

anti-venereal specifics are utterly unreliable. In Italy, Ubinini Galassi and others have experimented with the root of a member of the *Cucurbitaceæ*, viz., tayuya. I have not heard of any good results from the medicinal use of this plant, and Sigmund and Geher have shown it to be completely inert. Pilocarpine, that powerful sudorific, would naturally have been employed in syphilis, and if the sialagogue and sudorific action of a medicament can have any favorable influence in the treatment of venereal disease, this alkaloid and jaborandi, which contains it, ought to be of efficacy.³ Notwithstanding the results of Lewin, which have not been confirmed by other experimenters, jaborandi does not seem to have any curative virtues in syphilis.

Of this vegetal treatment, nothing remains for consideration but the ptisans and syrups called depurative, almost all of which have sarsaparilla for their basis.⁴

of guaiacum in twelve quarts of water; it was boiled down about one-third, or one-half, strained, and kept in tight stoppered bottles.

As for the patient, he was placed in a room which he was not allowed to leave for more than a month; was subjected to frequent sweatings by the frequent use of the guaiacum infusion, and was regularly purged. He was also kept on spare diet, such as simply bread and chicken broth, porridge, etc.

Many other plants have been employed in the treatment of syphilis, such as aconite, hyssop, honeysuckle, burdock, cherry laurel, lobelia, dog weed, persicaria, parsley, soapwort, polygala, and elder, all have had their turn. (a)

³ Sigmund, of Vienna, and Geber, seem to have effectually disposed of the claim of tayuya to the possession of anti-syphilitic properties.

Lewin has experimented with pilocarpine in the treatment of syphilis, and has obtained 27 cures in 32 patients (70 per cent.) (The cases were grave.) The mean duration of the treatment was 34 days, the whole quantity of the drug employed averaging for each patient, gr. 0.372.

Lewin ordinarily employs pilocarpine in the form of subcutaneous injections in the dose of one centigramme (about the one-sixth of a grain), in the case of a woman, and two centigrammes when the patient is a man. (b)

⁴ Sarsaparilla is a root furnished by several plants of the genus *smilax*, which grows in Central America and South America. *Smilax* belongs to the *liliaceæ*, and the roots furnish several sorts of sarsaparillas, which are divided into two groups, the farinaceous and the non-farinaceous, according as they do or do not contain starch. The first come from Honduras, Guatemala, and Brazil; the second from Jamaica, Mexico, and Guyana.

Galileo Pallotta, of Naples, has extracted from the root a special principle which he calls *parilline*; it is a saponide. On boiling with H^2SO^4 it is decomposed into sugar and parigenine.

[This drug, formerly of much repute in this country, and still occasionally prescribed as an excipient of iodide of potassium and other anti-syphilitic medicines, has now almost completely gone out of vogue. The same may be said of *stillingia silvatica*, of which the once famous "compound syrup" remains as a medical curiosity. It is doubtful if any of the indigenous remedies of this country (and we must here include the much vaunted vegetal specific of McDade) have ever cured or benefited a genuine case of syphilis.—TRANS.]

(a) Delgado, *Del modo di adoperare il legno zanco d'India occidentale, ovvero del modo che si guarisce il mal grancioso, e ogni male ineurabile*, Venice, 1529.—Ulrich de Hutten, *De morbi Gallici curatione per administrationem ligni guajaci (Aprodiascus)*, I, p. 275, traduit par Patton, Paris, 1865.—Astruc, t. II, édit. de Paris, Paris, 1777.

(b) Lewin, *Über die Wirkung des Pilocarpins im allgemeinen und auf die syphilitischen Prozesse insbesondere* (Charitt Annal de 1878, Berlin, 1880, p. 489).

If the vegetal treatment is absolutely without effect, it is not so with the treatment by the iodides, and particularly iodide of potassium. Since Wallace, of Dublin, in 1832, introduced iodide of potassium in the treatment of syphilis, this medicine has always been employed in this affection, and if there is still some dispute concerning the relative value of the mercurial treatment and the iodide treatment, everybody seems agreed in acknowledging the efficacy of the latter in syphilis. It has been proposed to substitute bromide of potassium for the iodide, and I told you in a former lecture that it was these first attempts in this direction that brought the bromide before the profession. During the last few years, Garey, taking up anew the former tentatives of Richardson, Magendie, and Gambrini, has counseled the use of iodide of ammonium, but thus far iodide of potassium remains almost the sole haloid preparation used. It is given in solution, either in water or in syrup of orange-peel.¹

I have spoken to you many times in the course of these lectures of iodide of potassium, and shall not now return to the use of this medicine and its therapeutic and physiological effects. I shall only add, that in syphilis iodide of potassium may be given in pretty large doses, and we have seen prac-

¹ Gritener was in the habit of prescribing burnt sponge for venereal ulcerations of the throat. Martini, of Lubec, in 1821, substituted iodine for the burnt sponge and obtained good results. Bielt employed in the same year in his service in the Hospital St. Louis, iodide of mercury, which Coindet had proposed in 1820. In 1824, Richard de Brus gave the tincture of iodine in venereal complaints. In 1831, Lugol reported numerous cases of syphilis treated by iodine preparations.

In 1832, Wallace, of Dublin, was the first to employ iodide of potassium in the treatment of syphilis. The preparation which he prescribed under the name of mixture of hydriodate of potash, contained two drachms of iodide of potassium in five ounces of distilled water; of this solution the patients were to take a tablespoonful four times a day, the equivalent of somewhat more than two scruples of iodide of potassium.

From this date iodide of potassium has been made the subject of clinical experimentation in all lands, and its advantages in advanced stages of syphilis have been fully shown.

It has been proposed to substitute bromide of potassium for the iodide in the treatment of this disease; the results have not proved satisfactory. It was thoroughly tested by Ricord between the years 1840 and 1850.

Iodide of ammonium has also been employed by Magendie, Richardson and others. It is an excitant of nutrition; given in doses of seven and a half to fifteen grains, it is according to Carat and Druhen, (a) much more active than iodide of potassium in the treatment of the tertiary accidents of syphilis.

(a) Martini (de Lübeck), *Hufelnd's Journal*, April 1833.—Wallace, *the Lancet*, March 1836.—Trousseau et Pidoux, *Traité de thérapeutique et de matière médicale*, t. 1er, p. 267, 3e édit., Paris.—Ricord, *Bull. gén. de therap.*, t. XII, 1837, p. 241, et *Gaz. des hôp.*, 1839.—Payan, *Essai thérapeutique sur l'iode, ou application de la médication iodée ou iodurée*, Bruxelles, 1850, et de l'emploi de l'iodure de potassium, Paris, 1847.—Gauthier, *Observ. prat. sur le traitement des maladies syphilitiques par l'iodure de potassium*, Lyon, 1845.—Costilhes, *Des différents agents thérapeutiques employés à Saint-Lazare contre les maladies syphilitiques et de leur appréciation* (*Gaz. méd. de Paris*, 1847, p. 418).—Juda, *A practical treatise on urethritis and syphilis*, 1836, in-80.—Saville, *London Med. Gaz.*, août 1835.—Bullock, *the Edinburgh Med. and Surg. Journ.*, January 1837.—Williams, dans *Syphilidologie de Behrend*, t. II, p. 316 et 331.—Gasca, *Giornale delle scienze mediche*, 1847.—Pellizzari, *Gazzetta Toscana delle scienze medico-fisiche*, 1845.—Gusman, *Ledizin Jahrb des Oesterstaates*, 1843.—Pourchet, *Observation sur l'emploi du brome et de l'hydrobromate de potasse dans la scrofule et le goitre* (*Ephémérides méd. de Montpellier*, t. VIII, p. 45 à 54, 1828).—Carat, *Usage de l'iodure d'ammonium dans la syphilis* (*Gaz. hebdom.*, 1874, no 10).—Druhen, *De l'iodure d'ammonium, son emploi en thérapeutique dans la syphilis et la scrofule* (thèse de Paris, 1875, no 265).—Lancereaux, *Traité de la syphilis*, Paris, 1866, p. 700.

tioners like Puche administer from twenty to thirty grammes a day. I do not advise you to follow this example, and I believe that generally you should rest satisfied with a dose of from two to five grammes (from thirty to seventy-five grains), and that it is only exceptionally that you should administer as much as ten grammes a day, for in very large doses peculiar toxic phenomena are likely to ensue, described under the name of *iodism*.

Whenever you give iodide of potassium in massive doses, do not forget that you must prescribe at the same time the milk diet. Milk, in favoring the elimination by the urine of the iodine, and in preventing the irritant action of this salt on the digestive tube, antagonizes the baneful effects of this medication. The solution which I advise you to use is the following:

R Iodide of potassium, 3 iij.
Water, 3 vj.
M.

Each tablespoonful of this solution contains just one gramme (fifteen grains) of iodide of potassium.

You should commence with small doses, and when the iodic coryza appears, discontinue for several days the use of the medicine, to resume it in larger doses. The economy in fact habituates itself to the iodide, and persons who, at the commencement of treatment, suffer from irritations of the mucous membranes as a result of small doses, a little later may bear without inconvenience much larger doses of this medicine.

By the side of these iodine preparations, certain authorities have counseled arsenic and sulphur. The first of these has been associated with mercury in a compound which enjoys a certain popularity, and which is known under the name of Donovan's solution.¹ Ricord has also combined iodide of potassium with arseniate of soda. As for sulphur, it has, according to Martineau, a considerable place in the treatment of syphilis. It is a sort of touchstone, which enables us (by the exanthems which it promotes) to determine if the specific symptoms have entirely disappeared.

Such is the therapeutic arsenal from which you may obtain arms to combat this disease. But I have accomplished only part of my task in pointing out the armor. You must know how to use it. We shall now study in their order the treatment of the disease in general, and the treatment of the disease in particular, *i. e.*, in the patient.

We are chiefly indebted to Prof. Fournier for formulating in a masterly manner the general treatment of syphilis under the name of *method of successive*

¹ Donovan's solution is an iodo-arsenical solution of mercury; the formula, according to the U. S. P., is as follows: "Take of iodide of arsenic, red iodide of mercury, each, thirty-five grains; distilled water, half a pint. Rub the iodides with half a fluidounce of the water, and, when they have dissolved, add the remainder of the water, and filter through paper."

The dose is from five to twenty drops a day, given preferably in distilled water. The dose contains the twenty-fourth of a grain of arsenious acid, a little over the twelfth of a grain of deutoxide of mercury, and about a quarter of a grain of iodine.

treatments. Fournier's system is based on stages of treatment and periods of repose, which latter, called by him *periods of disaccustoming*,¹ enable the economy to obtain relief from habits imposed on it by mercurial treatment, and derive the utmost possible benefit from the medication during its entire duration. So the first year he prescribes for two months the mercurial treatment, to be resumed after two months of repose; and this practice is continued with similar alternations for two years in such a manner that during the twenty-four months the patient will not have been taking mercury but ten months. At the end of the second year he administers, concurrently with mercury, iodide of potassium, and this latter medicine during the third and fourth years.²

Martineau has somewhat modified the formula of Fournier, and, while following out his system of successive treatments, he gives sulphur preparations during the periods of repose. Moreover, these periods, which Fournier has traced with great care, must vary according to the patients, and no absolute rule can be laid down. I am therefore of the opinion of Mauriac, who advises that the treatment should be modified according to the march of the syphilitic manifestations.

Does this method of successive treatments rigorously followed ensure the cure of the patient? Unfortunately, no. If, in the great majority of cases, all specific manifestations are made to disappear by a well-ordered treatment, rigorously followed, nevertheless one can never be sure that the patient is rid forever of syphilis, and you will often see arise in patients who have been treated with the greatest care, at periods remote from the primary lesion, symptoms clearly the consequence of the first infection. This question of the cure of syphilis will present itself before you, gentlemen, especially when the marriage of syphilitic persons is talked of, and you will be consulted for information as to what moment a contaminated individual may marry without danger to his or her partner and the children which may be born to this union. Fournier has treated this question in an able manner, and has shown that generally you

¹ Stades de désaccoutumance. Fournier, *Leçons cliniques sur la Syphilis*. 2d ed. Paris, 1881.

² This is Martineau's process: During the first year he gives mercury for two or three months; then he follows it with iodide of potassium for two or three months, then a month of rest, and another month of mercury and one of iodide of potassium.

During the second year he gives mercury for one month and a half, followed by two months of iodide of potassium, and two months of rest. He resumes the mercury during one month, and iodide of potassium during three months, followed by three months of rest, when the patient is subjected to a course of sulphur waters.

During the third year he assigns a month and a half to mercury and two months to the iodide, followed by three months of rest, then one month of mercury, then two months of iodide, then three months of rest, during which the patient goes back to the sulphur waters.

If there are any further manifestations he recommends at the beginning of the fourth year, the treatment of the first year. (a)

(a) Martineau, *Leçons sur la Thérapeutique de la Syphilis* (France Medical, 1882).

cannot authorize such marriage till after a treatment scrupulously followed for three or four years.¹

Now that we know the duration of the treatment, it remains for us to determine at what time we should commence it. The sooner the better, say Fournier and Mauriac. At the appearance of the first syphilitic manifestations, say Sigmund and Zeissl. I believe that the last advice is the safer and wiser.

The diagnosis of the primitive lesion often presents great difficulties, and unless one is an expert and an experienced clinician, it is quite easy to confound a hard chancre with ulcerations of quite different nature, and particularly with herpes. These difficulties are often such that we see experts, in doubt, practice inoculations in order to determine the nature of the ulcerations which they have before their eyes. Therefore the practitioner ought to wait for the appearance of the roseola to confirm his diagnosis, and indicate the time for commencement of treatment. When the rash shows itself all his doubts are dissipated, and he may begin the administration of mercury. This delay of a few weeks is a very little thing in comparison with the duration of a treatment which lasts several years, and it has no detrimental influence on the evolution of the disease.

We have already examined two important points in the question of the mercurial treatment of syphilis: the duration of the treatment, and the moment when it should be commenced. It may now be asked if all cases of this disease ought to be treated with mercury and the iodides? My reply is, Certainly; every syphilitic individual ought to undergo the specific treatment. I am well aware that in his remarkable work on the *Natural History of Syphilis*, Diday has shown us that a great many syphilitic patients get well without treatment,²

¹ This is the way Fournier expresses himself respecting the conditions which a syphilitic patient ought to comply with before thinking of marriage:

"The essential capital condition to fulfill consists in a thorough specific treatment, sufficient to confer complete relative immunity from the multiple dangers which syphilis imposes on the marriage relation.

For my part, I think myself authorized to say, as a result of all my past experience, that in no case the duration of an anti-syphilitic treatment should be less than three or four years, whatever may be the form of the disease, and however benign in appearance. Three or four years methodically devoted to an energetic treatment—such is the minimum necessary in my opinion, not merely to cure the pox, but to prevent dangerous manifestations in the future.

It is still farther advisable that the patient shall undergo from time to time, every two or three years for instance, a new course of treatment by iodide of potassium, in order to keep constantly in check the diathesis (if I may so call it), and preserve the benefit which he has gained."

In short, Fournier would deny marriage to every patient not fulfilling these conditions, while permitting it to patients who have methodically followed these rules. (a)

² Diday has comprehended in five categories the different forms of syphilis classed according to their gravity: these forms he has studied in 93 patients:

1. Cases of minimum severity (*syphilis ébauchée*)—7 out of 93. As sole manifestation the roseola; spontaneous cure without any treatment at the end of two months.

2. Mild syphilis—53 out of 93. Roseola, squamæ in the palmar and plantar regions;

(a) A. Fournier, *Syphilis and Marriage*. Paris, 1880.

and I know also that syphilis, like any other disease, has its mild forms and its severe forms; and, according to the soil in which it is implanted, it may take on a more or less rapid course. But what I am also convinced of is, that we often see very grave tertiary symptoms supervene in persons who have had till then manifestations of syphilis so benign that this disease has passed absolutely unperceived by them. Therefore, it will not do to depend altogether on the more or less tardy appearance of the secondary symptoms and their benignity, and abandon the specific medication, and in directing this treatment one ought to think, not so much of the manifestations he has before his eyes, as of those which are likely to appear in the future.

Finally, to terminate these general considerations on the treatment of syphilis, a question remains to be answered: Does the specific treatment cure all the manifestations of venereal disease? Unhappily, no; there is a malignant syphilis with galloping march, of ulcerous form, which resists the best directed specific treatment. Nevertheless, these cases are exceptional to-day; thanks to the hypodermic method, we can master the greater number of specific accidents. It is well understood that this treatment will not repair the loss inflicted on the tissues by the presence of certain syphilitic neoplasms, like gummata, and when these have invaded a part of the cerebro-spinal medulla, the lungs, the liver, the pharynx, etc., the specific treatment will be powerless to restore the parts thus destroyed.

These points being duly established, we pass to the study of the syphilitic patient, and we will follow, step by step in their progress, the several manifestations of syphilis. Let us commence by the chancre.

The nature of the chancre being once determined, can we, by cauterization, or by excision, prevent the system from undergoing the syphilitic infection and its consequences? Such is the first question we have to solve. From data furnished by the test experiments of Sigmund, Chadzynski Auspitz, and Mauriac, we are warranted in affirming that the most energetic cauterization and even excision made during the first days of the chancre, and before the propagation of this induration to the neighboring glands, does not prevent the development of the secondary symptoms. I am well aware, according to the statistics to which I have referred, that successes have been claimed by both cauterization and by excision, but as the failures have always exceeded the successes, it may well be asked if, in the latter cases, an error of diagnosis was

mucous patches two or three days in succession. Cure in ten months and a half, without specific medication.

3. Grave syphilis; erythematous eruption, general debility, ulcerated mucous patches; tubercles, osteocopic pains. Necessity of specific treatment. (29 out of 93.)

4. Galloping syphilis—4 out of 93. Rapid progress of the lesions, relative impotence of the specific treatment.

5. Tertiary syphilis. The accidents of visceral syphilis. According to Diday only one syphilitic in six is likely to have tertiary symptoms. Mauriac finds that this proportion is not exact, and according to him the ratio is far less. (a)

(a) Diday, *Natural History of Syphilis*.—Mauriac, *Lessons on Venereal Diseases*. Paris, 1883.

not committed? I believe, then, that this question of the excision of the chancre or its thorough cauterization demands new investigation before such treatment can be regarded as efficacious.

The treatment of the syphilitic chancre then consists in local means which have for their object to hasten the cicatrization of the sore; a curative process which, by the way, goes on normally with considerable rapidity. Pomades of calomel and cold cream (one part to four); lotions of chloral (half per cent.); light touches with lunar caustic, and, above all, special care about cleanliness, suffice generally to hasten the cure of the primitive lesion. Whenever the sore becomes deep and anfractuous, and presents a sanious and malignant aspect, you can employ tincture of iodine, or, what is better, iodoform. This latter is veritably a marvellous medicament in the local treatment of syphilis, and since Féréol showed us, in 1868, the happy topical effects of iodoform in chancre, it has daily been put in usage and always with success.²

You are well aware that of late years iodoform applications have had a great popularity, and that they occupy to-day the first rank among antiseptic

¹ Sigmond has furnished the following statistics:

	Number of cases.	Number of consecutive cases of syphilis.
Patients cauterized from the first to the third day after contagion.....	24	3
Patients cauterized from the third to the tenth day.....	11	7
Patients abandoned to themselves.....	22	11

To practice this cauterization, acid nitrate of mercury, caustic potash, or saturated solution of chloride of zinc are used.

Chadzynski has thirty times practised excision of the indurated chancre with these results: 16 failures, 7 cases doubtful, and 7 cases successful. He thinks that extirpation is indicated as prophylactic means in recent cases (two, three, four and five days) and before the glands are affected.

Auspitz has combated this view and maintained that excision has no therapeutic value whatever. Mauriac has practiced excision of indurated chancre three times; in one, four days after its appearance; in another fifty hours after its appearance; in the third at the end of forty-eight hours. In none of these cases was he able to prevent the appearance of secondary accidents. (a)

² Iodoform was discovered in 1822 by Serullas; its composition was given by Dumas, and Bouchardat in 1846 made known its principal therapeutic properties. Since then this medicament has been much studied, and it has been brought largely into use, in the last four years, as an internal and external agent.

As a local application it is both calmative and antiseptic. In 1853, Moretin pointed out the local anesthetic effects of iodoform. Sallier, Besnier, and Demarquay, in 1867, demonstrated the good effects of iodoform in the treatment of cancerous sores. Still later Féréol communicated to the Society of Therapeutics in 1868 the results which he obtained from this medicament in the treatment of syphilitic sores of bad nature.

(a) Chadzynski, Sur la valeur prophylactique de l'excision de la sclérose syphilitique initiale (Ann. de dermat., 2e série, vol. Ier, p. 461).—Auspitz, Zur frage der excision der syphilitische initial sclérose (Vierteljahrs. fur Dermat., p. 281, 1860).—Jullien, Traité des maladies vénériennes, Paris, 1878, et Bull. de Thérap., t. XCV, p. 49, 1878.—Mauriac, Traité des maladies vénériennes, Paris, 1883, p. 48.

dressings. I know of but one objection to this medicinal agent—its disagreeable odor. Attempts have been made to mask this odor, but none of them have been very successful.³ It has been employed in pomades, powder, and, better still, ethereal solution. Berkeley Hill has proposed a very concentrated solution (one part of iodoform to eight of ether). I prefer a very dilute (five per cent.) solution, and I apply it to the genitals by means of a spray atomizer. You can thus cover the most anfractuous parts of the sore with a thin coating of iodoform, and you have often seen in my service the good results which we obtain from these ethereal iodoform sprays in the treatment of venereal sores in the female.

It has been proposed to substitute for iodoform, bisulphide of carbon; but

The following preparations containing iodoform are suitable for external use:

R	Iodoform.....	1 gramme.
	Glycerine.....	10 grammes.
	Essence of roses, enough to destroy the odor.	

The following is a good pomade:

R	Iodoform.....	1 gramme.
	Balsam of Peru.....	3 "
	Vaseline.....	8 "
M.		(a)

³ Various means have been tried to deodorize iodoform. We have seen recommended tonka bean, musk, balsam of Peru, essences of peppermint, lemon, vanilla, etc. Fourmont and Sherck have employed carbolic acid, which in minute quantity removes the odor of iodoform; camphor does the same.

The following formulæ have been recommended for deodorizing iodoform:

R	Carbolic acid (crystallized).....	1 gr.
	Iodoform.....	10 gr.
M.		
	Iodoform.....	10 gr. 00
	Carbolic acid.....	0 gr. 05
	Essence of peppermint.....	1 to 2 drops.
M.		
R	Camphor.....	5 gr.
	Essence of peppermint.....	2 gr.
	Iodoform.....	15 gr.
M.		
R	Iodoform.....	100 gr.
	Essence peppermint.....	5 gr.
	Essence orange.....	1 gr.
	Essence citron.....	2 gr.
	Tincture of benzoin.....	1 gr.
M.		

The last preparation has the odor of "eau de Cologne." (b)

(a) Bouchardat, De l'iodoforme (Journ. de pharm., t. IV, p. 18, et t. XXIII, p. 1).—Ernest Besnier, Sur l'action thérapeutique de l'iodoforme (Bull. de therap., t. L. XXIII, p. 493).—Féréol, De l'iodoforme employé comme topique pour cicatrizer les plaies et ulcères non cancéreux (Bull. de therap., t. LXXIV, p. 400, 1860).—Berkeley-Hill, On the therapeutic use of Iodoform (Brit. Med. Journ., Jan. 1876, p. 127).

(b) De la déodorization de l'iodoforme (Journ. des So. Méd. de Lille, 21 juin, 1883).

the smell of this compound is quite as disagreeable as that of iodoform, and it is not proved to have any therapeutic advantage over the latter.

When once the chancre is healed, and the roseola makes its appearance, you begin the mercurial treatment, and I have already told you that, in my opinion, the best preparation is the liquor of Van Swieten; and you thus follow the various stages of the disease.¹

¹ Syphilis is a constitutional disease caused by infection of the organism by a special virus (virus syphiliticus) giving rise successively to divers manifestations which have been divided into primary, secondary, and tertiary.

Syphilis may be hereditary or acquired. In common syphilis the first manifestation is a special ulceration called hard chancre, Hunterian chancre, infecting chancre.

This chancre, which generally appears six weeks after the infection at the point of inoculation, is in general solitary, and occasions in the great majority of cases engorgement of the lymphatic glands of the vicinity.

The chancre begins in a little brown papule or in an indolent ulceration or erosion, ordinarily about a centimeter in size, with adherent and sloping borders, with smooth, even base, of reddish-brown color with grayish serous secretion. The underlying induration may be parchment-like, is more apt to be of split-pea variety, or there may be an elevated tubercle with a dome-like ulcerated cap.

The affection of the glands (adenopathy) always follows the infecting chancre. Those of the neighboring clustre (glands of the groin) are swollen, movable under the skin and upon the deep parts; they are hard, indolent, non-inflammatory, never spontaneously suppurate but undergo progressive regression. After the chancre gets well there is generally a period of calm, then after an average interval of forty-five days from the first appearance of the chancre (Diday) appear the accidents called secondary, which ordinarily affect the tissues in a manner both superficial and benign. These lesions pertain to the cutaneous system and its annexes (syphilides, alopecia, onyxis), lesions of the mucous system, mucous syphilides, adenopathies, and especially in the female painful phenomena, such as certain nervous troubles—divers neuralgias, "vapors," vertigines, hysterical fits, partial contractures, palpitations, etc., and general disturbances which may profoundly modify the functions of organs (uterine troubles, troubles of menstruation, abortion, etc.)

The cutaneous syphilides are indolent, apruriginous, affecting divers forms and frequently characterized by a special brownish or coppery coloration. They manifest themselves over the whole body, often beginning in the hypochondrial regions under the form of red spots of an indolent character (roseola) or squamous papules. On the hairy scalp they appear in the form of acne pustules which are destroyed by scratching and replaced by crusts. This eruption is accompanied by swelling of the post cervical glands.

Fournier divides the cutaneous syphilides into:

1. Precocious syphilides (roseola, urticaria, papular or papulo-squamous syphilide with small papules, and acneiform syphilide of the hairy scalp).
2. Tardy syphilides, *i. e.*, not appearing till at an advanced period of the second stage (pustulo-crustaceous syphilides of ulcerous form, deep ecthyma, rupia).
3. Intermediate, *i. e.*, not appearing either so early as the first series or so late as the second (papulo-squamous syphilides with large papules, palmar or plantar psoriasis, papulo-crustaceous, herpetiform, acneiform syphilides, superficial ecthyma, pigmentary syphilis).

The alopecia, the onyxis and the peri-onyxis are secondary accidents, the hairs become thin and light and fall out in more or less quantity, but they grow again at a later period unless the lesions of the scalp are deep.

The nails become frail and brittle and peel off; sometimes, on the contrary, become thicker and hypertrophied; the borders of the nail may be affected (uperonyxis) or become inflamed and ulcerated (ulcerous perionyxis).

The mucous syphilides present themselves later; they are seated on all the mucous

You all know that syphilis evolves by stages presenting characteristic symptoms, and to which has been given the name of secondary period, transition period, and tertiary period. In the secondary period we depend on mercury; in the period of transition we give mercury and iodide of potassium together. A convenient form of administration is the syrup of Gibert, which contains biniodide of mercury with iodide of potassium.

Lastly, in the tertiary period we use iodide of potassium almost exclusively.

There has been much discussion as to the precise time when the iodide

membranes but especially on the buccal mucosa, on the internal aspect of the tonsils, on the borders of the tongue, the inside of the labia, os uteri, margin of the anus; they develop spontaneously, secrete a virulent liquid, and affect divers pathological forms, hence called erosive, papulo-erosive, papulo-hypertrophic, ulcerous, etc.

To the second period belong also:

1. Certain ocular troubles, (iritis, ordinarily mono-ocular, keratitis, (rarely) choroiditis, retino-choroiditis).
2. Lesions in the genital regions (syphilitic albuginitis or sarcocele, syphilitic epididymitis).
3. Functional troubles of the locomotor apparatus, affecting the bones (peri-ostitis, periostosis, ostealgia); the joints (arthralgia and arthritis), the tendons (inflammations and dropsies of the tendinous sheaths); the muscles (muscular pains, enfeeblement, tremblings, contractures).
4. Lesions of the nervous system, characterized by headache, neuralgias (facial and sciatic), troubles of the sensibility (analgesia, simple or complicated with anesthesia), certain paralyzes almost always partial (facial, paralysis of the common motor oculi, or of the motor oculi externus); sometimes, but rarely, intellectual disturbances, especially in nervous women, troubles of calorificity (partial sensations of chilliness, bursts of perspiration).

The general troubles of the secondary period may pertain:

1. To respiration (rare).
2. To the circulation (palpitation).
3. To the digestive apparatus, especially in females or very nervous men; diminution or loss of appetite, exaggeration, perversion of the appetite, enteralgia, icterus. (Ricord and Gubler).
4. To the genital system (uterine neuralgia, menstrual troubles (rare), troubles connected with pregnancy, frequently abortion).

The tertiary period of pox is characterized by accidents which appear at an advanced stage of the disease and affect the central tissues and organs in a profound and grave manner.

To this group pertain the affections of the bones, which may sometimes manifest themselves in the second stage of the disease, but belong especially to the tertiary period.

They are almost always accompanied with the pains called osteocopic, more marked during the night. These are:

1. The periostitis, peri-ostoses, osteites, eburnated exostoses, hyperostoses, caries, and necrosis.
2. The gummata which form in the subcutaneous and submucous cellular tissue acquire a volume more or less large, are indolent or painful and terminate often by softening and leave after them grayish excavated, sharply-cut ulcerations.
3. The deep affections, rupia, deep ecthyma, etc.
4. The ulcerations of the deep organs, ulcerations which some writers class in a fourth period and call quaternary accidents. These are the morbid determinations of syphilis to the brain, the lungs, the liver, the spleen, the kidneys, the syphilitic encephalopathies, syphilitic phthisis, the parenchymatous and gummy hepatites, the nephrites.

In the last stage of the disease, in subjects very much enfeebled, whether by the pro-