

flaxseed-tea. More or less of this or of some other alkaline preparation should be continued throughout the treatment. If micturition is quite painful, gr. j to iij of the extract of hyoseyamus may be added to each dose of the alkali. This is better than the tincture, since it contains no alcohol. Its taste is perhaps best masked by cinnamon or bitter almond. Instead of the citrate, the bicarbonate of potash or of soda may be used. A convenient form for administering the two latter substances is found in the "compressed lenticular pills," prepared by Dunton. These are as good as the English, and are cheaper. Each pill contains gr. viij compressed into a small compass.

It is well to give this much treatment, even if it is decided to try the abortive plan, for acid, concentrated urine is an obstacle to the success of any course. In the increasing stage of the disease (in true gonorrhœa) the so-called specifics do not do much good. They may be used from the first, but not in large quantities. The balsam of copaiba or the oil of yellow sandal-wood is to be preferred. The latter is more agreeable to the stomach. Both of these substances are best given in capsules which contain gtt. x. each.¹ One capsule with each meal is usually enough for the first stage of gonorrhœa, possibly increased to two if it is well borne. Sandal-wood oil may be given on a lump of cut sugar, gtt. x to xx at a dose. If the expense of capsules is an objection, the alkali and balsam may be administered together in an emulsion known as "Lafayette mixture." The old New York Hospital formula is:

R. Bals. copaibæ,	℥ ss.
Liq. potass.,	℥ ij.
Spts. etheris nitrosi,	℥ ss.
Mucil. gum-acac.,	℥ iv

M. S. Tablespoonful after eating.

This is a nauseating dose, although very effective. Bumstead² has modified it into a much more palatable mixture, as follows:

R. Bals. copaibæ,	āā ℥ j.
Spts. nitrici dulcis,	℥ ij.
Liq. potass.,	℥ ss.
Extr. glycyrrhizæ,	℥ ss.

Mix together and add: Ol. Gaultheriæ, gtt. xvj, syr. acaciæ, ℥ vj. M.

The dose is the same as that of the old mixture. Sandal-wood oil may be substituted for the copaiba in either of these prescriptions.

If the use of any of these preparations during the first stage provoke nausea or interfere with digestion, they should be discontinued.

Should micturition be very painful, Milton's plan of immersing the penis in very hot water, before and during the act, sometimes affords considerable relief. Fournier advises a similar use of very cold water.

¹ Those of Dundas Dick are the best of English, Planten, of American, and Racquin, of French make. The market affords a large variety of very good capsules of French manufacture, especially those containing copaiba alone or in union with other substances.

² *Op. cit.*, p. 83.

Soaking the penis in very hot water before retiring seems to have some power in keeping off chordee. The higher the inflammation the more efficient is the local use of hot water.

The *wrappings* around the penis should be as light as possible. An excellent and efficient, though rather warm wrapping—if the discharge is profuse—may be made by rolling up the last two inches of the penis in several thicknesses of thin, brown water-closet paper, twisting up into a round rope the inch or more of paper projecting beyond the prepuce. This retains itself. If the discharge is light and the prepuce long enough, a little piece of lint spread over the meatus and glans, and retained on either side by the prepuce, makes the best dressing to protect the clothes. Or, if the prepuce is short, it may be retracted, and the glans passed through a hole just sufficient to receive it, cut in the centre of a large piece of muslin. The muslin is drawn behind the corona. Finally, by pulling forward the short prepuce, the dressing is completed. Bumstead's idea of a pair of half-drawers, like swimming-drawers, worn next the skin, is excellent, in certain cases, for cleanliness.

Injections are of doubtful advantage in the increasing stage of gonorrhœa. In bastard gonorrhœa and mild urethritis they are of great importance from the first. If a diagnosis of either of the latter conditions can be made, one of the following injections may be commenced with at once:

R. Liq. plumbi subacetatis dil.,	℥ j.
Extr. opii aqu.,	gr. vj.
	M. et cola.
R. Zinci sulphatis,	gr. j-ijj.
Liq. plumbi subacetatis dil.,	℥ j.
	M. S. Shake before using.
R. Zinci sulph.,	gr. j-ijj.
Aquæ,	℥ j. M.
R. Acid. tannic.,	gr. v-x.
Aquæ,	℥ j. M.
R. Aluminis exsic.,	gr. vj-x.
Aquæ,	℥ j. M.

One of these, or any other mildly stimulating injection, may be used from twice to four times daily after urinating. It is better to commence with a weak injection, increasing in strength if it is well borne, but does not produce its full effect.

These simple means of treatment will often keep a mild urethritis within bounds, and prevent a bastard gonorrhœa from becoming violent. If after a week or ten days the discharge has not become creamy, but seems stationary or declining—being still moderate and muco-purulent—the treatment recommended for gleet should be adopted, and a search for stricture instituted. If, on the other hand, the inflammatory symp-

toms and discharge increase, then the case, in all probability, is one of virulent gonorrhœa, and the case passes on rapidly to the second stage.

STATIONARY STAGE.—In this stage all the inflammatory symptoms have reached a certain high grade, where they tend to remain, for from one to three weeks, with very little change from day to day. The treatment of the first stage, without any injections, must be kept up. Rest, as nearly absolute as possible, must be enjoined upon the patient. Fifteen to twenty leeches upon the perinæum will often notably moderate the grade of the inflammation. A less number is of no service. They should on no account be placed upon the penis, as extensive infiltrations of blood may take place into the loose subcutaneous tissue, and œdema, erysipelas, or gangrene, ensue. Prolonged and frequent warm baths are beneficial in this stage. The sandal-wood oil or copaiba, which has been until now kept up at a moderate rate, must be steadily but gradually increased, according to the tolerance of the stomach, until the full dose is reached. The approach of nausea, copaibal erythema, or diarrhœa, indicates that the patient is saturated with the remedy, if it be copaiba; perhaps pain in the back, if it be sandal-wood oil. Patients can rarely take more than three capsules at a dose.

The maximum dose must be maintained for a week. If at the end of that time a positive effect is not produced, the drug in use should be changed, or, possibly, combined with some preparation of cubebs. Should retention come on, and it is one of the rarest complications, a finger in the rectum will usually make out a swollen, hot, tense prostate, as large as an egg, which throbs against the end of the finger, and is very sensitive to pressure. Under these circumstances, fifteen or twenty leeches may be applied to the perinæum; that many, or none. They are rarely if ever absolutely necessary. The patient must be kept warm in bed, with hot fomentations, or a light poultice or water-bag, over the hypogastrium and perinæum; or he may take a hot sitting-bath for a few minutes at a time every half-hour. The water must be above 100° Fahr., and the bath of short duration. The patient should be plied with mucilaginous drinks (flaxseed-tea, etc.), and get the equivalent of about one grain of opium every hour until the urine flows, which it invariably will do unless rather a tight organic stricture existed before the gonorrhœal attack.

In any case of great urgency a No. 5 or 6 soft, olivary, French catheter, without a stylet, may be very gently introduced, or, indeed, failing this, the aspirator employed; or Cazenave's expedient of ice in the rectum might be tried.

The most difficult part of the treatment of the stationary stage is to soothe the painful erections and keep off chordee. This can only be effected measurably. No anaphrodisiac has yet been discovered. Camphor, belladonna, conium, bromide of potassium, ergot—not one of these possesses the virtues attributed to it. The best course is for the patient to

keep his urine dilute and alkaline, avoid lascivious thoughts, and resort to prolonged immersions of the penis in very hot water before retiring. He should sleep, lightly covered, on his side rather than on his back, on a hard bed, after a small evening meal, in a cool room; and, if necessary, use as medicines large doses of lupulin or opium in pill or suppository, preferably the former. Lupulin rubbed up into gr. iv pills, or taken in powder with sugar, is of undoubted service, simply because it promotes profound sleep. But the dose must be large. Less than gr. xx is useless, and from 3 ss to 3 j may be given on retiring. No constipation or other bad symptom follows.

If this does not prove powerful enough, it is useless to halt at any thing short of opium:

R. Ext. opii aqu., gr. ij.
Camph. gr. iv.
M. Ft. pil. No. ij. S. One or both on retiring.

Or,

R. Extr. opii aqu., gr. jss.
Ol. theobrom., q. s.
M. Ft. suppos. S. Introduce into rectum on retiring.

When a patient wakes with chordee, the penis should be plunged into the coldest water which is at hand, or, what is better if it is winter, laid along a piece of iron (axe-head, railing), or other metal, which has been exposed to the cold. The bladder should be emptied as promptly as possible. The patient must be strongly cautioned against breaking the chordee. If this is done, the immediate effect is relief of pain, but the inevitable ultimate consequence is traumatic stricture.

DECREASING STAGE.—The slightest falling off in the amount of discharge, or in the pain, or other inflammatory symptom, ushers in this stage. Chordee, however, may persist long after it has been reached. The time of its advent depends considerably upon the success of previous medication. Advantage must be taken of this tendency of the discharge to decrease. Hygiene and alkali should be kept up, and the balsam or oil of sandal-wood pushed. The stomach has already become accustomed to its presence, and will usually allow the dose to be increased. If the discharge diminishes rapidly, the remedy should be held at full dose, but not pushed. Rarely more than three or four capsules at a dose (gtt. xxx to xl) will be needed, or indeed tolerated. It is exceedingly desirable not to disgust the stomach with the copaiba, as this necessitates its discontinuance. If copaiba is well borne and properly administered, it is the most efficient of the anti-gonorrhœal remedies.

Each of the drugs—copaiba, sandal-wood oil, cubebs, oil of turpentine—imparts an odor to the urine peculiar to itself. Besides its disagreeable action on the stomach, large doses of copaiba (in certain individuals even small doses) give rise, in some cases, to a peculiar exanthema resembling roseola.

COPAIBAL ERYTHEMA.—This eruption consists in the appearance

upon the whole body of small red blotches, closely aggregated, slightly elevated, causing a tingling, hot, itchy, sensation. The eruption is unimportant, and subsides in a few days, if the remedy be discontinued. It is sometimes mistaken by young practitioners for a syphilitic roseola. The rapidity of its appearance, the hot, inflammatory character of the patches, the itching and tingling of which the patients complain, are sufficient to make the diagnosis. The pain and itching are soothed by a warm bath. In these cases the urine always smells strongly of copaiba. When such a rash comes on the urethral discharge ceases, but it will reappear as the eruption fades. Consequently it is not wise to discontinue treatment. It is simply necessary to change the drug. Urticaria, or "hives," may also be excited by the ingestion of copaiba, and certain obscure nervous phenomena have also been referred to its use, such as headache and giddiness. Severe pain in the lumbar regions is excited in some individuals by the use of sandal-wood oil in excess.

Thus far nothing has been said about *cubebæ*. The different preparations of this remedy are more stimulating than copaiba or sandal-wood, and are consequently better adapted to combat the subacute and distinctly retiring forms of inflammation than the advancing or stationary. They are very applicable to the latter portion of the stage of decline, and to the gleet stage. As a rule they are well borne by the stomach, often increasing the appetite, and allaying dyspeptic symptoms. Occasionally the stomach rebels even against cubebæ. Of the powder, the dose is from one to two drachms in sweetened gum-water. The fluid extract, in drachm-doses, is efficacious and not unpalatable; but the most efficient preparation is the oleo-resin. This may be administered in capsules containing gtt. x. The dose is from one to three capsules.¹ By changing from one to the other of these three remedies, in sluggish cases, the effect of each seems to be increased. The compound prescriptions and pastes containing both copaiba and cubebæ and other substances, in varying quantities, are unscientific; by using them, a clear appreciation of which remedy is doing good is lost. It is not by combining and multiplying remedies that a gonorrhœa is most speedily cured, but by carefully watching the effect of a given drug, and replacing it, if necessary, with another.

One good reason for combining cubebæ with copaiba is, that the former acts as an anti-dyspeptic, and makes the stomach tolerate the copaiba. Hence, if the stomach be delicate, such a combination may be useful. Dr. Bumstead's formula is a good one:

R. Copaibæ,	ʒ ij.
Magnesiæ,	ʒ j.
Ol. menth. pip.,	gtt. xx.
Pulv. cubeb.,	
Bismuth. subnitrat.,	ʒ ij.
Mix. Divide into gr. v pills. Dose, five to ten.	

¹ The best oleo-resin of cubebæ is made by Merck, of Darmstadt.

If the bursting of the capsules in the stomach tends to nauseate, the pilulæ copaibæ, U. S., may be used. These dissolve slowly, and are sometimes less offensive. Some oleo-resin of cubebæ may, if necessary, be included in their composition. Turpentine and other so-called anti-bleorrhagic medicines are unreliable in comparison with the three already mentioned.

To recapitulate, *balsam of copaiba* is the best preparation, and is applicable to all stages of the disease, but some individuals cannot tolerate it, and in some it produces derangement of the stomach, skin, and nervous system, unless used with prudence and skill.

More attention is necessary for its successful administration than is usually bestowed upon it. Steadily carried up to the full dose in the stationary stage, with close attention to the gastric capacities of the patient, it is capable of being highly efficient. Within one week after saturation has been reached, the full effect of the remedy is attained. If at the end of this time the stomach can bear no more, and the discharge is unmodified, the oleo-resin of cubebæ should be combined with, or substituted for, the copaiba. The above statements only apply to manageable cases where urethral hygiene has been maintained. Protracted employment of full doses of copaiba is damaging to the stomach, and rarely of service in curing the disease if the first effect have failed.

Oil of yellow sandal-wood is a most excellent remedy; in some cases certainly doing better than copaiba. It is not objected to, as a rule, by the stomach, but may produce severe pain in the loins. It is applicable to all stages of the disease. The maximum curative effect is usually noticed during the week, after the full dose of the remedy has been attained.

Oleo-resin of cubebæ is usually well borne by the stomach. It may produce slight diarrhœa (as, indeed, may copaiba or sandal-wood). It is fitted for treating subacute and chronic cases, or for use in combination with either of the other so-called specifics.

These three remedies may be alternated, commencing with sandal-wood and ending with cubebæ. The last one in use when the discharge has ceased should be continued for at least ten days—one capsule less being taken daily until the remedy is gradually dropped.

These remedies have been found ineffective when given by the rectum. Their action is a local one. They undergo a change in passing through the kidney, and are excreted with the urine. It is the contact of this urine with the inflamed surface of the urethra which produces the benefit;¹ consequently they are useless in the female unless the urethra is affected.

Injections are of great service in the stage of decline. Any of the

¹ As has been proved in cases of large fistula in the floor of the urethra where the urine could be turned off, the part behind the opening getting well first—the anterior part of the urethra being subsequently cured by being injected with the patient's urine, freshly passed and full of modified copaiba.

formulæ of page 65 may be used, commencing with the milder and passing on to the stronger solutions.

GLEETY STAGE.—A gleet is a mucoid discharge from the urethra. All urethral discharges become gleet before they cease, and such a gleet, following upon an uncomplicated gonorrhœa, tends to get well by the simple observance of the hygiene of the urethra. This rule, however, has many exceptions. In undertaking the treatment of a gleet discharge, its cause must be studiously sought out and treatment applied accordingly. Sometimes the patient requires treatment more than the urethra—as in idiopathic gleet from strumous or gouty tendency. In such cases the observance of hygiene, as affecting the urethra, with alkali, cod-liver oil, quinine, and iron, constitutes the outline of treatment. Of the tonic preparations, the tincture of the sesquichloride of iron holds the first rank, on account of its astringent properties. Excess of treatment is not infrequently the cause of prolongation of gleet, the patient, either with or without a physician's advice, trying blindly one injection after another, and all sorts of internal medication, importuning his friends for their "infallible" prescriptions, and worrying his urethra with endless interference, searching for a specific which he cannot find, notwithstanding the countless number which are confided to him by sympathizing companions. In such a case the best medication is to reassure the patient and instruct him in every thing relative to urethral hygiene (p. 40), leaving the canal entirely alone for a week, simply watching to see what the discharge really amounts to.

Every thing earthly has an end, even a gleet, as Thiry has sagely remarked, and no treatment will sometimes succeed where over-treatment has only served to keep up the evil. Such cases are found chiefly in unmarried young men, who are kept in a constant morbid state of excitement about their genitals by ungratified sexual desire, or its irregular or excessive indulgence. In these cases the "discharge" may be invisible except to the patient, a slight gluing of the meatus in the morning being the only tangible evidence that something is wrong. Here the mind is often more diseased than the body, and marriage is the proper remedy. A regular, moderate exercise of the sexual organs tends surely to keep down congestion and to allow that rest which is most important in effecting a cure. Yet care must be exercised in advising marriage, if the discharge be at all purulent, for no urethral discharge containing pus can be pronounced free from contagious properties. If there be any pus in the discharge, the patient should not marry until it ceases, especially if examination reveal the slightest physical lesion in the canal. If there be no lesion, and only a slight, translucent, sticky discharge (a condition not uncommon), marriage puts the patient in the most favorable position for getting well. There is always a grave responsibility in advising a patient with a gleet to marry; but, if these two points can be clearly established—that there is no considerable physical,

urethral lesion, and that the discharge shows no marked purulent character—the advice may be given with safety, and with the certainty of proving beneficial if followed.

The most common of all causes for continued gleet is stricture already present or forming. Special causes of gleet require special means of treatment, and will be mentioned under their respective heads. They are: lacunal inflammation, chronic cowperitis, inflammation of the seminal vesicles, hypertrophy of the prostate, congestion, catarrhal inflammation, tubercular or other prostatic disorder (abscess, etc.), fistula with internal opening, peri-urethral abscess, diathetic idiosyncrasies, mucous patches in the urethra, etc. Next to stricture, an altered congested patch of urethral membrane, with or without thickening or granulations, is the most common lesion keeping up a gleet discharge. The treatment of gleet dependent upon this cause, or existing without urethral or other appreciable lesions, finds its proper place in this section.

Treatment.—Where no lesion is discovered, the following treatment is advisable: The urine must be kept mildly alkaline, without oppressing the stomach, hygienic conditions as affecting the urethra must be carefully observed, the provocation of sexual excitement interdicted. There is no objection to ordinary sexual intercourse if the patient be married and living with his wife; all extra excitement, however, during the act, and all provocation of the sexual appetite, are to be avoided. The use of copaiba or oil of sandal-wood, whichever may have been found serviceable in the stage of decline of gonorrhœa, may be continued, or substituted by the oleo-resin of cubeb in moderation. Tincture of iron, quinine, and a little claret, may be ordered, if the patient is anæmic or run down, and especially if the urine is alkaline; or contains phosphates in excess. A stimulating or astringent injection should be employed. Any of the formulæ already given (p. 65) will answer, but it may be necessary gradually to increase its strength. There is little use of a multiplicity of injections, and of running from one to another in trying to find a specific virtue. It will be hard to prevent the patient from doing this of his own motion, but his own dignity should prevent the surgeon from encouraging the patient in his folly. The fewer the number of injections a surgeon employs the more good will he be able to effect with them. He will learn how to handle them to more advantage, and will understand their power for good or evil. Nearly all known drugs have been at different times vaunted in injection for urethral discharge, but only a few hold their place. Besides the injections already given, several others have proved serviceable in the gleet stage, as permanganate of potash (gr. j to iij to the ℥j) alone, or combined with a small amount of sulphate of zinc; sulphate of copper (gr. j to ℥j).

Bumstead praises the persulphate of iron, ʒss to ℥vj. Finally, alcohol is often efficient. Perhaps the best way of using this stimulant, which, like tannin, is indicated where discharge seems to be kept up by