

infection); but the glands of most assistance to diagnosis are undoubtedly the post-cervical and epitrochlear, and these should be sought for in all cases to confirm the diagnosis of general syphilis.

SORE-THROAT.

Sore-throat is a concomitant symptom of all stages of general syphilis. There are three type varieties:

1. A diffuse general redness, with or without ulceration.
2. A certain amount of chronic congestion, and brawny thickening about mucous patches or atonic ulcers.
3. Destructive ulceration from gummy deposit.

The first variety is an early secondary phenomenon, and alone of the three is a concomitant of the early syphilides; the second may occur along with the later secondary and earlier tertiary lesions; the third is tertiary. They will be described in connection with the other symptoms.

Recently Fournier¹ has noted, as a concomitant symptom of the earlier secondary period of syphilis, certain aberrations of cutaneous sensibility, such as loss of ordinary cutaneous sensitiveness (anæsthesia), inability to appreciate the sensations of heat and cold, and complete insensitiveness to pain (analgesia); these either general or more commonly confined to limited areas of skin, notably the extremities. The back of the hand over the wrist is a favorite location. The trouble is a passing one, not lasting more than a few months, and has been observed by Fournier chiefly in women. It is questionable whether hysteria may not often play a prominent part in the causation of these phenomena. Fournier's observations include over a hundred cases.

Iritis concludes the group of concomitant symptoms. It will be described later.

CHAPTER V.

GENERAL TREATMENT OF SYPHILIS.

Hygienic, Tonic, Specific Treatment.—Syphilization.—Treatment of Early Syphilis.—Bad Effects of Mercury.—Methods of administering Mercury.—Treatment of Late Syphilis.—Mixed Treatment.—Treatment by the Iodides.—Methods of administering Iodine in Syphilis.—Quantity of Iodide which may be required.—Duration of General Treatment.

THE general² treatment of syphilis is hygienic, tonic, and specific. The latter is often ineffective unless aided by the former. Neither should be depended upon alone. They form component parts of one rational system.

¹"Annales de Dermatologie et de Syphilographie," tome i., 1869, p. 486. "Sur la Syphilis," Paris, 1873.

²The local and special means required for the different manifestations of the disease will be detailed under the heads of the symptoms requiring them.

Hygienic Treatment.—The hygienic treatment of syphilis includes all the ordinary laws of health. Regularity of the habits—especially of those of eating and sleeping, and of those involved in the performance of intestinal functions—is all-important. No deviations need be made from ordinary diet. Excesses of any kind are bad, even emotional (fear, anger), and especially excesses in strong drink, in work, in venery. The function of the skin should receive attention through scrupulous cleanliness. Warm baths are more cleanly and relaxing to the skin than cold. If baths be too hot early in the disease, they are apt to call out a more plentiful crop of eruption. Catching cold should be avoided. It is apt to induce and prolong mucous and ulcerative patches about the mouth, nose, and throat. Singing, and loud and continuous talking, are objectionable in subjects having weak throats. Experience has taught that tobacco in all forms, and even highly-seasoned food, is certainly injurious, in irritating and keeping up an outcrop of mucous patches. Air, exercise, and light, essentially necessary to all animal well-being, are particularly so in the case of obstinate chronic or advancing disease. Change of air in some of these cases is essential to the success of treatment, as a trip to the country, change from the seaboard to the mountains, or from inland to the shore, and then perhaps back again, six weeks being usually long enough in any locality to obtain its maximum effect for good.

CASE L.—A gentleman of twenty-four, of fair general health, tall, slight, pale, somewhat lymphatic in aspect, applied for treatment of a large lump on the forehead, nasal catarrh, and a yellow ulcer of the soft palate. He had been under treatment for some time for scrofula. Daily local applications had been made to his ulcer. He suffered no pain. His appetite was excellent. The most scrupulous examination and careful inquiry failed to elicit any history of syphilis, except a urethral discharge coming three weeks after exposure, for which he took capsules; and a little sore-throat within six months afterward. He never had been treated by mercury, or otherwise for syphilis, which he was unconscious of having. There was a painful node on the left ulnar, nodes on the tibiæ; the bones of the bridge of the nose crackled when touched, and had already begun to sink in. The fluctuating tumor (gummy) on the forehead was painless. The ulcer of the palate was rapidly perforating, and characteristic in appearance.

He was put on tonics, cod-liver oil, and the iodide of potassium. Five grains of the iodide produced a profuse eruption of purpura of the feet and legs. On this account he went to the country, continuing his iodide, and with directions to increase it. Within twelve hours after reaching the country, his purpura ceased coming out, he was able to increase the dose of the iodide, and all of his symptoms improved. Within a few weeks the ulcer in his mouth healed, the lump on the forehead greatly diminished; he had gained flesh and strength, and concluded to return to the city. Shortly after doing so he was obliged to decrease the dose of the iodide; new crops of purpura appeared daily, his nasal discharge ceased to improve. Again he sought the country, again his purpura promptly ceased, and he went on to recovery.

Many equally instructive illustrative cases might be detailed. The rule is positive. Many obstinate bad cases of late secondary and tertiary disease, which fail to respond to treatment in their homes, especially if that home be in the city, make rapid strides toward recovery, as soon as

the air and surroundings have been modified.¹ Mercury and the iodides will not cure all syphilis, as many practitioners seem to believe. The old chronic cases, remaining from year to year in our large hospitals, and relapsing endlessly in the damp and crowded tenements of our large cities, are not in need of medical treatment, for this they have and of the best; but what they need is intelligent hygiene, and with its assistance many of them would recover.

Tonic Treatment.—In the same category with hygiene belongs all tonic and supportive medication. Cod-liver oil, iron, quinine, and all lesser helps, find ample space to vindicate their claims at some part of the treatment of most cases. Without them specific treatment is often unworthy the name. In the hydræmic stage, just before and during syphilitic fever and the earlier exanthemata, as well as during portions of the later cachexia, these remedies outrank the specifics, and are indeed occasionally used alone and to advantage, until the general tone of the patient can be elevated; after which the prompt efficiency of the specifics, intelligently administered, gives them a claim to the title of being the most reliable drugs used in the practice of medicine. There are, however, certain phases of syphilitic cachexia over which no tonics act with the same efficiency as minute doses of mercury, especially corrosive sublimate, in women preferably combined with iron.

Specific Treatment of Syphilis.—But few known remedies have been left untried in the treatment of syphilis. Even condurango, the last startling therapeutical novelty, claimed to eradicate it. The claims of few of these need detain us. Most of the syphilides, especially the earlier varieties, are self-limiting, and will get well under any treatment, one might even say in spite of treatment. Mild cases, especially in married women, often go untreated, unrecognized indeed, and the patients never suffer any considerable inconvenience. It is on cases of this order that anti-mercurialists build their theories, substantiating the latter by reference to cases, in themselves inveterate and malignant in spite of the use of mercury, or perhaps in connection with its improper use. No treatment may be better than over-treatment.

The different vegetable decoctions and infusions, of which sarsaparilla takes the lead, assist digestion, promote the action of the skin, encourage the functional activity of the kidney, and please the patient. They may be adjuvants in certain cases, and should be perhaps ranked along with hygienic and tonic means, but they have not merited by their action any right to the term curative in its narrowest sense, since they do not demonstrably postpone relapses or shorten the duration of existing symptoms any more than other hygienic and tonic means. Bumstead speaks favorably of Zittmann's decoction (which also contains mercury), from ℥ viij to xvj daily, enough to produce free catharsis in

¹ We have repeatedly demonstrated the value of the truth contained in the above lines.

some "inveterate cases," believing that it increases the appetite and improves the patient's general condition.

To the same order of treatment belong diaphoretics and the action of baths, both useful undoubtedly, but strictly belonging to the class of adjuvants.

Of syphilization, that is, the attempt to eradicate syphilis by the rapid, indeed exhaustive reproduction of ulcers upon the patient by the use of pus taken from an auto-inoculable source, usually chancreoid,—the process is founded upon an inaccuracy. Its premises are scientifically inexact, for chancreoid is not syphilis, any more than is nettle-rash the itch. Its effects are produced not upon the principle *similia similibus*, but upon that which regulates the power that issues and sets on sometimes have over certain cutaneous affections. The skin becomes exhausted as to its power of maintaining an eruption. This same effect has been produced by the establishment and maintenance of ulcers with tartarized antimony, a method of treatment named, satirically, "tartarization." That an eruption may fade promptly under treatment by syphilization is highly probable, but this is only one of many symptoms of syphilis. Other eruptions and other symptoms are not prevented, and the treatment itself is physically repulsive, painful, and certain to leave more indelible cicatrices upon the integument than would a serious attack of syphilis allowed to go untreated.¹

The specific treatment of syphilis consists in the intelligent administration of mercury and of some of the preparations of iodine. It is divided, for convenience of description, into—

1. Treatment of early syphilis;
2. Treatment of late syphilis—mixed treatment.

The proper duration of treatment will be discussed at the end of the section.

1. TREATMENT OF EARLY SYPHILIS.

General treatment should be commenced as soon as the diagnosis of

¹ It is only the recent presence among us of the kind and gentle old man, the apostle of syphilization, Prof. Boeck, of Christiania, which makes it necessary to devote more than a single line to syphilization. Certain desperate cases in a neighboring city were undertaken by him, and so decidedly benefited that a well-known surgeon of that city, in reporting the case, announced his faith in the so-called "duality of syphilis" shaken. But, granting any amount of improvement in any number of severe cases, although it might establish the value of continuous and prolonged cutaneous irritation as a means of combating severe forms of syphilitic disease, it could not establish the identity of the poisons of syphilis and chancreoid, any more than could tartarization, employed with success, be held up as an argument for the identity of tartar-emetic and the syphilitic virus.

In a case (personal) of obstinate tuberculo-ulcerated syphilide, attended by acute ataxic symptoms in the lower extremities, where immense doses of iodide of potassium with a small amount of mercury failed to effect any marked or speedy relief, a certain advantage (by no means as marked as in Boeck's cases) seemed to be derived from the establishment and maintenance upon the breast of the patient of six large ulcers. They were kept open with the utmost difficulty, by means of large wooden buttons strapped down over them, and were occasionally sprinkled with tartarized antimony. The remedy caused pain, and the amount of benefit derived from it was not sufficient to justify its long continuance.

syphilitic chancre is made. There is no object in waiting for an eruption. By so doing, valuable time is lost. Still, early action is only justified by an absolute certainty of diagnosis. In all cases of doubt the honest surgeon must hesitate, and many cases are doubtful at first. In all such it becomes the duty of the surgeon and of the patient to wait for absolute proof of its presence before treating a disease which possibly may not exist. By following the opposite course the surgeon perhaps throws doubt and discontent, sometimes even torture, into the whole subsequent life of the patient, who is constantly alarmed by every pimple, every ache, every unusual feeling he may have through life, fearing it may be the beginning of the long-delayed onslaught of his imaginary foe.

A few days of a mercurial treatment in some cases will disturb the regular development of symptoms, perhaps prevent their appearance altogether in a form which would be readily recognized, and, in face of such a case, if the diagnosis of the nature of the chancre had been doubtful, how much more so would be that of the subsequent syphilis! Hence the rule in all cases of doubt: Do nothing, but frankly tell the patient that he must wait; or, if he has not the grace to appreciate pure honesty, and must have something to do while waiting, give a placebo while studying the nature of the sore and awaiting developments. As soon, however, as the diagnosis "syphilis" is satisfactory, commence general treatment.

In the early manifestations of syphilis mercury is specially potent. Under its kindly influence the chancre heals, the early eruptions fade. If given continuously and intelligently from the first, syphilitic fever rarely amounts to more than a little pallor, with occasional osteocopic pain, and the early eruptions instead of being general are more or less discrete. The iodides have but little power over early syphilis, although they are sometimes preferred during syphilitic fever, especially if it run high. A mild mercurial, however, is better, but with it the tonic and hygienic treatment should be vigorously combined; and, if mercury have a depressing effect, it should be discontinued until the latter means have brought up the patient to a point where he can tolerate the more powerful drug. Mercury properly administered may be taken for years without any injury to the individual, or to his constitution, either immediate or remote. It has no connection as a cause with the appearance of severe tertiary forms of syphilis. Accumulating experience derived from more accurate observation has established this truth beyond cavil, although the ancient superstition as to the injurious after-effects of mercury still measurably taints popular belief.¹

¹ The sweeping assumptions and broad assertions of a recent author of a pretentious volume in folio ("Ueber die Wirkungen des Quecksilbers auf den menschlichen Organismus," Dr. Jos. Hermann), which would seem to ascribe all possible evils, and especially the symptoms of syphilis, to the effects of mercury, are too little substantiated by the facts adduced to call for any discussion here.

BAD EFFECTS OF MERCURY.—Not very rarely a patient is found who cannot take mercury, or who bears it badly even in minute doses, and in any case it is a depressor of vitality if given too freely. Patients are now and then encountered, in all stages of syphilis, who are thrown at once into a condition of hopeless mental and emotional depression as soon as they begin to come under the influence of mercury. This curious phenomenon has been noticed again and again by the authors, and has been patiently and critically studied in order to differentiate it from the mental and emotional depressions caused by the syphilitic virus. Mercury will depress the spirits and give an otherwise buoyant disposition the most languid and distressingly desponding tendencies. No words can describe the awful gloom that settles down on an individual upon whom mercury exercises this peculiar power. One form of the remedy produces it as well as another; striking relief is afforded, obviously, by discontinuing the drug, or, what will often answer, lessening the dose. These symptoms may be observed before mercury has produced any effect upon the mouth or gums.

The other bad effects produced by mercury are salivation and diarrhoea with griping pain. The well-known poisonous effects of the stronger mercurials (bichloride, biniodide, bicyanide, etc.) render it unnecessary to discuss death from an overdose of one of the latter class. The general intelligence of modern practitioners renders it equally unnecessary to more than allude by name to mercurial tremor and mercurial cachexia, neither of which could occur except after an inordinate, unjustifiable use of the drug, although mild tremors are noticed sometimes after mercurial baths. (For the irritating effects of mercury used locally, *see* INUNCTION.)

Salivation.—Salivation is harmful. It should not be aimed at. The greatest effect that it is allowable to produce by mercury is to "touch the gums," as it is called. When the gums are touched there will be an increased flow of saliva, a faint coppery taste in the mouth, some tenderness of the gums, tongue, perhaps of the whole buccal cavity. Pressing the teeth firmly together causes slight pain, while a little swelling of the gums and a faint reddish line at the neck of the teeth may be noticeable. Sometimes ulceration along the edges of the tongue or gums, or on the inside the cheek, is caused by mercury, while there is still no tenderness about the mouth, nor a very markedly increased flow of saliva, but this is rare. The mouth should be inspected before commencing a mercurial course, so that the condition of the teeth and gums may be known. A patient with ragged teeth covered with tartar is not in a fair condition to test the therapeutic effect of mercury; his gums, naturally tender, will become affected long before his point of true tolerance is reached. It is, therefore, wise, in commencing a mercurial course, to send the patient to a dentist, with injunctions to have the tartar entirely removed from his teeth, both to make the observation of the

effect of mercury more accurate, and to remove one source of local irritation capable of keeping up mucous patches. The quantity of the drug necessary to produce an effect upon the gums varies with each individual; minute doses will occasion it in some cases having special idiosyncrasies; others may take enormous doses before the symptoms yield or the gums become affected. The point of saturation or "tolerance" of a given patient can only be learned by close observation of the symptoms just described. After this we have his gauge, and can temper his treatment according to the urgency of his symptoms. Should salivation accidentally occur, or be encountered in practice, it requires treatment. The effect of mercury is by no means increased by keeping a patient salivated; on the contrary, the disease is not benefited, while the patient is positively injured.

The cause of salivation is special idiosyncrasy with a small dose of mercury, or no idiosyncrasy with large doses. A mouth kept dirty or containing bad teeth is more apt to suffer. The influence of cold and wet during a mercurial course seems sometimes (though very rarely) capable of inducing it. Bumstead¹ mentions a patient who became "profusely salivated a month after the cessation of a mercurial course as a consequence of exposure to the rain."

Symptoms.—In salivation the salivary fluids flow freely, sometimes to an enormous extent, the breath is fetid, the metallic taste is very marked, the gums are sore, perhaps bleeding, the teeth feel too long for the patient to shut his mouth, tapping lightly upon them causes pain, the tongue swells, showing marks of the teeth, the lips and cheeks may also become tumefied. Often there is febrile excitement with mental depression, the lymphatic glands in the vicinity become swollen and painful. The teeth may fall, or portions of the soft or bony parts necrose, in extreme cases. Articulation is indistinct and painful, deglutition almost impossible.

The above is a description of a severe type case of mercurial stomatitis. Between this and the mildest increase in the salivary flow with "touching of the gums," the affection assumes all shades and varieties of intensity. The patient should be cautioned to report for inspection on the advent of the earliest of these symptoms, that possibly impending salivation may be averted.

Treatment.—Salivation may often be kept off by the administration of large doses of the chlorate of potash during a mercurial course, and that, too, without interfering with the effects of the mercury, as Ricord has shown,² but it is better to hold this remedy in reserve for exhibition, in case symptoms of mercurialization should suddenly run high. During salivation, or any sore mouth from mercury, ten to twelve grains to the ounce, of chlorate of potash in water, or any bland fluid, should be kept constantly on hand (warmed), and with it the patient should repeatedly

¹ *Op. cit.*, p. 502.

² "Leçons sur le Chancre."

rinse his mouth and throat. At least one drachm, and not more than three, of the same remedy daily should be introduced into the patient's circulation, either through the stomach, if he can swallow, or by the rectum. A mild solution of carbolic acid or of Labarraque's solution, or water rendered pink with a little permanganate of potash, should be occasionally used as a gargle, where there is great fetor of the breath. These means will generally promptly overcome salivation. In all other respects the treatment of salivation is symptomatic. An anodyne or a laxative may be required—the physician selects the one with the use of which he is most familiar. Nourishment must be kept up by hot broths, milk, and soft articles of light food, until a subsidence of the swelling allows the patient to swallow solids.

Diarrhœa with griping pains is apt to come on in many patients who are fairly under the influence of mercury. If kept up, the patient loses appetite, runs down, and fails to derive benefit from his mercurial course. When any mercurial shows signs of disagreeing by the production of these symptoms, it is better to lower the dose, if the syphilitic lesions are under control; otherwise, to change the mercurial preparation for a milder one, putting the patient at the same time upon a rice-and-milk diet, with lime-water and moderate doses of bismuth, or to administer the mercury by some other method—inunction, fumigation. Opiates and astringents may be combined with the mercurial, to prevent its irritating effects, but it is better to avoid them if possible, or in any case to try first the means above suggested.

Methods of administering Mercury.—The effects of mercury are produced no matter how the drug is employed, hence the choice of a method depends mainly upon the ease of its administration, the promptitude of its action, or upon the desire to produce or to avoid some local, useful, or disagreeable effects. It is on this account that, for treating general syphilis, the method by the stomach is the best. Since it is necessary to continue the use of mercury for a year, unremittingly, at the very least, it becomes at once apparent that the docility of the patient is taxed severely to keep him under treatment at all, and common-sense avers that the ordinary patient will take his medicine steadily by the mouth, in many cases where he would absolutely refuse to continue it by any other method—as by the hypodermic injection, inunction, fumigation. All of these methods have their value in the rapidity of their action, and from the fact that they spare the stomach, but, for prolonged, regular treatment, the latter organ must be relied upon. Even the advocates of other methods do not propose them for continuous use, but only to combat symptoms—calling the disappearance of an eruption a cure of syphilis, and the next eruption a relapse.

¹ Frequent warm baths and the exhibition of diuretics are useful for patients under any mercurial course. They hasten the elimination of the drug, thus warding off evil effects, without interfering with the therapeutic action of the remedy.

Among the methods in common use for the administration of mercury at the present date, five require mention. They are, in the order of their respective value to the practitioner:

1. By the stomach.
2. Local.
3. Endermic (inunction).
4. Fumigation.
5. Hypodermic.

5. *Hypodermic Injections.*—In favor of this method it may be said that eruptions, iritis, and lesions relievable by mercury, seem to yield very rapidly during its employment, as a rule. The method employed is that of Lewin,¹ more or less modified. From one-sixteenth to one-eighth of a grain of sublimate, with perhaps a little morphine, dissolved in fifteen minims of water, is injected, once or twice daily, under the skin—preferably of the back below the scapula. The objections to the treatment are sufficient to condemn it, unless in exceptional cases, where a speedy action of the drug is required, or where the patient cannot or will not swallow. Abscess sometimes follows the puncture, and a hard, painful lump of chronic inflammation occupies the seat of the injection, as a rule, for a length of time. Salivation is not uncommon.

4. *Fumigation.*—This method is an excellent one, but not practically applicable. It requires an expenditure of time and care, such as the ordinary patient will not continue to give it for a long time. It is useful where prompt and kindly action of mercury is aimed at. Improvement of symptoms sets in rapidly after the baths are commenced. Salivation is rarely induced. Fumigations may be taken daily, where the patient is robust and bears the treatment well, or at longer intervals. Depression, headache, faintness, tremors, occasionally salivation, or diarrhoea, attend this mode of treatment, when the patients are impressionable. Langston Parker² has done much to develop this form of treatment.³

The simplest method of thorough fumigation is the following: The apparatus for a local fumigation of the throat (Fig. 132) is all that is required in the way of special machinery. The patient undresses for retiring. The lamp and tin, and mercurial to be volatilized, are placed in position beneath a cane-bottomed chair. The patient, naked, sits upon the chair and wraps himself and the chair completely in a couple of thick blankets, drawing the latter snugly about his chin. A

¹ "Behandlung der Syphilis mit subcutaner sublimat-injection.

² "On Syphilitic Diseases," London.

³ Mercurial fumigations are administered in most of the Turkish and Russian bathing establishments in all large cities; but it is the universal experience of physicians that the proprietors of these establishments are prone to tamper with patients, and invariably fail to carry out instructions received from the physician. Otherwise the facilities of such establishments of mingling steam with the fumes of mercury are unequalled. In these institutions, where the head is also immersed in the fumes, the black oxide is the most suitable mercurial to be employed—from one to two drachm doses.

pan of steaming, boiling water is now placed under the blankets. As soon as the confined steam has rendered the body warm and slightly moist, the spirit-lamp under the chair is ignited. The bath lasts from fifteen minutes to half an hour. Profuse perspiration usually comes on. After fifteen minutes, if the patient is uncomfortable, the light may be extinguished, but remaining in the fumes five or ten minutes longer is of advantage. The patient now wraps one of the blankets around him and lies down, without wiping off the mercury until he has cooled. A more complete apparatus is that of Maury, of Philadelphia (Fig. 131). It is attached to the gas-burner by a rubber-pipe. There are two pans; one for water, one for mercury.

Of the different mercurials generally used in fumigation, calomel is the best. About a scruple is enough for a bath; the diminution or increase of this dose is regulated by circumstances. Calomel is better than the other substances used, because it volatilizes promptly with a heat

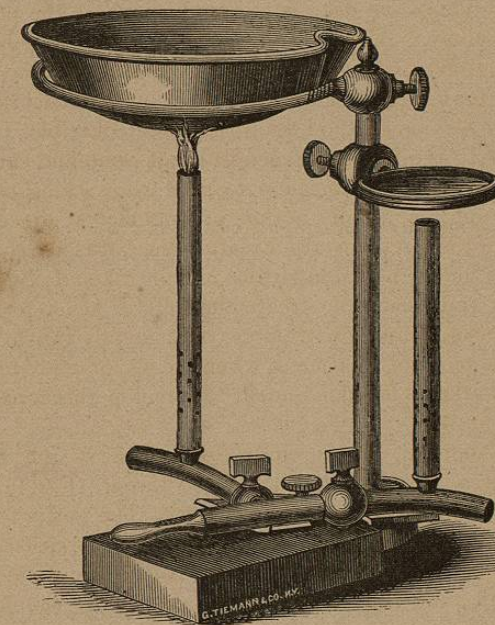


Fig. 131.

easily attained by a spirit-lamp, and whatever of the fumes escapes into the room is not irritating to the fauces. The red oxide of mercury also volatilizes without reduction. All the other substances in common use, metallic mercury, mercury with chalk, the gray oxide, the black oxide, the binocide, the yellow oxide, the bisulphuret, are exactly the same thing; they all reduce first, and then the metallic mercury volatilizes.