pruritus ani* or *genitalium*, before retiring to rest, a cold-water enema is administered, and the parts freely smeared with the ointment and some of it introduced into the rectum or vagina by the finger.

There is quite a long list of compounds which have at various times been tried in pruritus; but few, if any, of them possess any well-marked advantages over those mentioned. It is worthy of mention, that one of the newer synthetical remedies, Piperazine—the distinctive property of which is its high solvent power for uric acid and the ready solubility of the resultant salt, piperazine urate—has been given with very gratifying results in some cases of pruritus presumably dependent on the uric acid diathesis.

PURPURA.

Definition.—Hæmorrhage into the upper layers of the cutis under the epidermis. The effusion has well-marked boundaries, and may be accompanied by symptoms of general disturbance, and by a similar hæmorrhagic condition of the mucous membranes. The cause of purpura is generally not to be detected, but it may attack individuals of most diverse constitutions, and such as are apparently quite healthy. The nature of the affection is closely analogous to the phenomena exhibited by a bruise; in the latter case the capillary rupture which is the immediate cause of the blood effusion is produced by physical violence, while in the former it is the result of the operation of physiological causes. The dull purple appearance, passing through blue, green, and yellow till it disappears, is in both cases due to the infiltration of blood into the connective tissue, the absorption of serum and subsequent changes in the composition of the colouring matter of the blood left behind.

Symptoms.—Purpura is characterized by the appearance of isolated spots, varying in size from a pin-head almost indefinitely upwards. The colour of the spots may be red or purple, they are often more or less orbicular in shape and uneven as to the margins; they are not usually elevated above the general epidermal surface. The spots do not give rise to pain, irritation, or itching of any kind, so that their existence may escape attention. The duration of the stains is dependent of course upon the extent and amount of the hæmorrhage.

In the variety distinguished as *P. simplex* the spots are relatively small, scattered, and unaccompanied by complications or noticeable symptoms; in *P. rheumatica* there may be slight fever, and various rheumatic phenomena are displayed about the joints as well as gastric disturbance; *P. hæmorrhagica* is marked by the larger size of the spots, the larger area affected, and the implication of the mucous membranes.

In all these forms the blotches are distinguished by the

fact that there are no local symptoms and that they do not disappear on pressure.

Treatment.—The simpler cases of purpura are treated by rest and the administration of iron. The following mixture is suitable:—

R	Liquoris Ferri Perchloridi.	. . . . .	ʒss
	Liquoris Arsenicalis		ʒss
	Glycerini		ʒj
	Aquæ Chloroformi		ʒviij

M. f. Mist. One tablespoonful in water three times a day after food.

Diet should be generous, and any discoverable derangement of the digestive functions must be corrected. Cases accompanied by hæmorrhages from the mucous surfaces should be looked upon as serious and outside the legitimate domain of the semi-professional reader.

RHEUMATISM, ACUTE

(*ῥεῦμα*, humour).

Definition.—An affection of the joints, of the parts surrounding the joints, or of the muscles; preceded by fever, characterized by pains, severe, fitful, and shifting, and generally by swelling and local tenderness. The primary cause or causes of rheumatism cannot be definitely stated, but the theories have been advanced that it is associated with the presence of excess of uric or lactic acid or of fibrin in the blood, while as a matter of course its origin has also been ascribed to micro-organic agency. Of immediate exciting causes, exposure to cold and wet is the most common; but occasionally injury to a joint, digestive derangement, and depressing influences generally may bring on an attack. Three principal varieties of acute rheumatism are recognised, namely articular, gonorrhœal, and muscular.

Symptoms.—Fever, perspiration, and shooting or flying pains may be said to be constant symptoms of

acute rheumatism. The disease apparently has an incubation period of several days, during which the patient presents the appearance of a person suffering from a severe catarrh, and feels ill and "out of sorts," with fits of chilliness, severe aching pains in the limbs (similar to those of catarrh), and perhaps, in the articular form, characteristic shifting and fitful pains in the joints. At the end of the period of incubation (or invasion) the pains lose their shifting character and become more or less constant at certain joints or groups of joints.

From this point the progress of the varieties mentioned present some differences, so that it will be convenient to consider them separately.

(1) *Articular.* When the disease declares itself by attacking certain joints, these become swollen, owing to effusion; the joints usually most affected are the larger ones, of the ankles, knees, shoulders, elbows, wrists, for example. Pain begins with a feeling of soreness on movement and increases in severity to a maximum, from which point, after persisting for a time, it declines again. The effusion commonly keeps pace with the pain, or rather perhaps follows close behind it, increasing and diminishing with it. Unless relapse be brought about by movement, the pain gradually disappears entirely, and only a feeling of stiff weakness remains behind. With the pain and swelling there are the other usual accompaniments of inflammation, namely redness and heat. The affected parts are also what is termed "tender," that is, passive movement and even mere vibration may cause intense suffering. To some extent the muscles adjacent to an affected joint are involved, and the whole limb may ache and be stiff. The number of joints attacked at a time may vary; and it is one of the characteristics of the progress of the disease, that it flies about the body from joint to joint, some regaining their normal condition, while others are going through the inflammatory process. In this way all the principal joints of the body may be attacked in the course of a few days, and then those which have already suffered may again become the seat of the pain, and so on repeatedly.

The fever is well-marked in all cases, but indefinite in

severity, in progress, and in the time over which it extends. As regards the first factor, it mostly varies directly with the severity of the local symptoms, but this is not invariably the case. It generally has a remittent character.

Perspiration was spoken of at the outset as one of the constant symptoms of acute rheumatism. The exudation, which is frequently very copious, has a powerful acrid odour characteristic of the disease. Associated with this is thirst and scanty diuresis. The digestive system partakes of the derangement, appetite being lost, the tongue coated, and the bowels irregular. For the rest, the rate of pulse and respiration is somewhat increased, and a slight cough may be present.

A considerable number of complications are met with in acute rheumatism, some of which, especially of the pulmonary and circulatory systems, are sources of serious danger. It must be recognised as a general principle, that only quite slight and uncomplicated cases should be taken in hand, since in nearly all instances there is danger of cardiac disease, which has to be met by special measures.

(2) *Gonorrhœal*.—As a rule, the symptoms of this variety appear somewhat late in the course of the primary disease. Some of the joints—it may be those of the ankles, knees, or wrists—become swollen and painful, the temperature goes up, and in other particulars the case resembles one of articular rheumatism. Occasionally the conjunctivæ are also affected by the inflammatory process, but this soon passes off. Just as in the form first described, this exhibits great variation in respect to the intensity of the pain and of the tenderness, and as regards its course and duration generally. It is noteworthy that in some cases the pain is not confined to the joints, but also implicates the fibrous structures and the muscles. A further difference between ordinary articular rheumatism and this, is, that here the heart very rarely suffers. Generally, only one or two joints are affected, though in very obstinate cases the whole number may be in turn invaded.

(3) *Muscular*.—This form has been described with some

detail under lumbago, one of the chief varieties of muscular rheumatism. Another, not uncommon, is torticollis, or "stiff neck," most frequently occurring in the young; while in other cases the fibro-muscular substance of the chest (pleurodynia), the scalp (cephalodynia), or the abdominal walls, may be the seat of the affection.

Treatment.—Some importance attaches to proper arrangements for the nursing of a patient struck down by "rheumatic fever." In view of the tenderness and exquisite sensitiveness of the joints which characterizes acute rheumatism, the bed should be hard, and stand firmly on a firm floor; it should be accessible from both sides, and a pair of blankets must be placed between the sheets, and the patient between them. This is necessary owing to the profuse perspiration.

For local application a host of liniments, counter-irritants and lotions have been adopted and recommended, but none of them seem to be of any practical value. The simplest method of local treatment, and one that often affords great relief, consists in bathing the affected joints with warm alkaline water and enveloping in cotton-wool over which is wrapped an ordinary roller bandage; or it may be sewn up in flannel. On the Continent the principle of this treatment is carried further and the joints put in splints or encased in plaster of Paris bandages, so as to render movement impossible. Rarely some form of opium, belladonna, or other well-known anodynes may be necessary to relieve pain.

Among the older remedies given internally, the salicylates hold the foremost place. The sodium salt may be given in doses of 20 grns. every four hours, but the dose is better adjusted to the individual case; the unpleasant taste is disguised by administering it in effervescing potash water. The alkalies, especially bicarbonate of soda, with or without quinine.

Of the newer synthetical remedies, antipyrine, acetanilide, phenacetine and phenocoll hydrochloride, have been more or less warmly advocated. Cases are recorded in the literature of each, where very satisfactory results have been obtained; and probably they would be worth trial if

salicylates failed to have the expected effect, as sometimes happens.

Gonorrhœal rheumatism is treated in the same way, attention being paid at the same time to the urethral affection. It may be added, that such cases are sometimes very obstinate and resist all forms of treatment.

The methods of combating the muscular variety are indicated under lumbago.

A word or two may be added as to diet. This should be of the kind usually recognised as appropriate in fevers, viz., nutritious and readily digestible; milk and soda and milk are probably the best, to which a little farinaceous food may be added. At the later stages of the attacks light articles of diet are appropriate, but the ordinary forms of meat are regarded as contra-indicated.

RHEUMATISM, CHRONIC.

Definition.—A disease of the joints similar to that described in the previous monograph but characterized by its chronic course and the absence of the violent inflammatory processes of the acute variety.

Symptoms.—Pain and stiffness are constant phenomena of chronic rheumatism. Sometimes they may be the only symptoms, but more frequently evidences of structural changes are discoverable, the joints being swollen, red, and permanently enlarged. The severer forms of chronic rheumatism are generally such as have developed from acute cases; the attacks of pain are severe and with the tenderness, swelling, etc., are apt to recur repeatedly at constantly decreasing intervals, until the pain is virtually constant. Under these circumstances great changes take place in the joints, the bones becoming enlarged and the tendons ossified, so that permanent distortion and displacement take place. As the distinguishing adjective applied to this form of rheumatism indicates, it may persist indefinitely, having no tendency to spontaneous cure.

Treatment.—It may be stated at once that the treat-

ment of chronic rheumatism is chiefly palliative, *i. e.*, it aims at relieving the symptoms and modifying the effects of the disease, rather than at effecting a cure. Sometimes moderate use of the joint, though painful, may be beneficial, but this should not be pushed too far, or the symptoms will be aggravated. Pain is relieved locally by counter-irritants, anodynes, stimulating liniments, fomentations, etc., and internally by the salicylates and other medicaments mentioned in the preceding chapter. Of the older class of remedies guaiacum is worthy of mention as undoubtedly of benefit in some cases; it is the active ingredient of the old-fashioned Chelsea Pensioner.

Another form of treatment depends upon tonics and cod-liver oil to support the system, and various baths and hydropathic methods generally. In the majority of cases the ordinary dry sudorific or Turkish bath is beneficial, though it has to be employed with care.

ROUND WORMS.

(See WORMS.)

SCABIES

(Latin, meaning, Mange).

Definition.—A contagious parasitic skin disease consisting in a simple inflammation due to the irritation of the female *Sarcoptes scabiei*, which burrows under the skin.

Symptoms.—The parasite chiefly affects the softer parts of the skin, such as that between the fingers and toes, and the inner surface of the arms. It seems very often to attack these areas on both sides of the body at the same time, but may extend to any other parts of the cutaneous surface.

The morbid condition of the skin is the combined result of the burrowing of the insect and of the scratching resorted to by the host to relieve the irritation; it is described as an artificial superficial eczema. The burrows

have some resemblance in appearance to the scratches made by a fine-pointed instrument (*e.g.* a pin) but examined under a lens they are seen to have a dotted appearance while the entrances are commonly worn away by friction. The parasite lies at the inner end of the burrow whence it may be removed by inserting a bristle or the like to which it adheres. By the aid of the lens also, the male insect may sometimes be discovered roaming about on the surface of the skin.

Treatment.—The routine method of treating scabies consists in the application of sulphur, usually in the form of ointment. The patient is given a hot bath, the skin well scrubbed with soft soap, and then the ointment (1 in 10 or 12) rubbed into every part of the skin except that of the face and scalp, which the insect never attacks (at least in adults).

The so-called Vlemingx's solution is preferred by some practitioners to the ointment. It is practically a pentasulphide of calcium made by boiling about 2 ozs. of sublimed sulphur with half as much slaked lime in a gallon of water. After cooling and subsidence a clear yellow solution is obtained which is freely sponged over the cutaneous surface, and the clothes put on before the body is dry; the excess of the liquid destroys any of the parasites which may be adhering to the clothing. A few applications are necessary to complete the cure.

It is necessary to bear in mind in all cases, that the remedy, if applied in too concentrated a form, is likely to produce as much irritation as was set up by the parasites, and thus the mischief perpetuates itself, the condition of the skin brought about by the remedy being taking for a symptom of the persistence of the *Sarcoptes* calling for still more active measures. For this reason, if the ointment be used, that of the B.P. should be applied only once, and any following inunctions made with a diluter preparation (1 in 10 or 12). The lotion seems to be more apt to irritate than the ointment.

It is recommended to bake the underclothing for a short time, in order to ensure the destruction of any of the parasites which may be adhering to them.

SEA SICKNESS.

Definition.—Nausea and vomiting affecting persons subjected to certain forms of motion, such as, or like to, the pitching and rolling of a vessel at sea.

Within the last few years a good deal of attention has been given to the nature and prevention of this much-dreaded and very unjustifiably derided affection. There are a number of theories which have been advanced to account for the symptoms of *mal-de-mer*, which attribute its origin (1) to psychical disturbance, (2) to circulatory disturbances, and (3) to disturbance of physical equilibrium. None of these however is sufficient alone to account for the phenomena; and it seems that a satisfactory theory is yet to find.

According to the patient and searching experimental observations of the most recent worker on the subject (Rosenbach), the evidence goes to show that there is in the epigastrium a mechanism of some sort which regulates the movements and balance of the body, informing the brain of the position of the body and of the rates of movement, etc., to which the various parts are subject. It is owing to the incapacity of this mechanism to meet the demands thrown upon it by the unusual and complex movements brought about by a rolling or pitching, and especially by a rolling *and* pitching vessel, that the disturbances arise. The immunity of some persons to the affection must be ascribed, on this principle, to the greater versatility of the hypothetical mechanism in their case to adapt itself to the novel forms of motion.

Another theory refers the phenomena to the series of shocks given to the nervous system by the motion of the vessel.

Symptoms.—The earliest symptoms of the affection are giddiness, followed by peculiar sensations in the epigastrium, which are followed by nausea and vomiting. These persist perhaps for some days, acid mucous secretion mixed with biliary matters being brought up. All the normal secretions and excretions are generally partially arrested, but the flow of saliva is augmented. Ap-

petite is lost, the sight or smell of food aggravating the symptoms, which are also generally most troublesome in the morning.

In the greater number of cases these symptoms subside spontaneously after a time; appetite returns, and the general well-being is fully restored. Three, four, or five days are the ordinary limits of the attack, though it may be over much sooner, or last for weeks. In severe cases a period of exhaustion follows that described above, characterized by coldness of the extremities, thirst, headache, somnolence, and persistence of the gastric symptoms in a subacute form.

Treatment.—As already indicated, the affection has in the majority of cases a tendency to spontaneous recovery. The hypothesis of its origination in psycho-physiological causes referred to under "Definition," finds some amount of confirmation in the effect of various remedies on the symptoms. Thus the most striking results are produced by nerve-sedatives, which render the nervous system as a whole less sensitive to impressions of all kinds. If the theory of Rosenbach be accepted as a working hypothesis, it is manifestly impossible by administering medicine to educate a nervous mechanism into adapting itself to new conditions; the author himself hints at the advisability of effecting the necessary habituation by regulated exercise, previous to embarkation, under conditions made to simulate as closely as possible those of a vessel on the sea.

Internally, alcoholic stimulants and sedatives (as already intimated) are the chief remedies employed. Among the latter, hydrocyanic acid, opium, amyl nitrite, chloral, and bromides are the chief. Quite recently, chloralamide and potassium bromide in combination (*p. æq.* in aqueous solution) have been very warmly recommended by a number of observers, as superior to any of the sedatives both for the prevention of attacks and the arrest of the symptoms. The effects recorded by those who have employed the remedy are such as to encourage its trial in all cases.

It would be a tedious and unprofitable task to enumerate all the agents which have at various times been put

forward for the prevention or relief of sea-sickness. Suffice it to add, that of nearly all it may be said, for one or two cases in which they seemed to do good, dozens can be quoted in which they were evidently of no value whatever.

In spite of the nausea which characterizes sea-sickness, light food should be persistently taken at short intervals, in order to avoid a condition of physical exhaustion. Lying up on deck in a sheltered position near the centre of the vessel, warmly wrapped in rugs, and if necessary with a hot water bottle to the feet, is much better than remaining in the berth, as fresh air is one of the most potent factors in combating the depressing effects of the first stage.

SORE THROAT.

(See CATARRH AND LARYNGITIS.)

SPRAIN.

Definition.—The effects of severe strain upon a muscle or tendon, or on groups of these by too great traction upon them. In the great majority of cases the muscles of the joints are most frequently sprained, for obvious reasons.

Symptoms.—Generally familiar. Incapacity to use the muscles or tendons affected without severe pain and subsequent swelling, with more or less intense suffering, are the most prominent symptoms. They are liable to great variation according to the degree of the injury; and this has also its effect upon their duration.

Treatment.—The best way treat a sprained joint before swelling has commenced, is to bandage it firmly with a rubber-bandage, and allow cold water to run upon it from a tap as long as the patient can stand the pain which this procedure causes. The firm elastic pressure and cold in conjunction, are often effectual in preventing the ap-

pearance of the severer local symptoms, and in reducing the length of time the joint is invalidated from weeks to a few hours.

If the pressure of the bandage occasions intolerable pain, it must be removed; the application of cold however may be continued, either by the method already indicated or by evaporating lotions: solutions of spirit (1 in 4) combined with lead or ammonium chloride, are suitable for the purpose.

When swelling has already occurred, this plan is not serviceable, but on the contrary, warm applications give the most relief. Lint soaked in one of the evaporating lotions may be applied, covered with oiled silk or other impermeable material, and fixed by a light bandage.

Although perfect rest to the injured limb is essential while the acute symptoms persist, yet care must be taken that the limb do not remain inactive too long; this will have in itself a prejudicial effect, by leading to weakness and stiffness. As soon as pain and swelling have subsided, gentle massage of the joint may be commenced, and it should be cautiously "worked," without however using the affected muscles, *i.e.* it should be moved gently about at intervals by a second person; the patient should make no attempt to move the joint, to lean the weight of the body upon it, or to otherwise put strain upon the part, until passive movements cease to cause the least pain. When the sprain was very severe and the joint proportionately longer in regaining strength, slight artificial support may be advisable when it begins to be used again.

STINGS.

Definition.—From a physiological point of view a sting is a wound, generally very minute, produced by a vegetable or animal agent, through which some poisonous or irritating substance was injected beneath the skin. In the vegetable kingdom individuals possessing the power of stinging are almost exclusively confined to the genus *Urtica*. Of the animal kingdom, the power of stinging is

largely possessed by the *Articulata*, especially the spider family and insects.

Symptoms.—The irritant fluid injected by the plant or animal begins, practically, immediately to produce changes in the local blood supply; redness, swelling, heat, and sensations described as burning or itching, according to the nature of the poison, are the principal effects of a sting. When the irritant is introduced into some part of the mucous membranes, the swelling is much more intense, and in the mouth may lead to serious embarrassment to deglutition. In severer cases the effects are not purely local, but extend along the limbs or body, and give rise to marked constitutional symptoms. These are especially liable to be produced when the stings are numerous, as, for instance, when a swarm of bees or wasps attack a person; cases are recorded in which very serious and even fatal results have followed from such multiple stings. The victims fall into a state of coma or semi-coma, with stertorous breathing, and sometimes vomiting of biliary matters; the pulse rate is accelerated, but there is not always any elevation of temperature. In a later stage the pulse becomes almost imperceptible. In ordinary cases the effects soon pass off, and even when more severe the poison seems to be rapidly eliminated or decomposed, and recovery is complete in a day or two.

Treatment.—Since the poison of the stinging plants and animals is regarded as being acid in nature, alkalies are considered indicated in the local treatment of the effects. Ammonia seems to be most generally useful, but soda or potassium carbonate or bicarbonate are also useful. Other applications are carbolic acid, oil of pennyroyal, other essential oils, and chloroform. For mosquito bites, the essential oils seem to be best suited, as besides relieving the irritation they have the effect of keeping the insects away.

Any faintness or other constitutional symptoms are relieved by sal-volatile or alcoholic stimulants.

STYE

(Anglo-Saxon, *stigan*, to rise up).

Definition.—A local inflammatory affection of the connective tissue of the eyelid near to or possibly seated in one of the hair follicles.

Symptoms.—Stye may be regarded as a small boil, and the appearance it presents does not differ essentially from that of a boil in any other situation. They are most commonly met with during the earlier years of life, and their occurrence in any numbers is an evidence of a low condition of bodily health.

Treatment.—As indicated in speaking of the treatment of boils, the process may be arrested in the quite early stages by plucking out the hair involved and carefully applying a caustic point, which in this case must of course be very fine. If, however, the swelling and aggregation of pus are already well marked, hot fomentations are necessary until the boil “points,” when an incision may be made to allow the pus to escape. This promptly relieves pain, and is followed by the diminution and gradual disappearance of the swelling. As after-treatment, if any be necessary, a dilute ointment of the yellow or red oxide of mercury (5 or 6 grns. to the oz.) may be applied to the affected lid.

SUNSTROKE.

Definition.—A nervous affection produced by exposure to intense heat. The condition is rare but not unknown in this country, at least in its slighter forms. Persons in a state of disordered health, or suffering from over-fatigue and other depressing influences are more liable to heat-stroke (as sunstroke is also termed) than those of constitutional vigour and good health.

Symptoms.—The simple form of exhaustion from exposure to severe heat, which alone need be considered here, is characterised by a pale, cold and moist condition

of the skin ; the heart beats quickly but feebly, and muscular as well as nervous power is in a more or less complete state of abeyance.

Treatment.—This is quite simple in the cases under consideration. The patient is removed into the shade, the clothing, especially about the neck, loosened and the face and hands bathed with cold water. If any faintness persist after recovery, the inhalation of a few drops of ammonia or ether are beneficial, but as a rule hot coffee or tea is most suitable.

SYCOSIS

(σῦκον, a fig).

Definition.—An inflammatory process, chronic in character, affecting the follicles of the hairy parts of the face. It is frequently excited by exposure to cold, and has been regarded as parasitic in nature, and therefore contagious.

Symptoms.—The formation of pus in the sub-epithelial layers of the true skin is followed by the appearance of pustules, each of which is traversed by a hair ; the general area of the skin in the affected parts is more or less inflamed and swollen. The pustules when they break discharge their contents, which dry into crusts, and fresh crops may appear day after day for prolonged periods. The process is characterized by a burning sensation and some stiffness, and hence is the source of considerable discomfort.

Treatment.—The differences of opinion held by different authorities as to the nature of this disease have led to the suggestion of very different methods of treatment. The evidence appears to point, however, in the direction of the theory that sycosis is of parasitic nature, and the *modus procedendi* based on this presumption consists in first removing crusts by means of a starch poultice to which about 10 per cent. of boric acid has been added. The action of the poultice is supplemented by the application

of some fat or oil, and thereafter hot fomentation until a perfectly clean surface is obtained. Then the hair is cut as closely as possible with sharp scissors, loose bristles removed by the forceps, and carbolic oil (about 20 per cent.) applied.

Other local applications are the ointments of acetate of lead, calamine, zinc oxide, and, in chronic forms, dilute sulphur iodide, mercuric oxide. As it is important that all the agents employed should be brought into contact with the deeper parts of the capillary follicles, the ointments should be prepared with lanolin and rubbed in gently when applying.

Nearly all the antiparasitics among the newer remedies have been applied in ointment form for the treatment of sycosis, such as ichthyol (10 per cent.), resorcin (15–20 per cent.).

Internally sulphide of calcium ($\frac{1}{10}$ – $\frac{1}{2}$ grn. several times a day), has been given in this, as in most skin diseases, with varying benefit. Some importance also attaches to the treatment of any constitutional disturbance of health which may be discoverable.

TAPE WORM

(See WORMS).

THREAD WORM

(See WORMS).

THRUSH

(See APHTHÆ).

TINEA

(*Tinea*, a moth-worm).

Definition.—A name applied to a class of skin diseases due to the presence of filamentous fungi. The principal varieties are *T. trycophytina* (ring-worm) which

also receives different names, according to its position (*tonsurans*, *circinata*, *barbæ*), and *T. versicolor*. Favus (q.v.) is also sometimes termed *Tinea favora*, *lupinosa* or *vera*. Attention need only be directed here to the two chief forms mentioned above, and of this only the former requires detailed consideration.

1. *Tinea trycophytina*.

Description.—The fungus (*Trycophyton species*) which by attacking the epithelial layers of the skin gives rise to the condition known as ringworm, produces a change in the texture of the hair of the area affected. The evidences of this change are loss of the natural lustre and suppleness, so that the hairs break off and are further to be distinguished by their opacity and their swollen appearance. The colonies of the fungus generally approximate to the circle in shape, and vary in size up to that of the palm of the hand. In some cases, especially where there is a taint of scrofula, the formation of pus takes place at the affected points, which more or less mats the hair together and renders the diagnosis more difficult. By the aid of the microscope the conidia and spores of the fungus may be recognised, especially about the base of the hair (which is prepared by soaking in diluted liquor potassæ), and this is often important in the diagnosis of the affection.

On the general surface of the body the patches appear as well defined circular areas with red margins elevated above the normal skin, while the centre is paler in colour and covered with a kind of scurfy bran. Under conditions favourable to the development of the fungus (heat and moisture) the diseased patches may extend to almost any degree.

Treatment.—Ringworm of the general surface is for obvious reasons more amenable to treatment than that of the scalp. Among the older school of practitioners the routine treatment consisted in applying the solid caustic, at least if the patches were seated in an inconspicuous position. At the present time such a method is regarded as unnecessarily severe in ordinary cases. The Ung.

sulph. iod. of the B.P. is now regarded as the best all-round remedy for the affection, the only precaution necessary being to dilute it where the skin is very sensitive. Mercurials, tar and creasote are also applied in ointment form for the same purpose, and the list of substances which have been used might be extended indefinitely. In any case, however, it is generally recognised that the secret of success in the treatment of all forms of the disease lies in the persevering use of a single remedy. Of the newer synthetical antiparasitics, aristol, ichthyol, and β -naphthol, have been chiefly recommended.

When the seat of the disease is the scalp, the hair surrounding the patch (or even that of the entire head, if the patches are numerous) is cut quite short, and every diseased hair must be carefully removed from the affected area by suitable forceps at regular intervals. The same remedies in the same forms are applied as in the simpler variety of the affection, but the fungus is generally much more difficult to eradicate. It is recommended to apply blistering agents at intervals, and as the view is held by some observers that all ringworm remedies are effectual only by virtue of the irritation and inflammation they produce, treatment by vesicants alone is occasionally adopted.

The re-growth of healthy hair on spots which have been attacked by ringworm generally requires stimulation, for which purpose any mild stimulant lotion may be applied (*see* BALDNESS).

The disease must of course be regarded as contagious, and appropriate precautions taken to prevent its spread from the patient to others liable to infection, as members of the same family for instance. A small linen or silk cap is recommended to be worn during the treatment, the head is washed every day, special towels, combs and brushes, etc., being kept for the sole use of the patient. As a preventive any pomade containing a mild antiparasitic may be used.

Lastly, it is regarded as a principle that fungi cannot develop upon a perfectly healthy skin, and hence the appearance of ringworm is symptomatic of a departure from the normal standard of health in the individual

attacked. Good food, hygienic surroundings, tonics and cod-liver oil are therefore indicated.

2. *Tinea versicolor*.

Description.—The appearances presented by areas attacked by *Microsporon furfur*, to which this variety of the affection is ascribed, only differ from those of ordinary ringworm by a more or less marked fawn colour of the margins and more irritation. The conidia of the fungus are also much smaller than those of *Trycophyton*.

Treatment.—The same as that detailed above.

TOE-NAIL, INGROWN.

Definition.—A thickened, ridged, and curved condition of the nail of the toe with a tendency to grow downwards and inwards into the soft tissues of the member. Generally due to unequal pressure and the wearing of too small or badly shaped boots, which do not allow of the natural expansion of the parts of the foot when the weight of the body is thrown upon it.

Symptoms.—The effects of ingrowing toe-nail are the same as those of continuous pressure by a hard substance in any situation. Disturbances of circulation and irritation are produced which develop, if neglected, into actual solution of continuity and ulceration. Hence, pain and swelling locally are the principal symptoms, with, later, the formation of pus.

Treatment.—Advice is occasionally sought from semi-professional sources in cases of this kind, so that the subject is appropriately included in this work. It is, however, necessary to point out from the outset that, save in very mild cases, some form of operative treatment is necessary, which, of course, should be left to the skilled surgeon.

If the case comes under observation before the local symptoms have become at all severe or aggravated, relief is obtained by clipping the free margin of the nail square off, scraping the upper surface with a piece of glass or a

knife, and carefully removing the thickened cuticle which forms under the edge of the nail at the sides.

The old-fashioned *modus procedendi* in slightly more advanced cases, where the use of the scissors is impossible, consisted in carefully packing minute rolls of lint under the recurved nail, and thus gradually forcing its free edge outwards and upwards. Tin-foil is stated to be preferable to lint, small portions being packed in day after day and the part dusted over with a simple antiseptic. If this fails, removal of the nail under an anæsthetic becomes necessary. Other methods consist in thinning the portion of nail to be removed by repeated applications of ferric chloride or liquor potassæ and scraping with glass in the intervals, but these require special skill and experience.

TOOTHACHE.

Definition.—Any pain in or about one or more of the teeth, which may be caused by exposure or irritation of the tooth-pulp, by gum-boil or by periostitis, occurring separately or conjointly.

Symptoms.—It may seem unnecessary to give any very detailed information under this head, as the complaint is unfortunately too well known; but as it is sometimes confounded with neuralgia, which requires different treatment, the distinguishing characters should be noted. Exposure of the tooth-pulp is perhaps one of the most common causes, and this ensues when decay has laid bare the pulp cavity, so that contact with hot or cold fluids or with any solid substance brings on pain of a very severe description.

Irritation of the tooth-pulp is met with at an earlier stage of the decay than the above. It is caused by caries which has started at some weak spot in the hard exterior, and aided by various acids engendered in the mouth, often the result of the fermentation of particles of meat lodged between the teeth. The effect of biting upon any hard substance, or of contact with hot or cold fluids, irritates the pulp and causes the pain. Periostitis

is characterized by a dull, heavy pain, much increased by percussion, the tooth seeming to be longer than its fellows, and the gum very red and inflamed; the tooth is generally loose and easily movable. Gum-boil is caused by irritation set up by the dead tooth-pulp, causing an irritation of the apex of the fang and a formation of pus, which gradually forces its way to the gum, which serves as its point of exit.

Treatment—Must depend to a great extent upon the symptoms, given in some detail above, and should not consist of playing the changes on oil of cloves, creasote, and laudanum, as is so frequently the case. As mentioned before, the general cause is decay, giving rise to irritation, or even exposure of the tooth-pulp; in such a case the cavity is to be gently but thoroughly washed out, dried with cotton-wool, and a small plug of wool saturated with oil of cloves, chloroform, equal parts of carbolic acid and ether, creasote, or a similar anæsthetic, inserted. A solution of mastic is often found useful, and a plug of gutta-percha to cover the wool serves to keep away both cold and pressure, until a permanent filling can be put in. Some dentists speak most highly of a mixture of carbolic acid and collodion for application on wool, and, if inserted carefully, it deadens the sensitiveness and temporarily closes up the cavity.

A mixture, prepared by rubbing together in a mortar chloral hydrate and camphor, gives great relief, and it may be improved by the addition of a small percentage of cocaine, if that be thought desirable.

Periostitis, recognised by its characteristic symptoms, may be best treated perhaps by a mixture of tincture of aconite and liniment of iodine, equal parts. The gum is first carefully dried, and the mixture applied with a small camel's hair pencil, the mouth being kept open till a film of iodine appears, which does in the course of a few seconds. Any irritation of the pulp which may accompany the periostitis is attended to in a similar way to that detailed above.

In treating the form of toothache characterized by an alveolar abscess or gum-boil, it is a mistake to advise ex-

traction, though this is done in some quarters to avoid time and trouble. It can, as a rule, be saved and rendered useful once more, if the patient will submit to be placed under the charge of the dental surgeon. For local relief, a hot fomentation of poppies and chamomiles, applied internally, is often temporarily efficacious, and, if persevered in, will probably result in relief by the bursting of the swelling and emission of the contained pus. On no account recommend any poultice to be placed on the outside of the face, as it may cause the abscess to break externally and lead to various complications, in addition to disfiguring the patient.

ULCER

(*Ulcus*, a sore).

Definition.—An open wound secreting pus, either on an endothelial or epithelial surface. It is distinguished from sloughing or gangrene by the fact that it involves the death of “molecules” of tissue, while gangrene involves that of visible masses. The origin of an ulcer may be either external injury or internal changes in the tissues. Ulcers may be considered under two heads. Thus (1) the healthy ulcer, characterized by small granulations, a thin, bluish, epidermal pellicle advancing from the edges, which are normal in appearance and not raised or hardened; in this form the pain is very slight and the discharge healthy. The other class (2) is that of ulcers which do not tend to heal, owing either to defect or excess of granulation, or to other peculiarities of character. The latter class will be alone further considered here.

Symptoms.—The weak ulcer has pale, gelatinous-looking granulations with normal edges overlapped by the granulations; a thin and watery secretion is discharged without any considerable pain. In the so-called indolent form, the surface of the ulcer is depressed, no granulations can be seen, and the edges are raised and indurated. The discharge is thin and scanty. Pain is sometimes severe at night.

Irritable sores of this kind have an uneven surface, irregular edges, and a thin discharge, with which is mixed some blood; the pain is described as aching. If inflammatory processes supervene, the edges and adjacent parts become swollen, red, and hot, and the discharge is acrid and offensive, while the pain assumes a throbbing character. The so-called sloughing or phragedenic ulcer (mentioned here only to complete the series) differs from this in the tendency to spread, which takes place by the breaking down of the tissues which bordered the sore. The surface is covered by a grey or black layer of dead-tissue products, and the margin is sharply defined and undermined.

Treatment.—The excessive granulations of the weak ulcer are destroyed by caustics and firm bandaging with astringent applications adopted. In the indolent variety, strapping tightly with soap or resin plaster, perforated to allow the discharge to escape, and renewing the plaster every second day, strong stimulating lotions being applied when re-dressing, is the procedure recommended. Irritable ulcers are reduced to the state of the simple ulcer by soothing lotions (opium or lead), and the inflamed variety by poulticing and other antiphlogistic measures; when they are thus brought into a healthy condition, the ordinary treatment is appropriate. In these cases rest is essential.

These are what may be termed routine methods of treating ulcers. Others are by the elastic bandage and by blistering followed by antiseptic dressings. The elastic bandage has the advantage of giving all the advantages of rest without the circumstance of "laying up" in the treatment of ulcers of the leg. The bandage is simply firmly applied from the toes upwards, covering up the ulcer, which may be either without dressing or simply covered with lint soaked in a stimulant, soothing, or antiseptic lotion, according to the appearance of the sore.

The treatment of ulcers of the leg by Unna's method consists in washing the limb with soap and water and covering all over, save at the ulcerated area, by a "zinc gelatine" made as under:—

R	Gelatinæ	ʒss
	Zinci Oxidi	ʒss
	Glycerini	ʒij
	Aquæ	ʒij

M. f. Pasta. To be applied after liquefaction by gentle heat.

The ulcer itself is then sprinkled over with iodoform, covered with a layer of cotton-wool, and over this with antiseptic gauze. The whole is kept in place by firm bandaging. In most cases it is necessary to change the dressing only once or twice a week, but this depends upon the amount of discharge.

A considerable list of agents might be given which have found advocates for the treatment of ulcers of various kinds, especially in the antiseptic methods of treatment. Besides iodoform, different substitutes, as iodol, methyl violet, aristol, euophen, resorcin, thioresorcin, have been recommended; while carbolic acid has been substituted by creolin, lysol and other tar bye-products with satisfactory results. The use of most of these newer bodies does not, however, seem to have displaced the older methods of treating the sores.

It should be scarcely necessary to add that, especially in cases of chronic ulcers, an important indication is the restoration of the health and bodily vigour which the existence or persistence of the ulcers shows to be faulty. This is effected by a liberal diet of nutritious and readily digestible food, pure air, and the administration of tonics and cod-liver oil.

WARTS.

Definition.—Small papillary growths on the skin which vary in size, shape and consistency. They are indicative of a loss of equilibrium in the nutritive functions of the skin, and are mostly met with at the two extremes of life. Warts seem to have a close relationship to the nervous system, occasionally disappearing under the operation of nervous influence.

Description.—Owing to the abnormally active growth

of a small group of the papillæ of the skin, a hard prominence appears above the general surface, which commonly has a tendency to increase in size. That it really consists of such bundles of papillæ is seen by inspection of certain warts of long standing, which split up at the summits into a number of subdivisions. According to unimportant variations of form, warts have received a number of distinguishing names, but these need not be further considered here.

Treatment.—Consists simply in applying some solvent, of which perhaps the safest and best is glacial acetic acid. In some cases it may be necessary to first remove the top layers of the wart by a sharp knife or a razor (any bleeding being arrested by pressure) before applying the acid. A saturated solution of potash is recommended by Erasmus Wilson as more speedy and effective in action; this should not be entrusted to the patient.

Internally, small doses of magnesium sulphate are credited with a prompt action in bringing about the disappearance of warts, and the same is true of small doses of Liq. arsenicalis. Internal treatment is, however, only necessary in cases where the warts appear in numerous crops.

WHITLOW

(Scand., *quick*, and *flaw*).

Definition.—An acute suppurative inflammation under the skin of the terminal joints (or phalanges) of the fingers. Several stages of the affection are recognised, of which only the first (superficial whitlow) will be here described. The later developments of the condition require surgical treatment, which is outside the province of a volume dealing with minor medicine.

Symptoms.—Superficial whitlow (*paronychia unguialis*) is confined to that terminal joint of the fingers which bears the nail. Here the process of inflammation affects only the skin (generally that at the side of the nail). Being excited by some injury or local poisoning, the usual symptoms of inflammation appear, namely, redness, pain,

and local heat. In three or four days pus collects and the affected area swells. As it cannot escape through the tough skin of the part, a state of tension is produced, which, if not relieved, has two effects: first, to increase the pain; and secondly, to cause the pus to force its way to other parts of the joint under the skin, and so spread the mischief.

Treatment.—This consists in frequent hot fomentations, and the application of the wet compress under oiled silk or other impermeable tissue to form a poultice. As soon as the skin is raised by the pus collecting underneath, it is cut away by scissors or a sharp knife. Sometimes the glycerine of belladonna will arrest the process of inflammation; and in all cases it relieves the pain.

If by the frequent recurrence of the trouble constitutional weakness is indicated, the usual tonic treatment (and sometimes arsenic) is called for.

WHOOPING COUGH

(See PERTUSSIS).

WORMS.

Definition.—This word is used in medicine to signify certain members of the class entozoa, or internal parasites, which are found in the human intestines. The use of the term in this sense was in the first instance due to a mistaken belief in the resemblance between ordinary earth-worms and the round-worms, or lumbricoids, which are parasitic in the human subject. These creatures are however structurally quite different.

Ascarides have been already described under that heading, so that here it is necessary to consider only tape-worms (*tænia*) and thread-worms.

1. Tape Worm.

Description.—Various species of *Tænia* are recognised, of which the chief are *T. medio-canellata* (beef tape-worm) and *T. solium* (pork tape-worm). Each so-called worm is a colony of incomplete individuals arranged in a con-

tinuous chain, the first in the series being transformed into an organ by means of which the colony fixes itself to the intestinal wall; this organ is popularly regarded as the head of the "worm." The *T. medicanellata* has a smooth head provided with suckers only, while *T. solium* is armed in addition with hooks; the latter is therefore much more difficult to dislodge.

Symptoms.—The simplest effect of the presence of tape-worm in the intestine is a feeling of weariness, but subsequently the general health begins to show signs of disturbance. Headache, giddiness, pains of an indefinite nature about the body, reflex noises in the ears, and various symptoms of dyspepsia are the chief phenomena. More rarely nervous symptoms are more prominent, or the sensory organs are more or less powerfully affected.

Treatment.—In spite of the introduction of a number of tænicides, as turpentine, koussou, kamala, areca-nut, pomegranate, thymol, myrtol, menthol, and naphtalene, male fern still maintains its prominent position as the most reliable anthelmintic. Recent researches have shown that the oleo-resin or ethereal extract of male-fern owes its specific value to an amorphous filicic anhydride, and that the crystalline filicic acid is absolutely inert. The dose necessary is very varyingly stated by different authors, but the general opinion is that at least one drachm is essential. The dose is preceded by a fair dose of sulphate of magnesia, and followed by a purgative, preferably senna or other drug of the same kind, and not castor oil, which is generally adopted. The parasite is speedily expelled, and the patient should be directed to remove and wash it, and to look out for the "head." When the draught of male-fern extract (emulsified with chloroform water and syrup by means of egg-yolk) causes vomiting, the drug may be often successfully administered in capsules. Not more than two doses should be taken consecutively. The doses of the principal other anthelmintics may be shown as under:—

Areca-nut . . .	2 drms. in milk.
Kamala . . .	2 drms. in syrup or mucilage.
Koussou . . .	4 drms. in infusion without straining.
Pomegranate bark .	1½ ozs. as decoction in three doses.

All these are given after a longer or shorter fast, and are best followed by purgatives. Naphtalene has been highly recommended in doses of fifteen grns. (five to eight grns. for children), with oil of bergamotte as a corrective and castor-oil as a purgative.

2. Thread Worms.

Description.—The appearance of the common thread-worm (*Oxyuris vermicularis*) is more or less well known to every one. The females are much more numerous than the males. It is important to bear in mind that the ova of these parasites are exceedingly minute and have been detected under the nails of persons infested with the adult worms, who thus perpetually reinfect themselves. Hence great cleanliness is necessary to avoid the prolongation of the condition.

Symptoms.—The most common are itching sensations about the anus, genito-urinary passages and nose, which may be followed in young children by convulsions. Ordinarily restlessness and irritability are the principal sympathetic phenomena produced.

Treatment.—This is most effectually carried out by means of simultaneously giving iron, aloes and asafœtida by the mouth, followed by copious draughts of aperient waters (Cobbold), and using enemas of salt and water. Santonin is sometimes successfully given and some writers recommend large doses of infusions of gentian, or quassia with saline purgatives.

WOUNDS

(Sax., *vund*).

Definition.—Wounds are, speaking generally, a break or division of continuity of the soft parts caused by mechanical violence. They are of several kinds, differing of course with the class of instrument by which they were inflicted, and varying very much in extent and also in severity.

Symptoms.—The classes of wound for which semi-professional aid is as a rule asked, are chiefly Incised Wounds or Cuts, and Contused Wounds or Bruises. The first of these is in some localities a case of very frequent occurrence, arising in the performance of the most trivial duties, and may vary in extent from a flesh wound, only "skin deep," to a cut of very great severity, entailing the separation of a vein or artery. In the case of a flesh wound, the blood will be observed to issue in a steady flow, proceeding as it does from a very large number of capillary blood-vessels, scattered about beneath the surface, all of which are equally injured by the cut.

If the injury be deep, and the blood be found to flow in a steady stream and to be of a dark purple colour, it is an indication that a vein has been divided; and little anxiety need be felt, as with proper attention the bleeding can be stopped and the wound quickly healed. But if, on the other hand, the bleeding from a deep wound be of a spurty, jerky character, and the blood itself be of a bright red colour, it is evident that an artery has been incised; and every care must be taken to stop the bleeding as quickly as possible, or serious results may ensue.

It will hence be seen that cuts are of three principal classes, each of which requires to be dealt with in a special way.

Contused Wounds, or Bruises, were dealt with under the latter title. Abrasions generally show the raw flesh on the surface, the upper cuticle having been removed by a fall, or by a scrape against a rough surface. They may be accompanied by a certain amount of swelling, and may then be treated like an ordinary bruise, special attention being given to the unprotected flesh.

Treatment.—It is impossible to lay down any hard-and-fast rule as to what cases should be left entirely to the care of the practised surgeon. As often happens, however, cases even of a severe character are first of all taken to the nearest chemist; and he must do his best to stop or control the hæmorrhage, if not render any further assistance.

When a case of either of the classes of cut, above par-

ticularized, the first duty is to arrest the bleeding, and then, after cleaning the wound, to apply suitable dressings. If the wound be of the first class, a flesh wound, the bleeding may be generally arrested by the application of a styptic, such as tincture or solution of perchloride of iron, hazeline, orturpentine ; tinct. benzoin. co. is also used for this purpose with good effect, and it forms a resinous covering over the wound that assists to exclude the air. Strips of adhesive plaster, cut narrow and applied in star-shaped fashion over the injured part, complete the treatment.

If the wound be a deep one, in the arm, neck, or leg, and accompanied by much bleeding, the source of the blood, venous or arterial, should be determined, before proceeding to treat it. The thumb should be placed over the wound to arrest the hæmorrhage as much as possible, whilst some bandages are being obtained for the operator.

In case of an incised artery, the blood issuing in spurts, occurring in the arm or leg, a handkerchief should be tied loosely round the limb, a few inches above the wound. A spatula or short bit of stick is inserted under this, and twisted round in a screw-like fashion until the handkerchief tightly compresses the part, when the bleeding will be found to gradually cease. The clotted blood and dirt is then removed from the wound with a clean sponge, and a handkerchief or roll of clean rags placed over the wound, and securely and tightly bandaged on. The improvised tourniquet may then be removed, but replaced if hæmorrhage recommence, and made still tighter. A similar wound in the neck can be only treated with the linen absorbent pad and the bandage, as, of course, the tourniquet cannot be applied.

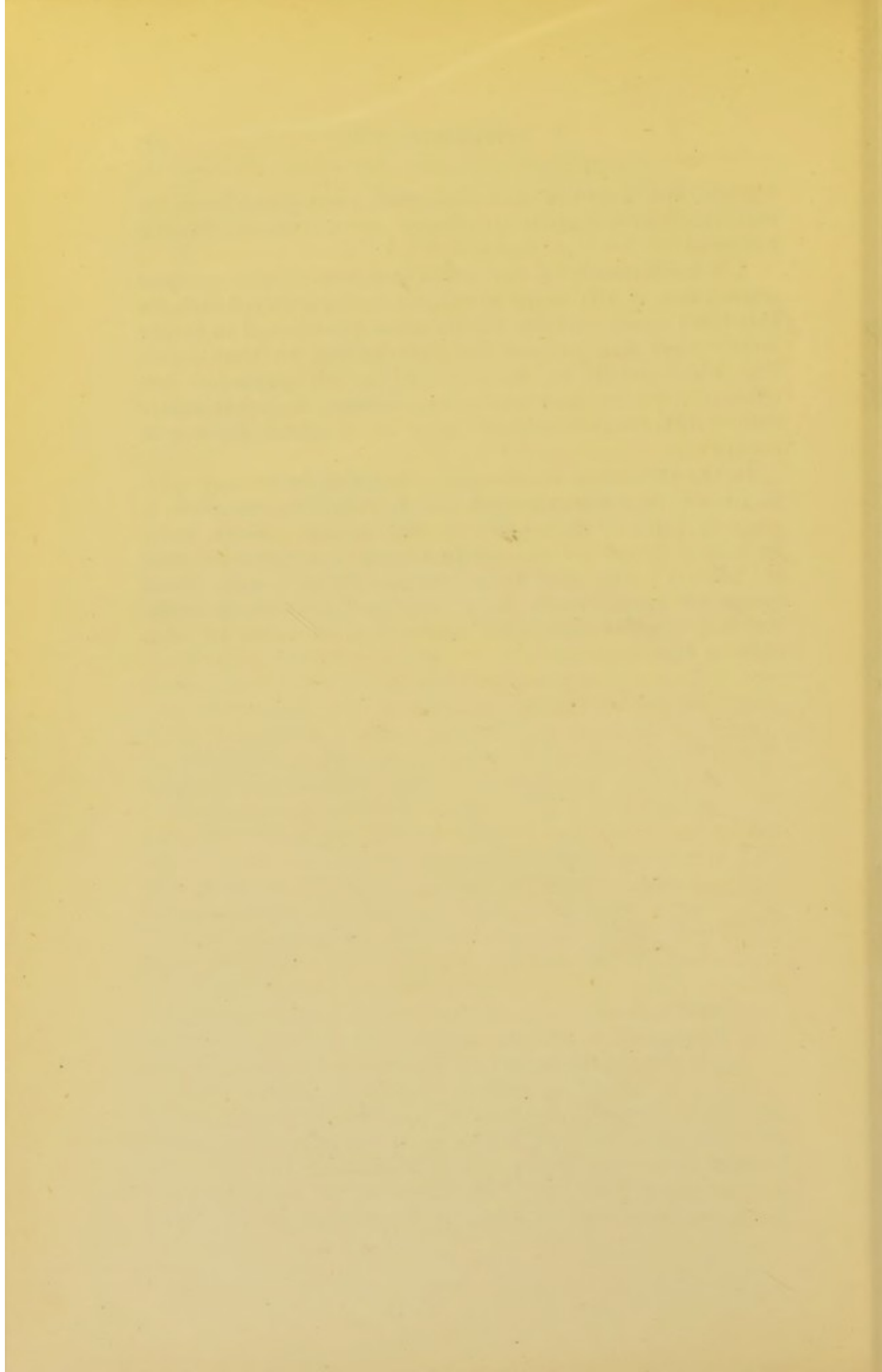
Remember that this class of wound is the most serious ; and the advice of the surgeon should be sought in any case which is not controlled by the above measures.

If the issuing blood be of a dark purple colour, indicative of a divided vein, any tight clothing, such as belts or straps, coming between the wound and the heart, must be removed ; and if the bleeding does not cease spontaneously, the part must be raised in the air. The edges of the wound are then drawn together with straps of adhesive

plaster, and a pad of soft absorbent linen placed over it, and the whole tightly bandaged with some antiseptic material.

A consideration of the relative values of the various antiseptics is too large a subject to be entered into in this brief space, and the reader must be referred to larger works than the present for information on that point. The chief points to be required in an antiseptic are efficiency, purity, and non-poisonousness; any antiseptic that fulfils these conditions may be accepted for use in surgery.

In the treatment of abrasions, any simple healing ointment is to be recommended, and it should be spread on a piece of lint and fastened over the wound. Much could be said in favour of the old-fashioned zinc ointment, and the official "*ung. acid. boric.*" is capable of a very great range of employment, as a safe and reliable remedy. Another simple antiseptic application of value in such cases is *lano-creolin*,



GLOSSARY.

(Abbreviations used :—*n.* for *noun* ; *adj.* for *adjective*.)

- Abdomen** (*n.*).—The cavity of the trunk below the diaphragm.
- afebrile** (*adj.*).—Without fever.
- albuminuria** (*n.*).—The presence of albumen in the urine.
- alveolus** (*n.*).—The bony socket of a tooth.
- anæmia** (*n.*).—Poorness of blood—deficiency in the relative number of its red corpuscles.
- antigalactics** (*n.*).—Agents that diminish the secretion of milk.
- antiphlogistic** (*adj.*).—Reducing or subduing—(applied to inflammation or fever).
- areola** (*n.*).—The coloured circle round the nipple.
- arthritic** (*adj.*).—Pertaining to arthritis.
- arthritis** (*n.*).—An inflammatory condition of the joints.
- articular** (*adj.*).—Belonging to the joints.
- atonic** (*adj.*).—Debilitated.
- auricle** (*n.*).—The outer part of the ear.
- axillæ** (*n.*).—The armpits.
- Balanitis** (*n.*).—External gonorrhœa—inflammation of the glans penis.
- bronchial tubes** (*n.*).—The air-passages in the lungs.
- bursæ** (*n.*).—Small sacs occurring between two parts that work one upon the other.
- Calculus** (*n.*).—A hard concretion occurring in various glands and in the bladder.
- cancer** (*n.*).—A malignant tumour.
- capillary** (*adj.*).—Hair-like. (*Noun in plural*) Minute blood-vessels.
- cardiac** (*adj.*).—Connected with the heart.
- caries** (*n.*).—Decay of bone.
- cerebral** (*adj.*).—Pertaining to the brain.
- cerumen** (*n.*).—The “wax” of the ear.
- chancre** (*n.*).—A venereal sore.

- chlorosis (*n.*).—The so-called “green-sickness” of young women.
- cholericform (*adj.*).—Cholera-like.
- coagululum (*n.*).—A congelation or clot.
- coma (*n.*).—A state of abnormal sleep.
- congestion (*n.*).—An abnormal accumulation of blood in an organ or part.
- conjunctivæ (*n.*).—The membranes connecting the front portion of the eye with the eyelids.
- cornea (*n.*).—The strong transparent membrane forming the front of the eyeball.
- cutaneous (*adj.*).—Pertaining to the skin.
- cuticle (*n.*).—The thin “outside” skin.
- cutis (*n.*).—The true skin under the cuticle.
- cyanotic (*adj.*). Having a bluish colour (applied to the skin).
- Dermatitis (*n.*).—An inflammatory condition of the skin.
- diaphragm (*n.*).—The muscular tendinous wall separating the thorax and abdomen.
- diathesis (*n.*).—That condition of the system, when it is specially prone to the development of diseases, like gout, diabetes, hæmorrhage, calculus, etc.
- diuresis (*n.*).—Excessive flow of urine.
- dyspnœa (*n.*).—Difficulty of breathing.
- Endothelium (*n.*).—The inner lining membrane of mucous surfaces.
- epidermis (*n.*).—The outer layer of the skin.
- epigastrium (*n.*).—The region of the abdomen over the stomach.
- epithelium (*n.*).—The cuticle of the skin—the outer lining membrane of mucous surfaces.
- eructation (*n.*).—A sudden ejection of wind or liquid from the stomach.
- Eustachian tube (*n.*).—The canal leading from the pharynx to the middle ear.
- exanthematous (*adj.*).—Eruptive.
- extensor (*n.*).—That which extends.
- Fauces (*n.*).—The space at the back of the mouth bounded by the tonsils, uvula, and palate.

follicle (*n.*)—A minute secretory cavity or sac.

Ganglia (*n.*)—Independent nerve-centres of limited functions.

gangrene (*n.*)—The death of soft tissue, due to failure of nutrition.

gastric (*adj.*)—Pertaining to the stomach.

glottis (*n.*)—The opening between the vocal chords.

gravel (*n.*)—Small concretions found in the bladder.

Hæmorrhage (*n.*)—Bleeding.

hemicrania (*n.*)—Headache, or neuralgia of one side of the head.

hepatic (*adj.*)—Pertaining to the liver.

hygiene (*n.*)—The science dealing with the preservation of health.

hyperæmia (*n.*)—Congestion (*q.v.*).

hypertrophy (*n.*)—Abnormal enlargement.

Ilium (*n.*)—The upper flattish portion of the hip bone.

infiltration (*n.*)—The diffusion of any fluid into a tissue or organ from without.

integument (*n.*)—A covering.

Laminated (*adj.*)—Arranged in strata or layers.

laryngeal (*adj.*)—Pertaining to the larynx.

laryngoscope (*n.*)—An instrument used in examination of the larynx.

laryngospasm (*n.*)—Spasmodic contraction of the larynx.

larynx (*n.*)—The organ of the voice.

lesion (*n.*)—A term loosely applied to indicate any wound or injury.

leucomaines (*n.*)—Animal alkaloids found in the living tissues.

lividity (*n.*)—Discoloration.

lumbar (*adj.*)—Pertaining to the loins.

lymphatics (*n.*)—The vessels which form the principal part of the absorbent system.

Meatus (*n.*)—A canal or passage.

melancholia (*n.*)—A mental disease characterized by great depression.

Necrosis (*n.*)—A mortification of bone; sometimes applied to the local death of any part of the body.

- neurasthenia (*n.*).—Nervous debility.
- neurosis (*n.*).—A functional affection of the nerves, or nerve-centres.
- Œdema (*n.*).—An effusion of serous fluid in the tissues below the skin.
- œsophagus (*n.*).—The food-pipe, or gullet.
- osseous (*adj.*).—Bony.
- oxygenation (*n.*).—The act of uniting with oxygen.
- Pancreas (*n.*).—A secretive organ situated in the abdomen.
- pancreatic juice.—A digestive fluid secreted by the pancreas.
- papule (*n.*).—A swelling or pimple of the skin.
- paralysis (*n.*).—Loss of sensation or motion.
- paresis (*n.*).—A partial loss of muscular power, a mild form of paralysis.
- parotid (*adj.*).—Situated near the ear.
- pelvic (*adj.*).—Pertaining to the bony cavity in the lower part of the abdomen.
- perineum (*n.*).—The lower portion of the abdominal cavity.
- periosteum (*n.*).—The tough connective tissue surrounding the teeth.
- periostitis (*n.*).—Inflammation of the periosteum.
- peripheral (*adj.*).—Surrounding.
- peristalsis (*n.*).—The movements of the intestines, whereby the contents are propelled forwards.
- peritoneum (*n.*).—The inner lining membrane of the abdomen.
- peritonitis (*n.*).—Inflammation of the peritoneum.
- pharynx (*n.*).—The cavity at the back of the mouth into which canals from the ear and nose also pass.
- pneumogastric nerve.—One of the sensory nerves that also regulates motion.
- pneumonia (*n.*).—Inflammation of the lungs.
- polypus (*n.*).—A small tumor supported on a kind of stem.
- prolapsus (*n.*).—The falling down or protrusion of some part beyond its natural boundary.
- psycho-physiology (*n.*).—Mental physiology.

pubic (*adj.*).—Relating to the pubes.
pulmonary (*adj.*).—Pertaining to the lungs.
pustule (*n.*).—A swelling of the skin, containing pus.
pyrexia (*n.*).—Fever.
Recrudescence (*n.*).—A severe relapse.
rhagadia (*n.*).—Ulcerous fissures.
rigor (*n.*).—A sense of chilliness with uncontrollable shivering.
Sciatica (*n.*).—Rheumatism in the hip.
sebaceous (*adj.*).—Relative to the fat-secreting glands.
seborrhœa (*n.*).—A disorder of the sebaceous glands causing increased secretion.
serum (*n.*).—The colourless fluid portion of the blood.
sinus (*n.*).—A canal or cavity.
sternum (*n.*).—The breast bone.
stertorous (*adj.*).—Breathing loudly.
stomatitis (*n.*).—Inflammation of the mouth.
sudorific (*adj.*).—Relating to perspiration.
suppuration (*n.*).—Formation of pus.
Thorax (*n.*).—The cavity of the chest.
traumatic (*adj.*).—Applied to wounds.
tympanum (*n.*).—The drum of the ear.
Urethra (*n.*).—The canal passing from the bladder outwards.
urethritis (*n.*).—Inflammation of the urethra.
Varicose (*adj.*).—A swollen condition of the veins.
vascular tissue.—That form of tissue characterized by the presence of blood-vessels.
vaso-motor nerves.—Those passing to the blood-vessels.
vertigo (*n.*).—Dizziness.
vesicant (*adj.*).—Blistering.
vesicle (*n.*).—A pimple or elevation of the skin, enclosing serous fluid.
vicarious (*adj.*).—Taking the place of another.
viscera (*n.*).—The contents of the cavities of the body.

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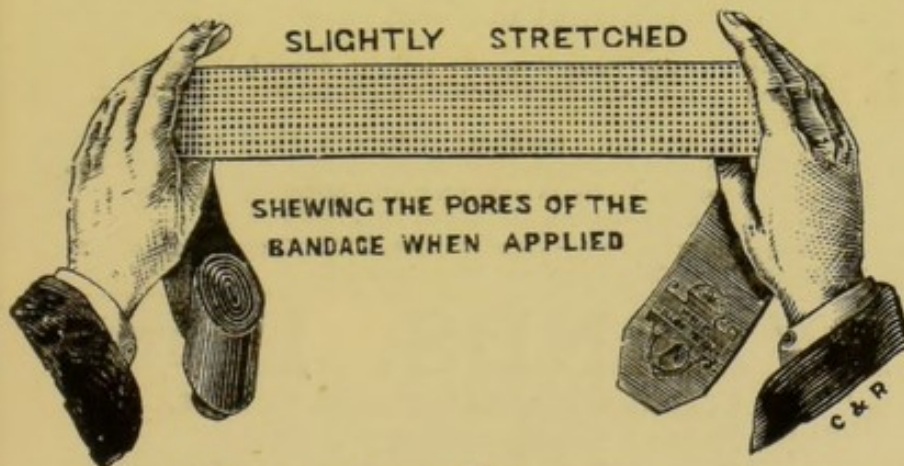
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