

DIURETICS.—Diuretics commend themselves where a derangement is of such trifling import that it is justifiable to treat the patient without confinement to the house; in common colds, for example. Sweet spirits of nitre is a favorite preparation in the direction; the dose is a teaspoonful, repeated three times a day. Spirits of Mindererus is much employed by the author; as intended to act upon the kidneys the dose is a dessertspoonful, the external parts of the body being kept cool, so that its action shall not be invited to the skin.

NARCOTICS.—Opium and its preparations, used with a view to the narcotic quality, seems, to the experience of the writer, to be ill-advised practice. In the Oral Hospital the medicine is never given but in emergencies. Like with the use of chloroform, employed as an anæsthetic, inflammatory conditions seem impressed with characteristics of depression. It may be, and undoubtedly is, occasionally necessary to employ full doses of opium, but such necessity is a matter to modify anticipations of a generous cure.

Where inflammation associates with wounds, or exists in other causes, and where sedation is an indication, no medicine surpasses, if it equals, the potassium bromide. As a dose this may be pressed from thirty grains to one and a half drachms. A practice with the writer is to order a mixture containing ninety grains, and to exhibit this in three equal parts, if found required, at intervening periods of two hours. It is to be observed that the medicine is not to be taken until external circumstances favor the falling asleep of the patient.

Hyoseyamus and belladonna combined in a suppository act commonly favorably.

R.—Extracti hyoseyami, gr. xx;
Extracti belladonnæ, gr. ijss.

The proportions are to be mixed up with cacao butter and divided into ten suppositories. The application is by rectum; one three times a day. In connection with this combination morphia has seemed to the author to be least objectionable; one-quarter of a grain of the sulphate added to each suppository induces speedy sleep; half a grain, if pain be great, as, for example, in phlegmasia of the skin or cellular tissue, in rheumatic or gouty inflammation, is not at all an overdose. In visceral inflammation, where control of movement is a necessity, there is nothing that seems able to do the work of opium. Being the only medicine to be used, it is best given in full doses. The writer has frequently met with conditions of irritable bladder where, to prevent the patient from being worn out, morphia had to be given; this, however, as must be appreciated, from the fact only of an inability to learn of and to treat the direct cause of the trouble. In conditions of pleuritis and of inflammation of the lungs morphia applies, and is to be employed where extreme irritability is not otherwise to be subdued.

Specific inflammation having existence by reason of the presence of a source of irritation specific in its nature, a treatment required is to be with

special signification; the poison, or agent of offence, is to be antagonized. Syphilis is a specific agent of offence that shows many expressions. Here local conditions are to be met on the grounds of common indications, but, associated with these common means, medicine specifically antagonistic to the virus is not to be omitted. The medicine required is mercury, an agent found too often not less full of evil than of good. The writer, deducing from the experiences of many years, recommends the bichloride. Where employed at all judiciously he has yet to fault the preparation in a single instance. His own usual prescription is as before given. (See page 690.)

R.—Hydrargyri bichloridi, gr. ij;
Potassii iodidi, ℥ij;
Aquæ, ℥ij. M.

Sig. Teaspoonful three times a day, before or after meals, as found least objectionable.

In all conditions of syphilis, primary, secondary, and tertiary, it is the practice of the author to give this combination in connection with whatever local remedies it seems necessary to employ; the iodide of potassium, if not useful in the first and second of the stages, has certainly never been found hurtful; on the contrary, it has always seemed to add activity and curative virtue to the mercurial.

In perversions of the circulation arising out of malarial poisoning the antidote is quinine. In acute attacks, where the disturbance associates with certain periods of the day, as in the instance of quotidian intermittent, the specific is to be employed only in the interim of attacks. Ten grains of quinia sulphatis, given in divided doses when the fever has passed off and before the chill comes on, being repeated during from two to half dozen interims, destroys the cause of the disturbance, consequently cures the evil.

In conditions of malarial disturbance, where the cause is not of sufficient force to produce paroxysms yet induces the state of malaise, no specific means better than the following is to be employed. Take of powdered red Peruvian bark (*cinchona rubra*) one ounce, of powdered Virginia snakeroot (*serpentaria Virginiana*) half an ounce, put the two together into one and one-half pints of water, simmer to one pint; when cold, strain, and add one pint of Lisbon or other red wine having an alcoholic strength of not less than twelve per cent. The dose is a wineglass, containing two tablespoonsful, before meals.

The specificity of diphtheritic inflammation, as of ordinary erysipelas, demands iron; this to be used externally and internally. In treatment of this inflammation it is a practice of the writer, resultant of his experience in the direction, to administer from five to twenty drops of the muriated tincture of iron each three hours, and to apply to the throat the iron, quinia, and cinchona mixture (see *Erysipelas*), by means of a camel's-hair brush, at least six times a day. With a view to dissolving the exudate as it forms, free local use is made of Watson's chlorine water, full strength, used with the brush, or,

when the deposit has reached the trachea, by means of a hand or steam atomizer. It is to be recommended that the steam atomizer keep the atmosphere quite continuously impregnated with chlorine. With this as the specific treatment, aided by adjuncts of a character suited to indications as they may offer, the writer finds himself able to claim a reasonable share of success in the direction.

Scrofulous inflammations demand special attention to the general lymphatic indolency which begets them. Treatment is tonic; salt sheet-baths, milk, drank in quantities of two quarts a day, cod-liver oil, ferrated wines, exercise, rough and exhilarating as it can be borne. In scrofulosis the perversions are always of indolent expression, no acute symptoms show themselves. As a local application to glands and parts indurating, the following combination is to be employed with much satisfaction:

R.—Tincturæ ferri chloridi, ℥j;
Tincturæ iodinii, ℥ss;
Quiniæ sulphatis, ℥ss;
Tincturæ cinchonæ, ℥ij. M.

Sig. To be painted over the part thrice daily.

Inflammation is to be considered from the stand-points of activity and chronicity. Active, or acute, inflammation signifies response, to the presence of an irritant, that runs a rapid course. It would not, perhaps, be easier to provide illustration of acute inflammatory action than is exhibited in the common boil. The phenomena are open, free, and follow each other successively, if not interfered with. Indications are always of an antiphlogistic nature. Chronic inflammation, on the contrary, is expressive of exhaustion and of sluggishness. It is that condition too often encountered on the subsidence of acute attacks where the irritability of parts seems worn out, where capillaries are over-full of blood, yet unable to contract upon and expel it. It is a condition where everything is in abeyance, growing neither worse nor better. It is a state where demand exists for external help, and this help pertains not to depression, but to stimulation.

The indication in chronic inflammation is for supply of lacking force. To accomplish the requirement demands the unloading of capillaries, and the putting into the parts of such activity as shall enable them to recover and preserve the lost equilibrium. An expression of chronic inflammation very familiar to the oral surgeon is seen in scorbutic gums. The parts are spongy, turgid with blood, are purplish-red in color, are fallen away from the teeth, about which organs pus is exuding, they look as if mortification was to terminate the condition. Ulcerations occurring in scrofulosis and in syphilis furnish other illustrations. In neither of the latter lesions is there any sign that is open and generous. Everything is indolent and expressive of degeneration.

To unload capillaries passively or chronically congested, depletion is almost always a necessity. Certainly the radicles cannot recover normality unless relieved of blood. This unloading is commonly to be accomplished by pricks

or slits, made by means of a bistoury. When depletion is obtained, a valuable succeeding performance consists in free painting with a sorbefacient of stimulating attributes. Of such medicines there is nothing superior, if indeed equal, to the ordinary officinal tincture of iodine. This tincture not only excites, but it favors attempt at renewed action, by arousing the lymphatics to removal of lymph and sero-lymph effusions with which such parts are found burdened. Aromatic sulphuric acid in dilution is an alterative stimulant of happy signification. Another, one of great virtue, is the tinctura capsici et myrrhæ, used pure, applied by means of a brush, otherwise diluted with water to meet indications. It is seldom that, in the practice of the author, this last is not pressed into service at some stage of the treatment of chronic inflammation. Mercury is to be commended when employed by the experienced with discretion. It is a remover of indurations, but is an agent capable of an evil far excelling any good that it may do. Tincture of erigeron is an expressive stimulant. Still another is the compound tincture of benzoin. Where it is desired to constrict, and at the same time to cover a surface, an admirable medical varnish is made by thickening muriated tincture of iron with sulphate of quinia. Touches with chloride of zinc or with nitrate of silver are sometimes found of valuable import in chronic conditions. A most excellent means for renewing vitality in a part is found in Volta's pile. To make this requires simply strips or squares of sheet-zinc and copper, between which is placed a piece of cloth kept wet with cider vinegar; care is to be exercised that it do not over-stimulate.

Conjoined with local cure chronicity, where of any extent of signification, requires systemic consideration. This is to be always a treatment of building up, and it varies necessarily with the disease and circumstances of a patient. A means of general import for good is found in the sheet salt bath. To apply this, Turk Island salt is put into a small tub of water (enough being added to give it the taste of the sea), and in this a coarse sheet is placed. The bath thus made ready, the patient steps into the tub, and the sheet being thrown quickly about him, he is rubbed, or rubs himself, until the skin is aglow. In the use of this bath regard is to be had to the immediate effect. If, instead of a glow, the patient comes from under the manipulations cold, depressed, the surface in the condition of goose-flesh, the cold water is to be changed for hot, or, the bath being taken in the morning, a goblet of milk in which a tablespoonful of whiskey or brandy, together with the yolk of an egg, have been placed, may be drank quarter of an hour before getting out of bed. Milk is an admirable medicine; two quarts may commonly be taken in the course of a day with benefit. Oils and oleaginous foods are indicated in every case of tuberculosis. Hill-sides and the sea-shore, and roughing it where air is pure and water good, are means not wisely neglected when a condition of depression is serious. Attention to habits is of consequence; excesses of any kind bear to be inquired into.

Massage is a means tending to restoration of lost general excitability most

worthy of careful study. To massage a person means simply to rub and to knead his flesh. Few better methods of dispersing indurations exist than is found in this practice. An induration is to be rubbed toward more vital parts. The acts of massage relate with both the vascular and lymphatic systems, meeting thus two indications at the same time.

A feature of chronic inflammation annoying and defying as to treatment relates with an inability shown by parts to retain advantages apparently secured. This is to be estimated in the treatment of a case that discouragement do not ensue. A part will hold its own when fully recovered from depression, not sooner.

Chronic inflammation associated with joints favors plastic effusion, apt to result in false, or possibly in true, ankylosis; related with the lymphatics, scrofulosis or tuberculosis ensues; if existing with the viscera, adhesions form; if in the tonsils, hypertrophy is developed; in mucous membranes sub-infiltrations and strictures follow.

Suppuration.—By suppuration is meant nothing different than that nutrition in a part showing the phenomenon is incapable of perfecting itself, consequently that food elements, brought to the locality, in place of accomplishing the process of organization, proceed a certain space in the direction, then undergo degeneration and roll away in the shape of pus-corpuscles.

Redness, Heat, Pain, Swelling, Functional Disorder.—Redness in an inflamed part signifies coloration by the excess of blood that is in it. Color varies. In syphilitic inflammation it is like to copper. In erysipelas it is a glistening red. In the skin, and associated with mucous membranes, being of non-specific character, it is scarlet. Affecting the iris, it is commonly brick-colored. In scrofulosis it is not unlikely to be a yellowish-purple. When gangrene is threatened the color is brown or a brownish-black.

HEAT.—Heat signifies increased nutritional activity combined with evolution arising out of the friction of an accelerated circulation.

PAIN.—Pain is a factor not fully comprehended; that it is not an unmitigated evil is proven in the fact of its acting as a warner, affording understanding of the condition of diseased parts. Pain begins with a perversion, and accompanies it until the suppurative act is reached, when it gradually subsides. In an inflammation it is commonly greatest at the central point of obstruction, and shades off proportionably with the clearing of the circulation. Pain exists with the nerve radicles, consequently in relation with the nervous system are we to study the phenomenon. To pinch is to produce pain. Nerves related with inflamed parts are pinched by the effusions. Pain like color varies: associated with serous membranes it is sharp, with mucous membranes it is dull, in cellular tissue it is throbbing, in the bones it is gnawing, in the testicles it is sickening, in the urethra it is scalding, in the kidneys, spleen, liver, and lungs it is a heaviness or soreness, in gout it is twinging, in rheumatism it is constricting.

Pain is proportional with the temperament and irritability of a patient.

The lymphatic suffer little, the nervous much. That long continuance of pain wears out vitality is not to be doubted. Pain, when in excess, is to be narcotized. Being bearable, without too great discomfort, it may be left to its office of sentinel, affording information as to a patient's condition. To narcotize pain is not necessarily to be in the line of cure of a case. To cure a case, however, is to be certainly rid of pain.

Pain is not the associate of inflammation alone. There is the pain of spasm, the pain of neuralgia, the pain of colic, the pain of anæmia, the pain existing in the functional disturbance of organs, growing pains, reflected pains.

In inflammations of vital organs the sudden cessation of severe pain where no opiate has been used is a sign of threatening import, implying too often that mortification has set in.

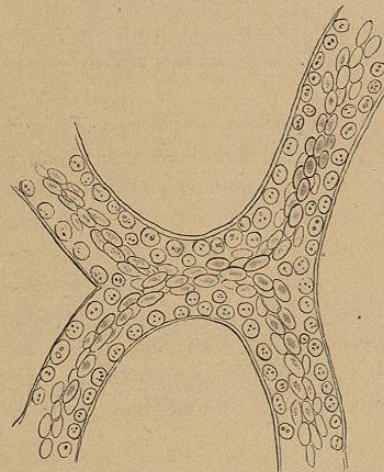
Morphia is the most reliable of pain-obtunding agencies. A standard preparation is the liquor morphiæ sulphatis; the admixture is a grain of the salt to an ounce of water; the dose, from a tea- to a tablespoonful, according to urgency. The liquor morphiæ bi-meconate is another admirable mixture; the strength is that of laudanum; the dose, twenty-five to fifty drops. Purgative (tinctura opii camphorata) is used with children; the dose is five drops for each year. Morphia, hypodermatically injected, is in universal favor: quarter of a grain is dissolved in ten drops of blood-warm water, and by aid of a needle-pointed syringe is thrown beneath the skin. Dover's powder is an admirable medicine as an opiate; being a combination of ipecacuanha with opium, it is not less antiphlogistic than narcotic. In common colds, having painful associations, few agents are found superior to ten-grain doses of this preparation. Other formulæ of the medicine are known as vinum opii, acetum opii, confectio opii, extractum opii, morphiæ acetat, etc.

SWELLING.—Enlargement of an inflamed part has its meaning in simple engorgement, in effusions, and in expressions of hypertrophy. In every inflammation there is, primarily, excess of blood in a part, necessarily measurement is increased. Effusions are of two kinds, serum and lymph; the first is a condition of a simple oozing from attenuated blood-vessels of the water of the blood, the second is a vital act, and expresses intentions looking toward the act described as circumvallation. A watery effusion is elastic to the touch, and by manipulation is quickly to be pressed from a part into which it has flowed. A plastic infiltration, on the contrary, is of dough-like consistency, and is not to be gotten rid of without much trouble. Swelling is beneficial or the reverse. It is the former where the effusion has relieved the tension in blood-vessels and permits of a restoration of contractility; it is the latter where it is of a character choking and interfering with the functions of a vital organ. Hypertrophy means overgrowth; the liver, the spleen, and the heart furnish too frequently examples.

Functional Disorder.—By functional disorder is meant matters of local and of general import. All organs show exhilaration of function in the con-

dition of simple vascular excitement. On "taking cold," excess in the circulation being directed to the nostrils, "cold in the head" as it is termed, increase in the secretion of the Schneiderian membrane, is familiar in the "running of the nose." Vascular excitement, progressing to the condition of congestion, function is diminished, not unlikely temporarily suspended. Susceptibility is increased; parts that are almost without feeling when in health become vividly sensitive to impressions when inflamed. Special senses are modified; the ear, the tongue, the tactile papillæ, the eye, all show derangement influenced by the circumstances of each particular case. In the instance of the kidneys, an acute congestion may quickly result in uræmic poisoning by reason of suppression; a most dangerous condition, that, happily, is to be quickly and easily remedied by means of dry or wet cups used about the loins. Enlargement of the prostate gland results in retention of the contents of the bladder, an accident less formidable than the immediately preceding, but scarcely less alarming. Congestion of the lungs afflicts with dyspnœa, the inter-vesicular circulation being of an extent that compresses the cells. Irritability of the general circulation, if at all excessive, results in fever. Changes in nutrition necessarily relate with inflammation; this for the reason of variation in quantity of blood brought to a part. In simple vascular excitement, nutrition, as suggested, is increased, this solely for the reason that free feeding and ability to appropriate exist. On the contrary, where congestion is present, that cell-action in which resides nutrition is

FIG. 615.



Positions occupied in inflammation by blood-corpuscles; in the centre are the red, outside are the white.

in referring to their meaning as the circumvallating agency. The fibrin of irritated blood is increased commonly several per cent.; change being at times

antagonized; the work of assimilation cannot go on in presence of crowding.

Besides nutritional changes, alteration shows in the circulatory fluid itself. Examining the contained blood of vessels related with an inflamed part, great increase is found in the number of the white, or pabulum-carrying, corpuscles, while at the same time the tendency of these bodies is to secure place about the sides of the vessel, the red corpuscles being crowded, not only toward the centre, but also closely packed together by the flat sides of the discs, after the manner of a rouleaux of gold coin. The meaning of the excess in the white corpuscles, which is not relative, but real, is appreciated

as great as from ten to twelve per cent. over the ordinary amount of two and a half. The clotting of inflamed blood is slower than with the healthy fluid; this exists by reason of the close relation of the red corpuscles, the fibrin and the white bodies separating and not being caught and held in the coagulum. The buffy coat so characteristic in the blood of inflammation has its existence in the union of the white corpuscles and fibrin, contraction on the part of the latter agent explaining what is known as the cup, —*i.e.*, the sunk centre and the elevated circumference of the clot, or crassamentum.

Swelling and hypertrophy as associated with vascular perversion will be recognized as being antipodal. Swelling has its meaning, as has been described, in the simple increase of blood in a part, otherwise in effusions of serum or of lymph. Hypertrophy means growth; illustration is furnished in the second direction by the increased development of the biceps muscles of a boxer, and of the gastrocnemii of a ballet-dancer.

Evolved by the illustration just offered, attention is referred to a question as to the identity of excess of blood in a part with inflammation. Reference is to be made to the fact that erectile tissues engorge normally, and that out of the application of a constricting bandage much blood is dammed up in a part. Confusion as to this seeming paradox is avoided on the part of a student by his bearing in mind the subject of office, or meaning, as this refers to determination of blood to a part. If some words more explanatory seem needed, reference may be made to engorgement of the penis. Here irritation precedes the afflux not less surely than presence of a splinter invites excess to a finger; but the irritant is of a mental character. The removal of such an irritant resides with the act of seminal emission, otherwise with the passing away of a libidinous thought. An irritant is not less real by reason of being mental.

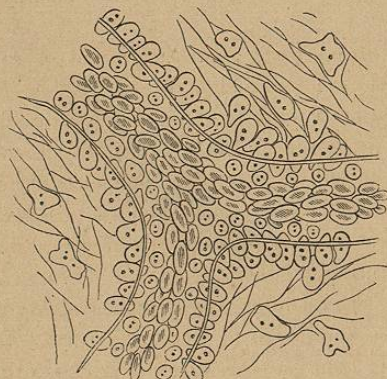
Repair.—Inflammation not terminated by resolution, destruction of a part involved necessarily follows. Repair, like to destruction, is an inflammatory phenomenon. Referring to diagram (Fig. 611), it is understood that destruction exists through compression by lymph. It is as well explained that lymph is the pabulum out of which structure is built, and that it needs alone relation with the circulation to establish it in vital meaning. An over-compressed part being sloughed away, all that remainder of the circumvallating lymph free of such over-compression begins to organize, and in the act accommodates extension of blood-vessels, which in turn supply to the new surface more lymph, which lymph repeats the acts of an underlying portion, until, in repetition, a cavity is filled.*

* An experiment of much interest to the writer is at present being pursued by Dr. M. H. Cryer, with a view to the simplification of skin grafting. So far the process has been tried exclusively with horses, and results seem most promising. It is known to the reader that on limitation of the act of repair, where skinning of a wound fails to be effected, it is the not infrequent practice to lay upon the sore a particle of skin removed from a neighboring part. This implies an operation and inflicts pain. The present experiment consists in

Lymph, as now understood, breaks down in the form of pus, or it organizes, or it is absorbed, finding its way back into the blood whence it came.

The subject of lymph invites to and furnishes wide and curious study. Much objection is urged by pathologists to accepting it as a fluid exuded by the blood-vessels. It is a common view that cell proliferation, or segmentation by existing cells, is the meaning of repair after suppurative destruction. Cohnheim considers and teaches the identity of lymph and white blood-corpuscles. As seen by the clinical observer, lymph is a opalish-white plastic substance, differing little, when first exuded, either as appearance or apparent characteristics are concerned, from ordinary albumen. Continued to be watched, tendency in the fluid to coagulation is observed, which coagulation, or solidifying, increases until a part occupied by an effusion may come to feel hard as a board. The writer, not at all unwilling to commit himself, offers it as his view that the material called lymph is a combined expression of the natural succulency residing in parts, in addition with fibrin, albumen, salts, a certain amount of water, and an indefinite number of white corpuscles coming direct from arterial radicles.

FIG. 616.



Nutritional pabulum exuding through the walls of vessels.

To affirm that tissues are built out of lymph is not at all to dispute the doctrine of Virchow as to cell segmentation. Organization of lymph can mean very much what is meant by an egg mass, as out of this is built by the germinal spot a chick.

simply scraping over the wound particles of epiderm, the scraping being so decided that scales not fully devitalized be secured.

CHAPTER LXVII.

ON DIAGNOSIS.

THE author indulges in a parting word on the subject of diagnosis.

To diagnose a case means to find out what is the matter; this, nothing more.

Every person having occasion for the services of a medical man has *something* the matter with him, which *something* is to be esteemed as of physical import.

A person knows himself as having something the matter when he ceases to be in a state of ease. Ease is the normal condition. An individual being in a state of ease is possessed of parts and of wholeness undisturbed, and of exact equipoise.

When, from any reason, parts or whole are out of equipoise, and are disturbed, an individual is not in a state of ease, but he has passed over to a condition which requires a word of exact opposite signification to express it. Such a word is the preposition "Dis." To signify, therefore, that ease is no longer present with an individual medical nomenclature employs this preposition, placing it before the noun; thus, Dis-Ease, disease.

Disease is a generic term, it tells nothing of diagnosis, it expresses simply and alone, yet embracingly, general condition. Search after dis-ease means search after cause. Search after cause implies ability to recognize what is not natural out of a knowledge of what is natural. It is not natural for teeth to have holes in them; a practitioner who knows that perfect teeth are without holes perceives and recognizes a dis when he meets with such a defect. It is not natural to carry a cinder about in an eye; when, then, this organ is found inflamed and suffering, he who everts a lid and discovering, has understanding to know that the cinder is a foreign body, this one is a physician. Between the elbow and shoulder anatomy gives no joint; when, then, dis-ease shows itself in this locality and examination comprehends false, or unnatural, mobility, comprehension is alike gained that the dis and a fracture are one. Rapid breathing may mean pneumonia, or it may mean asthma. A dis is most evident. If it be pneumonia, it is not asthma, if asthma, it is not pneumonia. To distinguish the one from the other implies simply knowledge of a kind that has seen the hole or the cinder or that has felt the mobility. Lung structure is seen and felt, however, by use of the ear,—by auscultation, as the act is termed. A kidney, situated deep back of the lumbar muscles,