

should be given. In a recent work, Gougenheim has shown that even in the secondary stages of syphilis iodide of potassium gives good results. Martineau, in opposition to Zeissl, who would give mercury after the iodide, recommends always to precede the iodide treatment by the mercurial, and I believe, judging from my own experience, that his views are sound.²

There are certain syphilitic accidents of a stubborn kind encountered in different periods of syphilis, and which resist to a certain extent the mercurial treatment. I refer particularly to the mucous patches that have for their seat the vulva, the pharynx, and even the labial commissure. These patches perpetuate themselves under the least local irritation. As for those of the vulva, you will need to enjoin the utmost care as to cleanliness, and local applications of iodoform and ether, or iodoform ointment, will be required; as for those in the mouth and throat, you must forbid the patient to smoke, and you will have to touch the sores with tincture of iodine or Van Swieten's solution.

The tertiary complications are often very serious, especially when they affect the nervous centres, and urgent measures will be required, such as the administration in large doses of mercury and iodide of potassium. Here we witness the triumph of hypodermic injections of peptonate of mercury, or frictions of mercurial ointment, associated with iodide of potassium; and I know of no more convincing evidence of the efficacy of this kind of treatment than the cures which are obtained in so short a time from cerebral complications so

gress of the disease or by excess or privations, supervenes sometimes a profound cachexia which undermines the constitution. The appetite is lost, the patient grows pale, languishes, becomes incapable of any physical or mental labor, and emaciates; ecchymoses form on various parts of the body; there is hectic fever, night sweats come on, and the debilitation makes rapid progress; the patients fall into a marasmus and succumb.

Such in our climate is the typical course of acquired syphilis, in its worst phases, and apart from a rational treatment.

² Gougenheim has shown that iodide of potassium is anti-syphilitic in the secondary stage, and he has treated, at the hospital of Lourcine, 220 patients affected with primary and secondary manifestations by iodide of potassium, in the dose of one to four grammes per day. Of these 220 patients, 144 got well, 32 were very much benefited, and 49 left the hospital during the course of treatment.

He made coincidentally another series of trials with mercurial treatment, and showed that iodide of potassium, administered during the secondary period in doses of 1 to 2 grammes a day, acts with the same rapidity as the liquor Van Swieten in the dose of 15 milligrammes (of corrosive sublimate); but that the iodide treatment shows itself inferior to the mercurial when the resort is made to hypodermic injections of the sublimate, in doses of 12 to 25 milligrammes.

Zeissl is a partisan of the expectant method of treatment of syphilis; only as the symptoms tend to disappear he employs mercurial medication; but before making use of the latter, he always gives iodine preparations (protiodide of iron, and iodide of potassium), and follows it up for six weeks. Martineau administers iodide of potassium from the beginning of the first year of syphilis, and three months after the infection. According to him you should always precede the iodide treatment by mercury. (a)

(a) Gougenheim, De la valeur comparative de la médication iodurique et de la médication hydrargyrique de la syphilis, notamment à la période dite secondaire de la maladie (Bull. et Mém. de la Soc. de théor., 1883, p. 97).

grave that they would have caused the death of the patient in a few days if help had not arrived. Paralytic and meningeal symptoms all disappear as if by enchantment.

When lecturing on the treatment of myelitis, I told you of the difference which exists between the ataxia of syphilitic origin and other affections of the spinal cord due to syphilis; the first being well-nigh incurable despite the most energetic specific treatment, the second being amenable to such treatment.

Mineral waters have an important place in the treatment of syphilis, and especially the sulphur waters. Numerous discussions have arisen concerning the action of these waters. Some maintain that certain of these waters have anti-syphilitic properties; others that they only make known the fact whether the patient is cured or not of the syphilis; others claim that these waters have only a tonic and stimulant effect. The latter view counts the most adherents, and is undoubtedly the correct view. The favorite resorts for syphilitic patients are the spas of Aulas, Baresges, Luchon, Cauterets, Amelie les-Bains; in a word, the various sulphur springs which abound in the Pyrenees.

I have finished the general treatment of syphilis, but I desire to say a few words about other venereal diseases, viz., the soft chancre and gonorrhœa. Soft chancre requires the same treatment as the infecting chancre. At the same time, under some circumstances, the soft chancre becomes phagedænic, and then it is necessary to employ a very energetic treatment to arrest the spread of the ulceration. Therefore, after failure with perchloride of iron, iodoform, and tincture of iodine, you may have to resort to cauterizations with the hot iron in order to modify the surface of the sore. To all these measures we must add partial baths of 40° C., which, according to Aubert, constitute the most powerful curative agent in simple chancre and its complications. You well know that the mercurial treatment is contraindicated in phagedæna, and that it is necessary to employ tonics under all their forms.

The treatment of gonorrhœa comprises the treatment of blenorrhagic urethritis, and that of blenorrhagic vaginitis. In the former, several forms are to be distinguished. Either it is a case of acute blenorrhagia, or the disease has become subacute, or has passed on to the chronic stage. In acute blenorrhagia, the most rapidly curative medicine is copaiba. You know that this balsam, which is in reality one of the turpentine, is composed of an essential oil, which is eliminated by the lungs, and a resinous copahivic acid, which is eliminated by the urinary passages, and it is this elimination which is the curative agent in gonorrhœa.¹ But in order to obtain from the copaiba treatment all the benefits which you expect, you must follow certain rules here laid down.

¹ [The following gonorrhœal mixtures are from the work of Keyes on Venereal Diseases.—TRANS.]

| | |
|----------------------|-----------------|
| ℞ Ol. santali | ℥ ss-i. |
| Liquor potassæ | ℥ ij-iv. |
| Syr. acaciæ | ℥ i. |
| Aquæ fœniculi | q. s. ad ℥ iij. |

M. S. Teaspoonful well diluted, in the third hour after eating.

Never give copaiba in the first periods of gonorrhœa, when the inflammation is invading the entire urethral mucous membrane, for at this stage it is worse than useless. Rather wait eight, ten, or twelve days, till this general inflammation has subsided, before giving copaiba. During this period you can give the diuretic infusions, or alkaline solutions, which have a sedative action. Then you can begin with copaiba, which may be given in capsules, dragées, or in some of the numerous anti-blenorrhagic compounds, like the famous potion of Choppart, which contains copaiba with syrup of tolu and essence of peppermint. But in whatever form it may be administered, it is necessary to give it in frequently repeated doses, so that the urine may be always charged with copahivic acid at the time of emission; so when you make use of the capsules, you should order the patient to take six of them a day—one every two hours. You should increase them by one capsule a day till he takes twelve during the twenty-four hours—one capsule every hour during the daytime. This dose should be continued for two days; then you can diminish them by one capsule a day, till the patient comes to take only one in twenty-four hours, at which time the cure ought to be complete.

In subacute urethral blenorrhagia, you can accompany treatment by copaiba with the use of alterative or astringent injections.² I assign due weight,

- ℞ Bals. copaibæ ʒ ss-i.
 Liq. potassæ ʒ ij-iv.
 Syr. tolu ʒ iss.
 Extr. glycyrrhizæ ʒ ij.
 Aquæ menth. pip. q. s. ad ʒ iij.

M. Shake.

S. One or two teaspoonfuls at a dose.

- ℞ Bals. copaibæ ʒ iv.
 Syr. tolu
 Syr. acaciæ
 Aquæ menth. pip. āā ʒ viiss.

M. Shake.

S. Teaspoonful.

² The astringent injections have for basis sugar of lead or sulphate of zinc or tannin. Here are several of them:

Ricord's injection:

- ℞ Zinci sulphatis
 Plumbi acetatis āā gr. xv.
 Tincture catechu
 Tincture opii āā ʒ j.
 Aquæ Rosarum ʒ vi.

M. Injection.

- ℞ Plumbi acetatis gr. ij ad iij.
 Decoction papavaris ʒ iij.

M.

The above is to be used at night and allowed to penetrate without restraint, as far as

gentlemen, to all the discussions which have arisen relative to the medicinal action of urethral injections, some authorities considering them as beneficial, others as dangerous. I believe that they are both, according to the time when they are employed, dangerous in the inflammatory periods, beneficial in the subacute and chronic stages. You are aware of the multiplicity of these anti-blenorrhagic injections, which may be divided into three groups: first, those that have a modifying action, the type of which are injections containing nitrate of silver; second, astringent injections, such as those of tannin and sulphate of zinc; and, lastly, the parasiticide injections, which are to-day very much in

the ordinary impulsion of the syringe will convey it. In four or five days it may be used more frequently. Used at the London Lock Hospital.—H. J. Johnson.

- ℞ Vini rubri ʒ vi.
 Acidi tannici gr. xviii.

M.

For the male urethra. For the vagina the quantity of tannin may be doubled, or still further increased.—L. Parker.

- ℞ Zinci sulphatis
 Acidi tannici āā gr. ij.
 Aquæ ʒ ij.

M. Injection. To be used repeatedly through the day.—Acton.

[A highly successful and rational mode of treatment has been lately proposed by Dr. Z. T. Dellenbaugh, of Cleveland, Ohio. It is as follows:

"In cases of acute gonorrhœa I have, for eight or ten years, used carbonate of lithia to alkalize the urine, and find the five-grain compressed tablets, one taken three times daily, very convenient, fulfilling every indication better than any other salt. I now rarely find it necessary to give any other remedy internally.

Should the case fail to respond to the following injections, and not show marked improvement in two or three days, two sandalwood oil capsules may be given, three times daily, for three or four days. The injection I have used in cases of acute and subacute gonorrhœa for more than a year with the most gratifying results, especially to the patients, who have recovered in from two to seven days, and paid me from one to three visits, is the following:

- ℞ Rescorcin ʒ j.
 Acid boracic gr. xx.
 Zinci acetatis gr. ¼-½.
 Aqua destillat ʒ iv.

M.

Of this solution two teaspoonfuls are injected three times daily. The germicides, resorcin and boracic acid, are so slightly astringent, that it requires the additional zinc salt to restore capillary tonicity. This injection is quite or nearly painless.

In the treatment of the later stage of sub-acute and chronic gonorrhœa, without stricture or granuloma as a complicating factor, I have had the happiest results follow the use of the following injection:

- ℞ Hydrarg. chlor. corrosivi gr. ¼-ss.
 Zinci chloridi gr. ss-j.
 Aqua distillat ʒ viij.

M. Sig.—A tablespoonful to be injected well down into the urethra, three times daily."

vogue, and although the microbe of blenorrhagia has not been found, it is not the less true that these injections, and in particular those of permanganate of potash, are employed with success in urethritis.¹ I shall only mention the one which I use oftenest myself, of which the formula is as follows:

R Tannin..... 3 parts.
Glycerine..... 100 "
M.

In the treatment by urethral injections it is well to insist upon the directions laid down by Keyes.² The patient should first be required to urinate; the injection should be retained for several minutes in the urethral canal, and it is necessary that the syringe be in good working order. In my practice, I prefer the syringe of Langlebert. As for chronic gonorrhœa, so-called gleet, it often presents an invincible resistance to every kind of treatment, and nothing is more obstinate than the *goutte militaire*. You must bear in mind that, as pertaining to this incurability, the patient, by his imprudences, plays a more important part even than the disease itself. It is also a noteworthy fact that deep-

¹ The anti-parasitic injections have for their type solutions of permanganate of potash. Bourgeois proposes the following formula:

R Potas. permanganatis..... gr. i.
Water..... 3 v.
M.

Ziessl would use a much more dilute solution, viz., $\frac{1}{2}$ of a grain of the permanganate in about 3 iij of water, while Weiss would employ as much as two grains of the salt in the same quantity of water.

Chloral injections have been recommended by Pasqua; his formula is:

R Chloral..... 1 scruple.
Water..... 4 ounces.
M.
R Tannin..... 3 parts.
Glycerine..... 100 "
M.

² Keyes gives the following directions as to the method of using injections in urethritis: The hard rubber urethral syringe known as No. 1 A, is probably the best. The bulb should be short, the tip only should be introduced into the urethra. It is a mistake to crowd the conical tip deeply into the meatus. This bruises the canal perhaps as positively as does the long nozzle of the old-fashioned syringe. In using an injection, the latter should be slightly warmed; with this warm injection the syringe should be filled and all air carefully expelled. The patient now urinates, washing the pus in this way from the inflamed surfaces. After the canal is free from urine, the nozzle of the syringe is to be gently introduced, just beyond the bulbous tip into the inferior angle of the meatus and the two lips of the orifice are to be pressed against each other with the thumb and finger of the disengaged hand. The lips of the meatus are not to be pressed upon or against the instrument, but against each other. Now the canal of the urethra must be very gently distended by pushing the piston slowly home; the syringe may be at once removed and the injection retained about thirty seconds and then allowed to escape. These motions constitute the whole act in most cases. The quantity of fluid held by the syringe is not enough to penetrate into the canal farther than the bulb, and in a capacious urethra not so far. There is little chance

seated ulcerations or even strictures often keep up this urethral running, and in these cases the use of the sound or medicated bougies may have a remedial effect.

After the tonic regimen, ferruginous preparations, bromide of potassium, sea-baths, or sulphur waters, will give you more certain cumulative results than the urethral injections and balsamic preparations, which are here absolutely useless.

I have not spoken to you of the abortive treatment of this disease, and for this reason—I consider it as useless and dangerous. I have been for many years, and am still, physician to a certain association of commercial employes, and I have observed very many cases of gonorrhœa among them, and I have never once witnessed a cure by the injection of strong solutions of nitrate of silver during the first few days of the attack. On the contrary, I have always observed that whenever this treatment was followed, there was an aggravation of the malady. I discard, then, altogether these abortive measures.

The treatment of blenorrhagic vaginitis ought to fulfil the two following conditions: it should modify the surface of the mucous membrane and prevent agglutination of the opposing surfaces. Here vaginal tampons and suppositories are of great utility. Besides the *sachets* and suppositories so generally employed, ointments introduced by special *pomade-depositors*, devised by Terrillon and Auvard, are much in fashion.³

Tripiér has recommended the employ of clay mixed with glycerine. I myself am in the habit of using a conical wad of finely-carded cotton wound rather tightly, having the form of a speculum, which is introduced into the vagina, after being smeared with a suitable pomade.

of doing harm, therefore, by throwing the injection too deeply down the canal. After injections have been used for a time it is allowable to manipulate the fluid in the canal by holding the meatus shut with the finger and thumb of one hand while with the fingers of the other hand the fluid is pressed forward in the urethra so as to distend it and backward so as to make it penetrate more deeply. In so pressing back a fluid the finger should never be carried beyond the peno-scrotal angle, or the fluid may be drawn back into the prostatic sinus and light up cystitis or occasion epididymitis. A light injection used twice a day does more good than a strong injection used only once. The time to use injections with most success is when the discharge is on the decline, after the height of the inflammatory stage is passed. In cases which commence deep in the urethra, when the meatus does not pout, injections may be used from the very beginning of the attack; in other cases it is better to wait and not use them at all until the flow has begun to yield to internal medication. A good injection to begin with is simple dilute lead water; when a more powerful astringent is needed, resort must be had to sulphate of zinc. (a)

³ The pomade of Terrillon and Auvard is made as follows:

R Tannin..... 1 part.
Vaselin.....
Starch..... 3 parts.
M.

These substances are incorporated into a paste, which is introduced into the vagina by the *pomade-depositor*. This treatment has proved very efficacious.

(a) Keyes, On Venereal Diseases. Wm. Wood & Co. New York. 1880.
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Apropos of these ointments, there are numerous formulæ all having for basis substances more or less astringent and antiseptic. Of all these preparations that which seems to me the best, is the mixture proposed by Vidal of Gurgun balsam and lime-water, in the proportion of one part of the former to two of the latter.¹ When this quantity of lime-water is exceeded, the pomade becomes too thick, and its application on the cone of wadding is rendered more difficult. Using then the preparation above formulated, I smear my tampon with it, and leave it in place in the vagina for twenty-four hours, and I renew this dressing every morning; when removed, the patient should wash out the vagina with a cleansing injection.

Vaginal injections, like urethral injections, require to be taken with certain precautions. The syringe with rubber ball and tubing, called in America the Davidson syringe, is preferable to the hard rubber or glass tubes in common use; or, what is better still in many cases, the fountain syringe with its appurtenances. The terminal canula should give issue to the fluid by lateral orifices.

The formulæ for vaginal injections are too numerous to be mentioned here, and you will find in your special treatises a sufficient number from which to select for any occasion. I shall only refer to chloral injections, which I was the first to recommend. These are now very much in use, and have often a very happy local effect. My usual way of ordering these injections is as follows:

R Hydrate of chloral, 1 part.
Water, 10 parts.

M. Signa.—Add a tablespoonful of this solution to a quart of cold water for an injection.

Next to these chloral injections, and almost on the same level, I place injections with resorcin. In my study with Callias, of this medicament, I have insisted on the energetic modifying action of this substance on bad ulcerations of the genital organs. Leblond and Fissiaux have just repeated these therapeutic experiments, and with equally good results. I know of but one inconvenience attending these applications of resorcin, it is the high price of the medi-

¹ Gurgun balsam (gurgun oil or wood oil) was first employed in 1838, in the treatment of gonorrhœa. Vidal employs the following formulæ:

R Gurgun oil.....
Gum arabic..... 4 grammes.
Infus. anisi..... 40 grammes.

M.

Sig. To be taken in two doses.

Mauriac recommends as a useful potion in gonorrhœa, the following mixture:

R Gurgun oil..... 16 grammes.
Gum arabic..... 10 "
Syrup. acaciæ..... 30 "
Peppermint water..... 50 "

M.

Sig. To be taken in three doses. (a)

(a) Leon Duval, on Gurgun Oil, Thèse de Paris, 1877.)

cament. The injection is made by adding 3 ijss of resorcin to a quart of water. Next in importance come the astringent injections, containing tannin, rhatany, oak bark, etc.

I have much more to say respecting the treatment of blennorrhagia, but it is time to bring this long lecture to a close; the indications which I have given will probably meet the greater part of the cases which will occur in your practice.