

tis placentaris gummosa, the mothers presented well-marked symptoms of syphilis, but Fränkel states that he has met with cases in which the syphilitic mother had a healthy placenta. He thinks that in these latter cases the disease circulates through the blood without leaving any trace of it at any point, while in other instances it is localized in the endometrium and is then transmitted to the foetus.

That syphilitic endometritis occurs is beyond question; it only remains to prove that this endometritis decidua or placenta gummosa recurs every time that an abortion takes place in the same woman. In this case the fact of local transmission would be established, and local treatment of the uterine cavity would be demanded as well as general constitutional treatment.

The influence upon the foetus of placental disease is of course prejudicial. In all seven cases the infants were premature; six were already macerated, and one, though born alive, was so atrophic that it died soon after birth.

## CHAPTER XXVIII.

## TREATMENT OF SYPHILIS.

THE expectant treatment of syphilis has been thoroughly tried by Diday, Zeissl, and others, as it was extremely desirable it should be, in order to ascertain what the natural course of the disease would be uninfluenced by medication. Patients with the early manifestations of secondary symptoms have been placed under the best hygienic conditions and rules of diet, and have received only a placebo internally or some bland inunction, as of cod-liver oil, externally, to lead them to suppose that active treatment was employed, while, in fact, only the natural course of their symptoms was watched. In some of these cases, especially those in which the symptoms were very persistent, the iodide of potassium was administered, but all forms of mercury were carefully excluded. The result of these trials has been, as already stated, that in very many cases the disease tends to a spontaneous cure. The syphilitic eruption and other symptoms disappear after a while, to return again very likely, but this is no more than we see after decided medication continued only for a short period. Still, under this purely expectant treatment the result *may be* most satisfactory, and the patient be left without permanent injury to the health or impairment of any organ. It is only in a few instances at this early stage that the administration of iodide of potassium has appeared to contribute to this favorable result. But while the above was true of many cases, others were met with in which both patient and surgeon were forced to renounce mere expectancy, and were only too glad to have recourse to their only sheet-anchor, *mercury*.

The expectant treatment of syphilis will commend itself chiefly to those who are imbued with the vulgar and unfounded prejudice against mercury, even when most judiciously administered. Under the expectant treatment, the existing symptoms persist for a much longer time than when mercury is used, and the patient continues to be a focus of contagion to the members of his family and his intimate associates. If thus treated unwillingly, he is, moreover, rendered impatient and despondent as he sees some comrade rapidly improving under mercurials, and is very likely to abandon his surgeon. Still further, he is exposed to the outbreak of serious manifestations of the disease, which may leave indelible marks upon him; and we question whether his chances of immunity in future years from tertiary lesions are not greatly lessened.<sup>1</sup>

<sup>1</sup> It may here be remarked that Zeissl, within the last few years, has given in his adhesion to the expectant treatment, while Fournier (Leçons sur la syphilis, Paris, 1873) most ably and eloquently advocates the use of mercury, prolonged for several years. (See chapter on the Prognosis of Syphilis.)

The treatment of syphilis which we recommend consists in attention to the general hygienic condition of the patient, and, as the case demands, the use of tonics, mercurials, and the iodides.

**HYGIENE AND TONICS.**—The successful management of any case of syphilis undoubtedly depends in a great measure upon attention to hygiene. The most careful administration of specific remedies will be of little avail, unless the patient be willing to submit to the necessary restrictions with regard to diet, exercise, exposure, etc. Many syphilitic patients who enter our hospitals begin to improve at once, simply from the fact that they are brought under better hygienic influences, and are obliged to lead a regular course of life and abstain from excesses which have hitherto depressed the vital powers and thwarted all attempts of nature or of art to eliminate the virus from the system.

The essential features of the hygienic plan, which is adapted with slight variation to nearly every case of syphilis, are general regularity of life, simple but nourishing diet, abstinence from the free use of stimulants and tobacco, attention to the functions of the skin and bowels, and, last, but not least, a cheerful disposition. The habits of the patient should be systematic and regular, especially as regards his hours of eating, his sleep, and exercise. Irregularity in these respects exercises a drain upon the vital powers, the whole force of which is requisite to eliminate the poison from the system. The diet should be plain but nourishing; *plain*, in order that digestion may not be too much taxed; sufficiently *nourishing*, that nature may be sustained in the work it has to accomplish, and that the depressing influence of the virus may be counteracted. It is impossible, however, to give minute directions which will be applicable to all cases, when the condition of different persons is so various, and when so much must necessarily be left to the judgment of the surgeon. The abstemiousness recommended in certain methodical modes of treatment, as in that by Zittmann's decoction and the dry treatment of the Arabians,<sup>1</sup> is adapted for patients who devote their whole time to treatment and who lead an inactive life, confined for the most part to the house, but will not answer for those who are engaged in labor or the active calls of business. Abundant testimony proves that any dietetic course which weakens the system affords to syphilis a stronger hold upon the constitution. When a patient, the victim of dissipation, has for a long series of years been accustomed to artificial stimulus until it has become a second nature to him, it may not be best

<sup>1</sup> The dry treatment of the Arabians, as communicated by an Arab physician who visited Marseilles, is described by M. Benoit, who has tried it with very satisfactory results, as have also Lallemand, Broussonnet, L. Boyer, Tribes, Jaumes, and Malinowski. The patient is directed to abstain from his usual articles of food; lives on biscuit, dried almonds, figs, and raisins; drinks only in the twenty-four hours a glass or two of a decoction of sarsaparilla; and takes a mercurial pill morning and evening.—Gaz. hebdomadaire, 4 mai, 1860, from the Montpellier médical, 1860, Nos. 1 et 2.

to cut him off entirely from his daily potations, but they should be given methodically under the special supervision of the surgeon, and at mealtimes rather than on an empty stomach. In such cases, it is often safer to administer stimulants in the form of medicine, as the compound tincture of gentian, since in this way the necessary moderation can best be secured. On the other hand, habitual high-livers require to be restricted in the quantity and quality of their food and drink, and between these two extremes every shade of variation may be met with.

The secretions should also receive attention. That of the skin should be promoted by regular exercise not carried to fatigue, by bathing and friction. The season of the year, and the habits and condition of the patient will determine whether a cold bath every morning, or a hot bath two or three times a week, should be preferred. Flannel or merino underclothes should be worn and changed frequently; and the bowels should be opened at least once a day. Absolute continence in men accustomed to frequent sexual indulgence may induce nocturnal pollutions and consequently be objectionable, but coitus should be practiced only as a relief to the system, and never be carried to excess.

Tobacco exercises a depressing influence upon the vital powers, and is moreover objectionable in consequence of its irritant effect upon the mucous membrane of the mouth and fauces. Mucous patches of this region in smokers and chewers are especially obstinate, and will often persist in spite of remedies, unless the irritating cause be removed. Total abstinence from "the weed" should peremptorily be insisted upon with all syphilitic patients.

The influence of the mind upon the body is rarely exhibited in a more striking manner than in syphilitic subjects; those cases commonly proving most intractable, in which patients are anxious and despondent, and constantly watching and examining themselves to discover some new symptom. The surgeon is not always blameless in this matter, for promises of a cure within a fixed time or after a certain course of treatment are almost sure to be falsified, and to be followed by disappointment and depression of spirits. It is, therefore, desirable to be frank at the outset, and to tell patients that no treatment, however thorough or prolonged, will afford certain immunity for the future; that it is the nature of syphilis to manifest itself by repeated outbreaks; that consequently the reappearance of symptoms is not necessarily to be regarded as a relapse; that the work of cure may still be going on; and that with proper care the chances are strongly in favor of ultimate recovery and complete restoration to health. *There is a disease worse than syphilis, viz., syphilophobia*, which has no tendency to self-limitation, over which remedies have no control, and which can only be cured by the exercise of a strong and manly will.<sup>1</sup> The syphilitic subject who would avoid this

<sup>1</sup> I have met with three sad cases in which syphilomania has led patients under my charge to commit suicide several months after all syphilitic manifestations had disappeared.

greater evil and place himself in the most favorable condition for recovery from his actual disease, must shun gloomy thoughts, give his mind and body healthy occupation, and cultivate a cheerful disposition.

Examination of the blood of persons in the early stage of syphilis shows a diminution of blood-corpuses and an increase in the proportion of serum. This "chloro-anæmia," as it is very properly called, is chiefly confined to the primary and early stage of secondary symptoms—hence the special value of tonics at this period of syphilis; but they are hardly less desirable in the later stages to counteract the depressing influence of the disease and to assist the action of specific remedies. Unless decidedly contraindicated by a plethoric condition of the patient, they should be included in the therapeutic means employed in all stages of syphilis, and they may commonly be administered with advantage for several months after specific remedies have been suspended. Nearly all of the mineral and vegetable tonics may in turn prove serviceable. The most useful are quinine, the preparations of iron, and gentian.

The chief remedies in the treatment of syphilis are mercurials, and iodine and its compounds. The former exert their therapeutic action mainly upon secondary and the latter upon tertiary symptoms, so that the susceptibility of a given lesion to one or the other may in some but not in all cases indicate to which stage of syphilis it belongs. This rule, however, is not so invariable as the above statement would make it appear, and requires explanation.

There is no distinct line of demarcation in respect to treatment between secondary and tertiary lesions, but a gradual transition from one to the other. By far the most powerful agent in the treatment of the chancre and the earlier general symptoms is mercury; as the disease progresses, iodine gradually begins to exercise a therapeutic influence; those symptoms which border upon the boundary line between secondary and tertiary manifestations, and which constitute the stage of transition—so called by Ricord—require a combination of mercury and iodine; finally tertiary symptoms yield with great facility to iodine and with difficulty to mercury, though it is very doubtful whether the former agent without the assistance of the latter can effect their permanent removal.

*The iodides cause tertiary lesions rapidly to disappear, but do little if anything towards the cure of syphilis.*

MERCURIALS.—Mercury came into general use in the treatment of syphilis within fifty years after the appearance of the Italian epidemic,<sup>1</sup> and, in spite of the many attempts which have been made to supplant it by other remedies, still holds its ground as the only reliable agent for combating secondary lesions. At the present day its

<sup>1</sup> Hæser (Historisch-pathologische Untersuchungen, vol. i., p. 230), according to VIRCHOW, quotes a satirical poem composed by Georgius Summarpia, of Verona, in 1496, in which the use of mercury in syphilis is mentioned.

efficacy is admitted both by regular and irregular practitioners, though the latter generally administer it furtively and under the guise of some other name. It is the active ingredient of most of the "life-balsams" and "essences of sarsaparilla," the marvellous virtues of which for the cure of "private diseases" are proclaimed in our daily and weekly journals (religious as well as secular). Even the homœopaths use it, in pretty full doses too, and kindly give us their approval. Says Yeldham:<sup>2</sup> "It is an interesting fact that the practitioners of the old school have arrived nearer to the truth in the treatment of venereal than of any other class of diseases."

When speaking of the treatment of the chancre or initial lesion of syphilis (p. 511), the ground was taken that it is better, unless under certain circumstances, to defer the administration of mercury until the appearance of secondary symptoms. This course is now advocated by a number of authorities, among whom are Zeissl<sup>2</sup> and Sigmond.<sup>3</sup>

No one form of mercury can be used exclusively in all cases and in all stages of the disease. A preparation which agrees with one person will not unfrequently disagree with another, and it is sometimes necessary to make a trial of several before the one best adapted to the case can be selected. Again, after employing one form for a time, when the system has become accustomed to it, it is often desirable to change to another; in this manner the therapeutic action may be increased without resorting to large doses, which are liable to disarrange the bowels.

In general, my own experience leads me to give a decided preference to mercury in the metallic form, as the blue mass or mercury with chalk, above any of its salts or combinations. At the outset, it should be given with some degree of caution, since the patient's susceptibility is generally not known before trial, and salivation is to be avoided. Contrary to a very general but mistaken idea, at least as applied to the treatment of syphilis, the mouth is most readily affected by the first mercurial course, hence special care should be exercised at this time. The condition of the blood in early secondary syphilis, already referred to, renders it desirable to associate a tonic with the mercurial, as in the following formulæ:

R. Pilulæ Hydrargyri, ℥ij . . . . . 250  
 Ferri Sulphatis Exsiccati, ℥j . . . . . 125  
 Extracti Opii, gr. v . . . . . 30  
 Mix and divide into twenty pills.

R. Hydrargyri cum Cretâ, ℥ij . . . . . 250  
 Quiniæ Sulphatis, ℥j . . . . . 125  
 Mix and divide into twenty pills.

One of either of these pills may be given from two to four times a day.

When there is special reason for desiring speedy mercurial action, a combination of several preparations may effect the purpose sooner than one alone.

<sup>1</sup> Homœopathy in Venereal Diseases, London, 3d ed., p. 10.

<sup>2</sup> Allg. Wein. med. Ztg., Nos. 1, 2, 3, 4, 1879.

<sup>3</sup> Wiener Klinik, Oct., 1876.

R. Pilulæ Hydrargyri, ℥j . . . . .	1.25
Hydrargyri Chloridi Mitis, gr. x . . . . .	60
Hydrargyri cum Cretâ, ℥j . . . . .	1.25
Ext. Opii, gr. v . . . . .	30
M. In twenty pills.	

It is best to commence with one of the above pills morning and night, and, if no effect be perceptible by the fourth or fifth day, to increase to three a day. So soon as the chancre begins to assume a more healthy aspect, or the secondary symptoms to subside, no further change in the treatment is required, unless, on the one hand, the mouth become tender, or, on the other, the symptoms cease to improve; in the former case the remedy must be suspended, and in the latter given more frequently.

The dose of the protiodide is from one-sixth of a grain (0.01) to half a grain (0.03), given in a pilular form two or three times a day. No benefit will be derived from exceeding the latter quantity, which alone is apt to produce diarrhœa. Indeed, the chief objection to this preparation is the abdominal pain and intestinal irritation which it often occasions; but these may in most cases be avoided by directing the patient to take his pill about an hour after meals, when the stomach is not entirely empty, or, if necessary, by the addition of opium; if these measures fail, some other form of the mineral must be employed. The sugar-coated granules of the protiodide, each of which contains one-fifth of a grain, afford a very convenient and elegant mode of administration, and, by their minute division, enable the surgeon to graduate the dose from day to day according to the exigencies of the case. The first decimal trituration, *i. e.*, one part to nine parts of sugar of milk, as prepared by the homœopaths, is also to be recommended on account of the thoroughness of the trituration and the fineness of the powder, which renders it less irritating. Two grains (0.12) contain, of course, one-fifth of a grain (0.012) of the iodide.

A convenient mode of exhibiting the biniodide of mercury is by decomposing the bichloride by means of the iodide of potassium, and dissolving the precipitated biniodide with an excess of the iodide of potassium, as in the following formula:

R. Hydrargyri Bichloridi, gr. ij . . . . .	12
Potassii Iodidi, ℥ss . . . . .	2.00
Aquæ, ℥viiij . . . . .	250.00
M.	

Dose.—A dessertspoonful (10.00) an hour after eating, two or three times a day.

Gibert's favorite formula, which is much employed at the Saint Louis and other hospitals of Paris, where it is known as the "syrup of the ioduretted biniodide of mercury," is as follows:

R. Hydrargyri Biniodidi, gr. j . . . . .	0.06
Potassii Iodidi, ℥j . . . . .	4.00
Aquæ, ℥j . . . . .	4.00
Filter through paper and add—	
Syrupi, ℥v . . . . .	150.00
M.	

Dose.—A tablespoonful (15.00).

Mr. Langston Parker recommends the following:

R. Hydrargyri Biniodidi, gr. iij . . . . .	0.20
Potassii Iodidi, ℥j-iiij . . . . .	4.00—12.00
Spiritus Vini, ℥j . . . . .	4.00
Syrupi Zingiberis, ℥ij . . . . .	12.00
Aquæ, ℥iss . . . . .	45.00
M.	

Dose.—Twenty to thirty drops (1.50–2.00) three times a day in half a tumblerful of fluid.

Such combinations of mercury and iodide of potassium are the more valuable the longer the time which has elapsed since contagion. In late secondary lesions, we often administer half a grain (0.03) or less of the protiodide of mercury at noon, and the iodide of potassium morning and night. Duncan's compressed pills of the bichloride of mercury and the iodide of potassium are also of value. They are prepared of three different strengths, containing  $\frac{1}{20}$ ,  $\frac{1}{18}$ , and  $\frac{1}{10}$  of a grain of the bichloride, with 3, 4, or 5 grains of the iodide.

The bichloride has for a long time been a favorite preparation with many. It has certain advantages; in small doses, it rarely salivates, and its administration does not require to be so closely watched as that of the more active forms of mercury. It is, therefore, worthy of employment in those patients who tolerate it, and who live at a distance from their surgical attendant; in those who are peculiarly susceptible to the morbid action of mercury, and in persons of a broken-down constitution. Its taste, however, is very repulsive, and it is not well borne by delicate and sensitive stomachs, often occasioning gastric pain, cramps, and colic. For the latter reason, it is better tolerated by men than women. But there are much better preparations of mercury than this, and we desire to protest against the indiscriminate use of the bichloride, which is the routine practice of many practitioners. It has little effect in subduing syphilitic symptoms, especially in obstinate cases, and patients are constantly brought to me by their attending physicians, in consultation, with the report that "the disease will not yield to mercury," when the only fault has been the choice of a comparatively, and frequently intolerable preparation of this mineral.

The bichloride of mercury may be administered in solution or in a pill. It is very liable to undergo decomposition, and, with the intention of preventing this, is usually associated with the muriate of ammonia. The average dose for an adult is one-sixteenth of a grain, but is sometimes raised to a fourth, or even half a grain; in the treatment of syphilis, however, I have rarely found it beneficial to exceed one-tenth of a grain, given three times a day, upon a stomach not entirely empty; even in this quantity it is difficult to prevent intestinal pain and irritation.

This preparation of mercury was extensively used by Van Swieten,<sup>1</sup> and is the active ingredient of the "liquid" known by his name, the formula for which is as follows:

<sup>1</sup> Commentaries, xvii., 292.

R. Hydrargyri Bichloridi, 1 pt.  
Aquæ, 900 pts.  
Spiritus rect., 100 pts.

The average dose of Van Swieten's liquid is a tablespoonful (15.00), which is given in a glass of sweetened water.

The solubility of the bichloride of mercury in alcohol and water facilitates its administration in any of the vegetable tinctures and infusions, which are often required in anæmic subjects. When given in this form, it doubtless undergoes partial decomposition, but does not appear to lose its therapeutic effect. I sometimes employ as a menstruum the tincture of the chloride of iron:

R. Hydrargyri Bichloridi,  
Ammonie Muriatis, aa gr. iij . . . . . 20  
Tinct. Cinchonæ Comp., ℥iij . . . . . 90.00  
Aquæ, ℥iij . . . . . 90.00  
M.

From a teaspoonful (5.00) to a tablespoonful (15.00) two or three times a day.

R. Hydrargyri Bichloridi, gr. iv . . . . . 25  
Tinct. Ferri Chloridi, ℥iv . . . . . 15.00  
M.

Eight drops (0.50) contain very nearly one-sixteenth (0.004) of a grain of the bichloride.

The pilular form is more convenient for many persons. Equal parts of the bichloride of mercury and the muriate of ammonia may be dissolved in a very small amount of pure water, with which finely-powdered cracker is to be mixed in sufficient quantity to absorb it; syrup of gum acacia is added to give it consistency, and the mass rolled into pills containing the desired quantity of the bichloride. Extract of dandelion is also a convenient vehicle, but is more liable to decompose the mercurial.

It is a fact but little known that the bichloride may be administered in cod-liver oil by first dissolving it in a few drops of sulphuric ether. If the bottle be kept tightly corked, it may be retained in solution for an indefinite time; but if the ether be allowed to evaporate by exposure to the air, the bichloride will be precipitated and cannot be redissolved by the addition of more ether:

R. Hydrargyri Bichloridi, gr. ij . . . . . 12  
Etheris Sulphurici, ℥j . . . . . 4.00  
Dissolve and add—  
Olei Morrhuæ, ℥vj . . . . . 200  
M.

A dessertspoonful (10.00) contains one-twelfth of a grain (0.005) of the bichloride.

The preparations of mercury above mentioned are those which are found to be the most serviceable in the treatment of syphilis, though others, as, for instance, Plummer's pill, may sometimes be employed to advantage.

Increased experience in the treatment of syphilis, however, has led me to give a decided preference to the external over the internal use of mercury, in any outbreak of general symptoms subsequent to the first. In the earliest attack of general manifestations, small doses of the blue mass, or mercury with chalk, are commonly sufficient to sub-

due the symptoms without unpleasant action upon the gums or bowels; but at a subsequent period tolerance of the remedy has often been acquired, and the administration of doses sufficient to accomplish the desired end will very frequently induce diarrhœa, salivation, or general cachexia; while the use of mercury by fumigation or inunction rarely salivates or causes diarrhœa, does not disarrange the stomach, and, it has appeared to me, has a much more decided effect upon the disease than mercury by the mouth. I frequently see symptoms which have persisted for many months under the internal use of mercury, rapidly subside and disappear as the effect of its external application.

*Fumigation.*—Mercurial fumigation was employed at a very early period in the treatment of syphilis, but fell into almost complete disuse until revived by Mr. Langston Parker, of Birmingham, England. In Mr. Parker's method, the vapor of water is combined with that of mercury, constituting a "moist mercurial vapor bath," which is regarded by its author as a means of treating syphilis "safer, quicker, more certain, less frequently followed by relapses, and more efficient in obstinate cases than any other."

The mercurial vapor may be generated from metallic mercury, calomel, mercury with chalk, the bisulphuret, the gray oxide or the binoxide, from a scruple (1.25) to three drachms (12.00) of which are required for each bath, the quantity being proportioned to the effect desired. Mr. Parker states that in skin diseases, and especially in rupia, the bisulphuret is to be preferred; in diseases of the throat and nose, the gray oxide, binoxide or calomel is better, because the patient can bear the head immersed without sneezing or coughing, which he cannot do when the bisulphuret is used.

I commonly employ calomel, as recommended by Mr. Henry Lee, and also the lamp (Fig. 138) introduced by the same surgeon, which is a great improvement over the more elaborate and costly apparatus formerly in use.

The purest calomel only should be used, and it is better to have it resublimed and then washed, so as to rid it entirely of its free hydrochloric acid, the fumes of which are very irritating to the lungs.

The best times for taking the bath is just before going to bed. The circular groove on the top is to be filled one-third full of boiling water, the alcohol lamp beneath lighted, and, at the last moment, about half a drachm (2.00) of calomel to be deposited upon the plate C. The patient, stripped of his clothing and enveloped in one or more blankets drawn closely around the neck, sits upon a cane-bottomed chair with the lamp beneath. In the course of five or ten minutes profuse perspiration is induced; the calomel is wholly evaporated within fifteen to twenty minutes, when the lamp may be blown out, and the patient, after waiting five or ten minutes longer exposed to the moist vapor, may retire to bed. I commonly advise, as recommended by Mr. Lee, that the use of a towel after the bath should be avoided, so that the thin layer of mercury deposited upon the surface