

The nails, when involved in syphilitic changes, require special attention. Besides the constitutional treatment required in all cases, the digits should usually be protected from injurious contacts by cots. In gummatous lesions the iodide or the "mixed" treatment is indicated internally, and in non-ulcerative forms a weak mercurial salve may be applied. In ulcers of the soft parts about the nail caustic applications followed by dusting with europhen or calomel are needed. However great the apparent deformity, and however exquisitely painful the ulceration, after immersion in warm borated water followed by dusting-powders, and the gentle but firm compression of the parts with antiseptic cotton between bandage and ulcer, the dressing may be made both efficient and comfortable. In gouty and cachectic states special treatment is required to obviate these conditions.

Syphilis of the bones and the periosteum calls in general for treatment by iodide of potassium, to relieve the osteocopic pains and tumefaction, while mercury is needed to ensure against trouble in the future. In many of these cases the "mixed" treatment answers well. Externally, when the osseous tissue involved is within the reach of such treatment, mercury is of the highest value, unguents and oleates of mercury being chiefly employed. Mercurial plaster is often serviceable when cut to the proper shape and more or less continuously worn over any accessible nodes or tumors. It is rarely, if ever, necessary to incise local gummatous deposits; and any sequestra formed as a result of syphilitic caries or necrosis should be removed surgically only when completely separated. The familiar surgical procedure of making long incisions the length of a bony "splint" along the tibia is, in syphilitic cases, for the most part

wholly unnecessary and without value. Surgical interference is on rare occasions required when there is pressure upon a nerve-trunk by an osseous or osteo-periosteal tumor. All abscesses require proper surgical opening and drainage. Separation of an epiphysis demands correction of any resulting deformity, and immobilization of the limb by the aid of a splint.

Plastic operations are often of decided value in correcting the most hideous of the facial deformities produced by bone-syphilis; and in grave cases an artificial nose may be worn. Sinking of the nasal bridge is well corrected by platinum and other supports. In dactylitis syphilitica amputation should almost never be practised. Great relief can be obtained by medical treatment (iodide of potassium internally), by mercurial frictions where there is no degeneration of tissue, by incision of all suppurating tissue (in lines parallel with the long axis of the limb in the effort to avoid wounding tendons), and by strict observance of antiseptic precautions.

The viscera, when the seat of the lesions of syphilis, require, for the most part, internal treatment, which is to be pursued according to the indications in each case. It has already been noticed that the suggestion that syphilis is a possible cause of aneurysm was originally due to the recognized value of iodide of potassium in that affection. In syphilis of the heart, lungs, liver, kidney, and spleen the iodide of potassium, occasionally in combination with mercury, is indicated, and in many cases is of great service. In other cases, especially when degeneration of cells has been wrought, the treatment, while not always curative in its results, exhibits a marked power in arrest of the malady. In all cases of visceral syphilis, however, there is urgent need of systemic treat-

ment beyond that which might strictly be called "anti-syphilitic," patients being often in a cachectic or anæmic state. Special complications also arise (ascites, albuminuria, cough, hæmoptysis, jaundice, etc.), requiring the particular treatment recognized in general medicine as appropriate to each.

Syphilitic lesions of the rectum and the anus always demand special attention. By the aid of nitrate of silver in solution (from 5 to 10 grains to the ounce) all fissures of the anal folds may be stimulated, and they may be dressed subsequently with iodol or eucrophen powders with superimposed lint. Before each stool, the rectum, as far as can readily be reached with the finger, is to be well smeared with the following:

R. Benzoin., tinct., fʒj;
Unguent. aq. ros.,
Vaselin., aa. ʒss.—M.

Sig. For external application with the finger as directed.

Enemata of warm water must be ordered if the bowels are impacted.

All gummatous lesions call for iodide of potassium in the largest doses required to secure involution, mercury being at the same time carefully and judiciously employed. Strictures of the rectum are to be treated at first with dilatation by rubber bougies, care being taken not to rupture the gut and induce a peritonitis. When, as is too often the case, the result is a mere temporary benefit, the last resorts are posterior proctotomy, division of stricture by the galvano-cautery, inguinal colotomy, and complete excision of the neoplasm, as in case of carcinoma. In emergencies requiring surgical interference we have found inguinal

colotomy most serviceable. In a few instances, after the irritation produced by the passage of fæces over the rectum has been removed, the latter organ has under treatment returned to a condition permitting of closure of the artificial anus in the groin. As most of the subjects of this disorder are women, the pain attending subsequent menstruation often requires attention.

Syphilitic lesions of the epididymis and body of the testicle are usually amenable to treatment with iodide of potassium internally and mercury externally, the latter employed in the form of either the oleate or the ointment. Many of these cases call for prompt and energetic treatment to avert aspermatism, which too often ensues even if atrophy does not follow absorption of the gummatous mass. An accompanying hydrocele usually requires tapping. Even after implication of both testes it is often difficult to persuade patients of the need of absolute disuse of the sexual organs.

Lesions of the nervous system, whether of the brain, the meninges, or the cord, usually require internal treatment of similar character in each complication. It has been customary to employ in these cases the largest tolerated doses of iodide of sodium or iodide of potassium; and the result in favorable cases is as brilliant as it is satisfactory. One of these salts, or both in combination, may be administered in a saturated solution in drop doses, the vehicle being milk, alkaline water, or an essence of pepsin taken before or after meals, with another dose at bed-time. In all emergency cases it is well to disregard the hours of meals, and to administer the remedy every four hours during the wakeful periods of the day and night. By the addition of 1 or 2 drops of a saturated solution either to each or to each third or

fourth dose, very large quantities of iodide of potassium have been taken with favorable results, an ounce and even two ounces and more having been thus ingested within twenty-four hours. For the caution requisite in the attainment of and persistence in these large doses the reader is referred to preceding pages devoted to the subject of the employment of the iodides.

Inunctions of mercury at the same time with the medication may generally be practised with the best results; while the "mixed" treatment is to be reserved for cases exhibiting no signals of danger and calling for no specially energetic management.

The belief, however, is now gaining ground that too much stress has in the past been laid upon the treatment of nervous syphilis with the iodine salts, and that the great value of mercury has needlessly been ignored in these grave complications of the disease. We are in the habit, in all severe cases, of carefully testing the condition of the patient by giving $\frac{1}{10}$ grain of calomel, or even more, every hour until a decided effect has been produced; and certainly the gravest types of pachymeningitis have thus been relieved. Tonics are demanded in all cases of nervous syphilis where the crisis of the disease has been combated successfully, and often before such an event. The diet should be in a high degree nutritious, the feet are to be kept warm, and tobacco and alcohol are rigidly to be excluded. For the majority of patients we are opposed to the employment of hot baths in nervous syphilis, preferring, in general, the daily sponging of the body-surface with a strong solution of salt and water followed by frictions with the flesh-brush. Fumigations also, valuable though they may be in other syphilitic states, are, equally with the hot bath, to be

avoided, as in various degrees are apt to induce congestion of the nervous centres. In syphilitic patients convulsive seizures of a severe grade have been precipitated both in the fumigation chamber and in Turkish and Russian baths.

Syphilis of the eye and its appendages is to be treated internally on the principles already formulated. Mild astringent lotions locally answer well for most of the simpler inflammations of the canaliculi and the sac; in rare cases only is division for stricture or the introduction of the probang required. When the sclerotic is involved, instillations of atropia, combined, if there be pain, with cocaine, are useful. In iritis of all forms repeated applications of hot water slightly impregnated with boric acid are to be made over the closed lids, and solutions of atropia (from 1 to 4 grains to the ounce) instilled sufficiently often to ensure persistent dilatation of the pupil and to tear loose any adhesions between the iris and the capsular envelope of the lens. Persistence in these efforts is rewarded with success in cases which often look desperate, when blood is effused into the anterior chamber, and there are apparently unyielding attachments of the free border of the iris. Opium for relief of pain is rarely required in well-managed cases, and is contraindicated by the effect of the drug on the pupil; hence, if it be used in an emergency, the atropia must be employed in doses sufficient to counteract fully the pupillary action of the narcotic. Leeches may be ordered to the temple in plethoric subjects or in case of emergency. Mercury is, as a rule, best employed by inunction, and the iodide by the mouth.

Seclusion of the affected eye from the light must be secured, and must be continued for some time after relief

is obtained, in order to avoid recurrence, which is not rare. Posterior synechiæ, as liable to result eventually in glaucoma, call for operative interference only when persistent. Iridectomy is a last resort in cases which by good management should have had a more favorable issue. In all affections of the choroid the ciliary muscle should be paralyzed with atropia, and when the optic nerve is involved strychnia is indicated. In all bony affections of the orbit the iodide is to be pushed to the fullest doses tolerable, as in gummatous lesions of the liver, brain, and testis.

Syphilitic lesions of the external ear demand semi-liquid unguents containing mercury, carbolic acid, or boric acid, applied by means of a toothpick wrapped in cotton or on pledgets of lint. Weak mercuric oleate (5 per cent.) mixed with oil of benne may also be applied. In the interest of antiseptis, the meatus should be cleansed daily with warm borated douches; vegetations should be snipped away with fine scissors, and their bases cauterized with the nitrate of silver, care being taken to avoid the drum. Too violent treatment is likely to occlude the canal by a consequent swelling. When this swelling occurs, the walls are to be prevented from adhesion by the interposition of pledgets of lint. Warm sublimate lotions, 1 : 10,000, are also valuable when operative treatment is not demanded.

In syphilis of the tympanum the naso-pharynx always requires attention. Inflation of the Eustachian tube with iodinated vapor is in this region distinctly beneficial. The constitutional management is of importance, and especially the care of the feet, which should be kept dry and warm and be dusted nightly with either salicylic or boric acid. Suppuration of the middle ear is a grave

complication which may terminate fatally; for details of its strictly antiseptic management the reader is referred to special text-books on aural disease. Syphilitic involvement of the labyrinth can be treated only by internal medication.

Hereditary Syphilis.—A woman known to be syphilitic and pregnant should have prompt and energetic antisiphilitic treatment, in the interest not only of herself but also of her unborn child. Genital lesions require frequent and careful applications with a view to asepsis. Warm borated lotions, or solutions of the permanganate of potassium, 1 grain to 2 ounces, should be used—with caution, however, when employed as vaginal lotions, since a stream of warm water directed against the cervix of a pregnant uterus has brought on labor.

The special treatment of the pregnant woman is by mercurial inunctions pushed within the limits of a decided effect upon the gums, and suspended for periods during which she is to be subjected to "mixed" treatment. The mercuric protoiodide, blue pill, and other pilular vehicles of the metal are less serviceable than the method named. In advanced syphilis the iodide in full doses is of unquestioned value and has saved the lives of many children.

In the management of the syphilitic infant at the breast the mercurial and other treatment of the mother is not to be neglected. Whether the very small amount of mercury detected in the milk is of value, or whether the improvement which has been noted on the part of the child is due to the enrichment of the quality of the milk of the mother whose health is benefited by the treatment, it is not necessary to determine. In administering iodide of potassium to a nursing mother it should

be remembered that at times the remedy has a very decided influence in inducing suppression of the milk—an accident of serious import when a syphilitic child is at the breast.

The direct treatment of the syphilitic infant is a matter of the greatest moment. Only upon very strong evidence should treatment of a syphilitic infant be begun before it has betrayed symptoms of inherited disease, since, even after the birth of "intensely" syphilitic fetuses and a series of abortions, there are brought into the world children who never exhibit signs of the disease even when both parents have recently been infected. This note of warning should be heeded, as some physicians are ready to pronounce a sickly child syphilitic simply because they have knowledge of the venereal accidents of one or both parents occurring a brief time before pregnancy.

Seeing that a syphilitic infant does not infect the breast of its mother, the child should always, when practicable, be thus nourished, and should never be suffered to take the breast of a sound woman. If breast-milk cannot be had, goat's milk may be employed as a substitute, or sterilized cow's milk, or cream and warm water. A healthy wet-nurse should at all hazards be prevented by the physician from exposing herself to the dangers of infection. A syphilitic wet-nurse is unfit for service. Where the utmost care is requisite in the cleanliness of the mouth, nose, anus, vulva, umbilicus, etc., the woman who is herself suffering from the accidents of infection is liable to be a carrier, not of a new syphilis, but of the germs of a secondary infection from pyogenic cocci.

When exhibiting snuffles and the exanthemata of

hereditary disease, the child may be given internally calomel rubbed up with sugar of milk—from $\frac{1}{20}$ to $\frac{1}{10}$ grain to the weak; to those who are stronger, from $\frac{1}{3}$ to $\frac{1}{2}$ grain three times in the day. The crushed tablet-triturates of this salt administered in milk serve a useful purpose. An accompanying opiate to relieve diarrhoea, advised by some authors, is rarely needed if the dosage be adjusted accurately to the requirements of each case.

Tonics are as necessary for the infant as for the adult affected with syphilis. A few drops of a solution of citrate of iron and quinine, a drachm to the ounce, may be given in syrup; or Monti's formula:

R. Ferri lact.,	gr. v;
Hydrarg. chlor. mit.,	gr. iss;
Sacch. lactis,	gr. xxx.—M.
Ft. chart. No. x.	

Sig. One to be given after taking the breast.

The gray powder, once highly commended, is uncertain, in consequence of its liability to the production of the bichloride of mercury. It is given in doses of from $\frac{1}{10}$ to $\frac{1}{2}$ grain, according to the weight of the child. We believe these preparations to be preferable to the others named below, which should, on the whole, be reserved for cases where there is decided intractability under the dosage of the mild chloride or the gray powder. But the protoiodide is given in combination with lactate of iron in doses of from $\frac{1}{10}$ to $\frac{1}{4}$ grain rubbed up with the sugar of milk; black oxide of mercury, in doses of a similar size; and corrosive sublimate, in doses of from $\frac{1}{100}$ to $\frac{1}{50}$ grain.

Iodide of potassium in solution may be administered to young children in doses of from $\frac{1}{3}$ grain to 4 grains.

This remedy, however, in infants and children is exceedingly liable to produce a severe grade of medicamentous dermatitis and the other accidents of iodism; furthermore, it is not so often as in adults productive of brilliant therapeutic effects. It is chiefly indicated when there are osseous lesions and those involving the brain, the viscera, the testes, the eye, and the ear. The mixed treatment advised for adults can often be used, however, with advantage in cases where no emergency exists, as, for example:

℞. Hydrarg. biniodid., gr. j;
 Potass. iodid., ʒij;
 Syr. simpl.,
 Aq. menth. piperit., āā. f ʒiss.—M.

Sig. From 3 to 10 drops to be swallowed in large dilution, after taking food, three times a day.

Mercurial inunctions, advised by some authors only after the child has attained a certain age and degree of strength, we employ with great advantage as soon as indicated in the earliest periods of life. It is not the method, but the skill directing the method, that renders this procedure possible. In very young infants the skin is exquisitely sensitive and unable to endure mercurial frictions. In such cases the mercurial ointment is combined with 1, 2, or more parts of pure white vaseline, and the swathing band is well anointed with the mixture, care being observed that the bandage be fastened so that it does not turn, and also that one part of it only be anointed. In this way the constant motions of the child produce a gentle inunction, which may be pushed to any desired extent by increasing the quantity of the mercurial in the unguent until a scruple or more is rubbed

in daily. During all these applications the child should be watched carefully, and on the slightest evidence of debility, anæmia, or increased restlessness the remedy should be suspended. The same course should be pursued when it is observed that the skin over which the ointment has been applied is the seat of a mild dermatitis; in which event, if the general condition warrant, the inunctions may be practised over another region, as over the feet or the shoulders. In point of fact, a syphilitic infant furnishes a ready and constant indication of the value of the treatment instituted for its relief, inasmuch as its increase in weight, its improvement in color, and its capacity for eating and sleeping are promptly changed for the better or the worse according as such treatment is or is not rightly directed. In the event of irritation of the skin being produced in any region where a mercurial has been applied, the inunctions should at once be suspended and the integument of that part dusted with a soothing powder such as talc or starch, or, in case of need, anointed with freshly made benzoinated zinc ointment.

What good can be wrought by inunction is within the range of either mercurial ointment, pure or reduced, or the several mercuric oleates. The red precipitate in the strength of a 1 per cent. ointment, the white precipitate in the strength of 1 part to 10 of lanolin or vaseline, and mercurial plaster for regions of limited area, have all been praised by authors, and may be regarded as of value when a change is thought desirable. Hypodermatic injections and fumigations have been employed in hereditary as in acquired syphilis, but no urgent reason for their use can be adduced. In the event of their selection, the dose should be reduced somewhat

from that employed in adults, according to the age of the child. From $\frac{1}{10}$ to $\frac{1}{40}$ grain of the sublimate can be injected between the first and fourth years, the smaller doses only in the first twelvemonth of life. The sublimate baths recommended by Elsenberg contain about a grain of the metal, an equal quantity of the ammonium chloride being added, to the gallon of warm water. The local applications found useful in acquired syphilis may be employed when needed in the case of syphilitic infants. The addition of ammoniated mercury, calomel, or yellow oxide to the Lassar paste already described, in the strength of from 2 to 30 grains to the ounce, will be found available in many of the syphilodermata. Tumors and nodes should rarely be opened surgically, as they can commonly be made to disappear under an appropriate therapy. When the lids are affected, warm borated lotions, or those containing the bichloride, 1 part in 10,000, may be employed, followed by a weak salve containing a grain of the yellow oxide of mercury. Atropine should be instilled, as often as required, both in keratitis and in iritis, in the strength of from $\frac{1}{10}$ to $\frac{1}{4}$ grain to the ounce. Leeches may be required over the mastoid process to relieve the severe deafness of inherited disease, which, if not energetically treated, may result in deaf-mutism. No applications are better for the special rhinitis of hereditary syphilis than those containing nitrate of silver, from $\frac{1}{2}$ to 1 grain to the ounce being injected or wiped over the surface, and followed by an albolene spray. In some cases this spray answers well, employed alone or after the addition to it of a few drops of carbolic acid and a single drop each of the tincture of iodine and glycerin. The mouth should be cleansed thoroughly and repeatedly with solutions of

boric acid and honey, usually best applied by dipping in the solution a soft rag or a handkerchief which is wound about the finger of the nurse and then applied to every part of the child's mouth. The anus should be kept scrupulously clean, and should frequently be dusted with boric acid or boric acid and talc in equal parts; if condylomata form, these should be deodorized with liquor sodæ chlorinatæ, and after drying should be dusted with calomel and talc, 1 part of the former to 4 parts of the latter. Mercurial plasters are useful applications to tumors and swellings over bone, digit, joint, or muscle, and can also be wrapped neatly about an involved testis.

ACQUIRED INFANTILE SYPHILIS.

The acquired syphilis of infants differs from the inherited form chiefly in the important particulars that its evolution is on the lines observed by the acquired disease, and that the patient does not start life with lesions of the viscera, of the bones, or of other important organs. As a rule, under proper care the issue in these cases is fairly favorable. The acquired syphilis of infancy is chiefly remarkable for its display of moist and secretory lesions and for its failure to relapse in cycles as does acquired disease of adults. The first-named feature is due to the soft character of the infant's tissues; the last-named, to the constant control to which the child is subjected when the disease is duly recognized and properly cared for. But in unrecognized or neglected acquired syphilis of infancy the results may be as mutilating and as disfiguring as in the worst phases of acquired disease of later years.