

Thus the iodide of potassium, is recognized as capable of most rapidly removing the gummous material, and thus of relieving symptoms; but mercury is found requisite to produce permanent immunity. The iodide of potassium, acts readily in removing recent new formations and cell accumulations, probably through the iodine it contains. The fucus vesiculosus, a remedy in use for obesity, and popularly known as "antifat," owes its virtues to the same ingredient. But mercury is known not only to hasten dissolution and elimination of fatty matters and new formations: it is, besides, the only agent with which we can expect to disintegrate more or less long-standing fibrous obstructions.

In the gummy accumulations of so-called tertiary syphilis, we are obliged to infer that some condition remains, after the removal of this material, which predisposes to, or causes subsequent reaccumulation. What is more likely, than that such condition, consists in obstruction of lymphatic vessels, the office of which is to carry just such material as we find producing the difficulty? Vessels, too, that have been, more than any other structures, involved in recognized troubles during the active stage of the disease. More or less inflammatory action, usually of a very low grade, is recognised at different superficial points in the lymphatic system during this period. The well-known tendency of all such action, is to the deposit of fibrous material—the very material through which cicatricial contractions of other tissues are brought about. Analogous, in a degree, are the conditions which result in stricture of the urethral canal, ten, twenty, or even forty years after the original inflammation: conditions which set in motion a process which culminates, finally, in obstruction to the passage of urine.

It has been claimed that much of the trouble, in so-called tertiary syphilis, may be the result of wide-spread fatty degeneration caused by obstruction of vessels.

It is well known that fatty metamorphosis occurs more easily in some subjects than in others—that purulent degeneration is most readily set up in the

debilitated and diseased. It is also claimed by Hutchinson and others that the liability to, and severity of, the lesions of the so-called tertiary period of syphilis "is in proportion to the duration of the secondary stage."

Hence we may conclude, that the varied degrees and forms of so-called tertiary manifestations, depend upon, first, the damage caused during the "duration of the secondary stage," and inferentially in consequence of it; and, secondly, upon the condition of the individual affected, and this quite independently of any specific virus.

Notwithstanding the variety in locality, physical characteristics, and date of appearance, the sequelæ of syphilis practically call for the same remedial measures. Whether it be a superficial scaling or a tubercular eruption, an ulcerative lesion of the integument, an osseous swelling or a necrosis, a tumor in the cellular tissue or in the brain, or in any other organ or locality; whether it be a painless hypertrophy of the tongue or of the testicle, no matter how slight in degree or how destructive, all the lesions of this period are most efficiently treated by some form of mercurial, combined with the iodide of potassium. It is only necessary to know that the lesion presenting, is a legitimate sequel of syphilis, to determine the character of the remedy to be used. The form, the size, and the frequency of dose will be suggested by the circumstances of each case; but the agents through which we may expect the most rapid removal of the so-called "gummous material," upon the presence of which we are warranted in believing that all the trouble depends, are mercury and the iodide of potassium. It is the living material, obstructing nutrition of parts, which, in every instance, produces the destruction of tissue, as well as disturbances of function, that characterize the sequelæ of syphilis. This is the inevitable conclusion to which we are led, by the published results of examinations, made by the most accomplished pathologists of modern times. There is no disagreement in regard to the presence of the so-called "gumma" of syphilis in all such cases. Destruction from the influence of syphilis may occur at any point where lymphatic vessels are

present—in other words, at any point to which nutritive material is carried; not only to the skin, the cellular, muscular, bony, and even cartilaginous structures, but to every part of the brain and nervous system. It will also be found that the behavior of tissues and structures, infiltrated with the so-called gummy material of syphilis, in all forms in which it presents a destructive result, shows nothing, either by inoculation or by any physical property, which proves it capable of acting otherwise than by the mechanical influence of its presence, by interfering with function and cutting off nutrition, through diminishing the calibre of blood-vessels, or possibly effecting their entire obliteration.

The measures, theoretically, most efficient in setting up a tissue metamorphosis in, and removing this gummy material, are those which, practically and clinically, are found most promptly serviceable in curing the late lesions of syphilis. In point of fact, it is so well understood that mercury and the iodide of potassium, when judiciously administered, have a specific influence in curing the sequelæ of syphilis, of whatever form or degree, that whenever a case occurs in which the diagnosis is doubtful it is customary to test the character of the lesion in question, by use of these remedies: failure to relieve, constituting a positive evidence against the syphilitic origin of the trouble.

The administration of mercury and the iodide of potassium, combined, is found most serviceable in the early syphilitic sequelæ, as for instance, in the tubercular eruptions which may appear before the contagious syphilitic principle has been eliminated from the affected organism, that is to say, within the first two or three years from the date of the acquirement of the disease.

These remedies, combined as in the following formula, are usually well borne:

℞ Biniodide of mercury.....	gr. iii.
Iodide of potassium.....	ʒ iii-vi.
Tr. of orange peel.....	
Syrup of orange peel.....	ʒ i.
Aquæ.....	ad. ʒ viii.
M.	

Sig.—A teaspoonful, thrice daily, after meals.

As the ordinary teaspoon holds somewhat more than a drachm, it will be found that the patient in the above prescription will get one sixteenth gr. of the biniodide, and about 4 to 8 grains of the iodide of potassium at a dose.

The same may be judiciously used in every form, stage, and date of syphilitic sequelæ. If, however, the lesion is one where destructive action is a prominent feature, or the brain or nervous system is the seat of the affection, the iodide of potassium may be increased by the addition of a drop of the saturated solution,

Iodide of potass.....	ʒ viii.
Distilled water.....	ʒ viii.
M.	

at every dose, in from a wineglass to a tumbler of milk or water (preferably the former), up to 60 or 80 drops, or until troublesome iodism results. The favorable effect of this treatment may be often seen within a few days, but occasionally no benefit will be observed until the dose of the iodide has reached a very high point, viz., a drachm at a dose, and in cases of cerebral gummata this dose may require to be continued over a very long period—several months, or even longer. In the very largest majority of cases the foregoing plan may be successfully pursued, varying the amount of mercurial, or of the iodide, within the limits indicated, in proportion to the gravity and urgency of the case. The mercurial reaches its limit of efficiency when the constitution becomes slightly affected by it, as indicated by softening or tenderness of the gums and teeth, and should, at that limit, always be stayed. Should the iodide of potassium fail of toleration, the iodide of sodium may be substituted and better borne in the same doses. If still iodism quickly result, as indicated by irritation of mucous membrane of the digestive tract, the tincture of iodine may be administered in doses of 10 to 40 drops in a wineglass of starch as prepared for laundry use, or what in my experience has often been a most serviceable and

agreeable substitute for the iodide of potassium and sodium, viz:

℞ Iodine (crystals).....	gr. xviii.
Iodide of potassium.....	ʒ i-iii
Water.....	q. s.
Stuart's syrup or plain molasses.....	to ʒ viii.
M.	

Let stand 12 hours.

Sig. From a dessert to a tablespoonful, three or four times a day, after meals.

Cod-liver oil is always indicated in cases when any cachexia is present, from syphilitic influence, or debility from any other cause. The diet should be simple and nutritious, and adapted judiciously to the condition of the patient. Stimulants should be denied except in cases of especial urgency on account of habitual use and great debility—red wines may be permitted, at meals, in moderate quantity.

The pursuance of the general plan just presented, covers all cases, as far as internal remedies are concerned. Mercurial fumigations may be, and often are, promptly serviceable, especially in the ulcerative lesions, and may be substituted for the internal administration of mercury. Twenty grains of resublimed calomel may be vaporized in a Lee's lamp, placed under a cane-bottom chair, and the patient covered in with a rubber cloak, or even an ordinary blanket, and this repeated three or four times a week—due care being used to prevent taking cold after the operation—and continued until the disappearance of the lesions, or the occurrence of the specific effect of the mercurial.

In regard to local applications for the non-ulcerating forms of trouble, ointments containing a mercurial ingredient, such as the ung. mas. hyd., the ung. hyd. nitratis, or ung. hyd. præcip. alb., or a combination of the oleate of mercury (a 6 per cent solution), with an equal quantity of cosmoline or vaseline, is often serviceable, especially in the scaling and non-ulcerating tubercular eruptions.

For local application to open ulcerations, or losses of tissue, through the influence of the so-called gummy in-

filtration, especially when advancing, pointed, and painful, the powdered iodoform is often promptly beneficial. In all forms of open lesion of syphilitic origin this drug appears to be especially potent in its sedative, antiseptic, and healing properties; perhaps it is the most so of any.

Throughout the treatment of the sequelæ of syphilis the effort to appreciate the causes of any presenting trouble—the influences local and constitutional which may tend to modify, or aggravate, or interfere in any way with the favorable progress of recovery should be unremitting, and not to rely upon or seek after some drug or prescription which is vaunted for the cure of syphilis. Judicious attention to the general health, and to the idiosyncrasies of patients, often brings success in cases which would otherwise result disastrously. Many subjects of syphilitic sequelæ, suffer greatly from the apprehension of communicating the disease to others. They are entitled to the assurance that such troubles are not contagious, and are of purely personal interest after a lapse of four or five years from the occurrence of the initial lesion of syphilis, and this whether a systematic course of treatment has been pursued in the interval or the patient has been quite neglected in this respect. It is quite true that many cases have been reported claiming communication of syphilis five, ten, and even twenty years after the acquirement of the disease, but a single well-observed, well-authenticated case, reported by a competent authority, has not yet come to my knowledge, nor have I ever known such an accident to occur after three years from the date of the initial lesion.

CLINICAL CASES ILLUSTRATIVE OF THE VARIOUS SEQUELÆ OF SYPHILIS.

Case I. W. W.; 28, physician. In December, 1874, after repeated suspicious connections during many months, one day discovered a small sore on his penis. This was treated simply and only locally, and continuing in a sluggish way for a couple of months, when it was proved to be a true initial lesion of syphilis by the

appearance of a well-marked roseolous eruption and mucous patches in the throat. A systematic mercurial treatment was then initiated, bringing the system gently under its influence, and continuing at the point of easy toleration, occasionally pushing it up to sensitiveness of the gums or teeth. When this occurred the iodide of potassium was substituted until all evidences of the mercurialism had disappeared, and then the mercurial was resumed, either in the form of pil. duplex (mass. hydrarg., 2 grs.; ferri exsic., 1 gr.) or pil. proto-iodid. hydrarg. ($\frac{1}{2}$ gr.), three times daily. Under this treatment, borne satisfactorily for eighteen months, no further manifestations of syphilis occurred. The glands in the groin and cervical regions, and also in the epitrochlear spaces, which were characteristically enlarged at the date of discovery of the roseola, had apparently become reduced more than one half in size. It was confidently asserted by the doctor that his glands were enlarged for years before the discovery of the initial lesion, and were now as small as he remembered ever to have seen them. In consequence of this statement, in connection with the entire absence of any congestion of the faucial mucous membrane or any abnormal appearance at the site of the initial lesion or any evidence of syphilis at any other point, all treatment was suspended. After six months, during which there was no sign of trouble of any sort, local or general, attention was called to a cluster of dark red papules (twenty to thirty), about the size of a small split pea, situated on the integument of the left temporal region. They were quite prominent, insensitive, and while firm to touch had a juicy, semi-transparent appearance at the centre. On examination another patch of similar eruptions nearly as large as the hand was discovered under the left scapula. These clusters of apparent papules constituted a typical illustration of the simplest form of the *tubercular syphilide*, one of the most common and earliest of the sequelæ of syphilis. Treatment by a combination of mercury and the iodide of potassium (mist. biniodid. hydrarg., No. , page) was at once commenced, and continued steadily, the eruption for

a time increasing in prominence. At two points alone slight ulceration occurred, and a scab about the size of a five-cent piece was formed. After about four weeks the tubercles began to decline, with slight desquamation, and finally to sink below the surface, so that by the third month of treatment the only remaining evidence was a cicatricial depression on the site of each tubercle; the intervening spaces between these points being of a faint coppery hue. Treatment discontinued, but, in a month, several tubercles had returned, and again disappeared under same treatment as before—mild mercurial ointment (ung. hyd. nit. et vaseline, āā ʒ ss)—applied locally for two months. Again, on remitting treatment, in a week or two, evidences of return of the trouble on the side of the forehead were visible; several spots were simply reddened, while small scabs formed on others. The treatment was resumed, and re-enforced by fumigations with the re-sublimed calomel tri-weekly, and this continued steadily for three months, when, no evidence of the return of the trouble presenting, the cicatricial spots distinctly paler than the surrounding skin, and the coppery stain scarcely noticeable, the treatment was again discontinued. August, 1881, the doctor called with the statement that he was about to be married unless some important objection should be raised. The cicatricial depressions were still distinct in both localities and quite white, and no evidence of activity of the former trouble. Glands in the various localities were distinct, but not changed by time or treatment since the cessation of active medication, eighteen months after infection.

Thus a period of five years had then elapsed since any sign of activity of the disease had been manifested, and it was concluded that there was no valid reason for postponing marriage,—always excepting the possibility of some future trouble of local character, but not susceptible of hereditary transmission. Now up to February, 1883, he has had no further trouble; has a wife and child, now eight months old, perfectly well.

Remarks.—As recent painless enlargement and induration of lymphatic glands (first, those directly connected

with the initial lesion of syphilis; and second, groups of glands at characteristic points, such as the cervical and epitrochlear) are the most certain diagnostic signs of the presence of syphilis, in a given case, so their gradual subsidence is the most sure evidence of the efficiency of treatment, and their final and complete disappearance the most satisfactory proof of the complete cure of the disease.

It is, however, necessary to mention that painless gland enlargements are present, in some persons, independently of syphilis, or of any distinct scrofulous antecedents or evidences of this or any other dyscrasia. Hence it becomes important to note the condition, in this respect of any person, presenting with known or suspected initial lesion of syphilis, not only for the diagnostic value attaching to recent painless gland enlargements, but as an aid in determining the proper duration of constitutional treatment. When the glands are in normal condition at the time of inoculation of syphilis—*i.e.*, not susceptible of recognition by the touch—a continuation of the treatment is necessary until their restoration to such condition. On the other hand, when appreciable gland enlargements, are present before the system is invaded by the syphilitic influence, there will be no such guide for the cessation of treatment, and a much longer period will be required, before the patient can be assured of the propriety of discontinuing anti-syphilitic remedial measures.

The administration of mercury by fumigation, as in the foregoing case, while not suitable for general systematic treatment, is an excellent adjunct in certain cases. The necessity of a prolonged feeble mercurial influence is best met by its judicious internal administration, but in cases where this is not well borne, it may be supplemented by two or three fumigations a week—steadily, if practicable, or at intervals, when it appears desirable to produce the constitutional evidences of the mercurial influence. It is especially adapted to cases where eruptive and ulcerative troubles are present. The method of application is exceedingly simple. An ordinary tin basin set upon a couple of bricks, high enough

to admit a small alcohol lamp to be placed under the basin. From fifteen to thirty grains of pure calomel (re-sublimed to carry off the free hydrochloric acid, which is very irritating to the respiratory apparatus) is placed in the basin over the lamp. This under a cane-bottomed or open-worked chair. The patient sits on this naked, and is then enveloped closely in an ordinary blanket—the lamp is lighted, and in the course of from ten to twenty minutes the calomel is vaporized, and deposited to a greater or less extent on the surface of the body. Still wrapped in the blanket, or slipping on a flannel night-dress, the patient gets at once into bed, and remains through the night. During the fumigation the vapor may be inhaled from time to time to advantage, especially if there are open lesions of the mouth or throat, or if a prompt mercurial effect is desired. If an irritative cough results, inhalation should be very limited, or suspended entirely. Where it is available, the fumigation lamp invented by Mr. Henry Lee of London, and in general use under the name of Lee's lamp, is preferable. In this a small amount of water is evaporated with the calomel. An ample water-proof garment in place of the blanket is also an improvement, but the results are fully much the same as with the simpler apparatus. There is no more danger of taking cold after a mercurial bath or fumigation than after a simple warm bath, but it is desirable to secure a temperature in the room of about 70° F., and to have the patient clad habitually in flannels, light or heavy according to the season, throughout the period during which the baths are administered. When the mercurial fumigation is relied upon alone, and the patient is robust, it may be used nightly, using ten to sixteen grains, and continued for months without producing the apparent constitutional effects. If, however, signs of the mercurial influence appear in the mouth and breath, the fumigations should be promptly suspended. The inconveniences attendant on this mode of treatment are such, that except it is manifestly the only way the mercurial can be efficiently introduced, the treatment by innunc-

tion, or through internal remedies will be found greatly preferable.

Case II. June 10th, 1874, N. L., 46, naval officer, presented with a general and quite profuse, large, ham-colored, papular eruption, slightly scaling at borders, of some papules, chiefly on body and legs and arms, none on face. Mucous patches in the mouth; well-marked gland enlargements in the cervical region, viz. along the posterior border of the sterno-cleido-mastoid muscle and of the trapezius, also in the epitrochlear and in the inguinal regions. On further examination, an indurated lump, the size of a pea, was found in the tissues of the prepuce on the left side. This was said to have come with a small sore some six months previously. Had consulted several surgeons, who thought his sore a simple one. It finally healed, after several weeks' continuance, through simple applications alone, but left a hard kernel on its site. No more attention was paid to the matter until the appearance of the eruption, some three weeks previously, when he was suffering from a supposed malarial attack. Having now some suspicions that his trouble was syphilitic, and not then desirous of confiding in the medical officer of his ship, he waited without treatment until his arrival in port. The case was one of undoubted syphilis in full bloom, and was at once put upon a systematic mercurial treatment. This was carried on now under the care of another surgeon—a most accomplished medical man—for about a year. During this time several consultations were held. The eruption, and all other external lesions, passed off satisfactorily. The chief difficulty experienced was a failure to produce the constitutional effect of mercury by the ordinary means. Three at first, then four, five, and even six pil. duplex (each 2 grs. mass. hydrarg. and 1 of exsiccated sulph. of iron), were given daily, without apparent effect either on the gums or on the digestive apparatus. Patient's general health excellent. Small doses of calomel ($\frac{1}{12}$ gr. every two hours) were given then in addition until gums responded, and at the same time a bilious diarrhœa set in and continued for several days. When this and the other evidences of mercurial action

had completely disappeared, the patient resumed the mercurial in the form of pil. proto-iodid. hydrarg., three $\frac{1}{4}$ -gr. pills, three times a day. The treatment was pursued steadily, for about three months, making about twenty months since the acquirement of the disease, and over a year of full and systematic treatment. This course was remarkably well borne, in every respect, and the patient was in excellent general health and spirits. There was now no external evidence of syphilis, and the glands in the various regions were no longer characteristically enlarged. Leaving home for a three months' cruise, the patient returned presenting a thickly studded tubercular patch about the size of his hand, under the left scapula: tubercles size of a grape-seed, and of a pale purplish-red color—with neither itching nor tenderness to touch. Another group, chiefly of large tubercles, covered with brown serous scabs, ranging in size from a pea to a five-cent piece, arranged in a horse-shoe form four or five inches in diameter, appeared on the left thigh; while several small tubercles were scattered irregularly over the buttocks,—thus presenting a well-marked specimen of the so-called tubercular syphilide in its several characteristic forms: 1st. The simple tubercular under the scapula, in an irregular patch, with each tubercle distinct, and of pale purplish hue, with no tendency to ulceration or exudation of serum; this kind disappearing slowly by absorption of the material composing the tubercle, and leaving a distinct depressed cicatrix to mark the site of each. 2d. The tubercles coalescing and extending by a superficial ulceration, exuding serum and forming brownish scabs with a tendency to the horseshoe shape. In the arrangement of this lesion, the scabs, often quite thick, on removal presented a superficial surface of large florid granulations scantily bathed in serum, and bleeding at slight touch. The so-called impetigenous tubercular syphilide. 3d. Tubercles from size of a grain of pearl-barley to a pea, varying in color from pale red to purple, irregularly scattered about; also some larger, quite pustular in appearance, some with yellow and others with scabs of quite a dark brown color.