Pins and needles usually necessitate an opening of the urethra from the outside. Such an opening should never be made through the scrotum, for fear of infiltration. It is preferable to cut through the perinæum, even if the foreign body has to be pushed back in order to be caught. The urethra may be opened by cutting upon the foreign body, or upon the end of a staff in the urethra, pushed up to it. The after-treatment of wounds so made is the same as for incised wounds of the urethra. The incisions should invariably be longitudinal. Dieffenbach[1] removed a pin very adroitly from the membranous urethra, by introducing a finger into the rectum, pushing upon its head until the point had been caused to penetrate the skin, and then seizing and forcibly extracting it.

CHAPTER III.

DISEASES OF THE URETHRA.

Inflammation.—Causes.—Subdivisions: Gonorrhœa; Bastard Gonorrhœa; Urethritis.—Symptoms.—Duration.—Course.—Gleet.—Complications of Urethral Inflammation.—Treatment; Method of performing Injection; Abortive Treatment.—Methodic Treatment of Increasing Stage, including Description of Wrappings; of Stationary Stage, including Chordee; of Decreasing Stage, including Copaibal Erythema.—Gleety Stage; Treatment of Gleet.—The Endoscope.—Rare Sequelæ of Gonorrhœa.

Gonorrhœa — Urethritis.—Of all the diseases encountered in genito-urinary surgery, urethral inflammation is the most common. Furthermore, although a strictly local affection, and exerting no poisonous action upon the blood, it is the most venereal of all venereal diseases, since it is the commonest malady acquired during the copulative act. A most respectable antiquity is given to the disease by the fifteenth chapter of Leviticus, and although it is contended that the discharge known to the Jewish lawgiver was a simple urethritis, and that gonorrhœa (a specific infection) did not appear until later (according to Astruc[2] in the year 1545–'46), yet the disease was evidently a running from the urethra, and discussions about its simple or specific nature belong to theoretical and not to practical text-books. We have to start from the clinical facts that all inflammations of the urethra are characterized by the discharge of pus, or muco-pus, from the meatus, and that the only guide for treatment is the amount of the inflammation, and the quantity and quality of the discharge[3]—an inflammation of given intensity requiring a given treatment, whether it has sprung from specific contagion, or from chemical or mechanical irritation. This point

[1] "Ueber fremde in die männliche Harnröhre eingedrungenen Körper." Casper's Wochenschrift, i., 1843.

[2] "De Morbis Venereis," Paris, 1736.

[3] "Dry gonorrhœa" is an impossibility. The morbid state formerly known by that name is neuralgia of the urethra.

being fairly understood, the study of the disease becomes simplified. Gonorrhœa cannot be separated from urethritis clinically, hence they must find a common description under the same head.

The term gonorrhœa is etymologically inaccurate, indicating, as it does, a flow of semen (γόνος); but usage has secured to it a precise signification even among the laity (almost to the exclusion of the old Saxon term *clap*), and any alteration would lead to confusion. Urethritis signifies simply inflammation of the urethra, consequently gonorrhœa is urethritis, but the converse does not hold good; and, although it is sometimes absolutely impossible, in a condition of high urethral inflammation, to pronounce upon its origin with certainty, yet it is better, for practical purposes, to retain the two terms, calling that gonorrhœa which has been derived unmistakably from an individual of the other sex with a gonorrhœa, and reserving the term urethritis for all inflammatory urethral discharges having another origin, and for all cases of doubt. This latter precaution is of the utmost importance to the student and young practitioner. It is better that a hundred of the guilty should escape, than that one innocent person should be accused. Experience proves beyond a doubt that a high condition of urethral inflammation, attended by an abundant discharge, and presenting absolutely no diagnostic features to differentiate it from a gonorrhœa derived from a prostitute with a virulent discharge—that such a urethral inflammation may be acquired by a healthy young lover from his equally healthy mistress, by a young husband from his wife, or may be produced by applying a chemical irritant to the urethra. These cases are indeed rare, but are of undoubted authenticity, and it becomes the surgeon's duty to hesitate long before asserting the infidelity of a man or woman, and thus, perhaps, accusing the innocent, and destroying the harmony of a family. It is proper to state that a healthy man may get a urethritis from a woman who has none (may give himself the gonorrhœa, as Ricord puts it) far more easily than a woman can get a discharge from a healthy man; unless, of course, great mechanical violence be used, as in rape.

Causes of Urethral Inflammation.—Gonorrhœa is a notoriously contagious disease, and it may be acquired, from any person having it, by the mere contact of the discharge with the mucous membrane of the urethra.[1] It is not necessary that the surface should be abraded. Simple contact is enough without any sexual act, as has been abundantly

[1] The only mucous (or other, as far as known) membranes of the body capable of taking on inflammation from the contact of gonorrhœal pus are the urethral, vesical, by extension (gonorrhœal cystitis), the vaginal (the uterine rarely by extension), the conjunctival, and the rectal. Buccal, aural, nasal, and umbilical gonorrhœa have been mentioned, but authors are of accord that the cases cited are not conclusively proved. Gonorrhœa of the rectum has undoubtedly been observed in several instances; one case by Tardieu ("Études médico-légales sur les Attentats à la Pudeur," p. 180) in a prostitute who had practised sodomy; and three cases by Allingham ("Diseases of the Rectum," London, 1871, p. 237), all in prostitutes, "who all confessed the manner in which they got so affected."

proved by the experiments of B. Bell, Baumès, Rodet, and others.[1] Taking the idea from Von Roosbroeck's experiments in inoculation upon eyes, Rollet proved that the vehicle of contagion in the pus of chancroid (the most virulently contagious of all secretions) resided solely in the corpuscle. Inoculation of the filtered fluid was always negative. Von Roosbroeck came to the same conclusion for purulent conjunctivitis, and there is little doubt that the rule holds good for gonorrhœa. Thus is explained the fact which clinical experience proves, that the more purulent (the less mucoid) a urethral discharge is, the more certainly is it contagious.

But, to return to urethritis: besides urethral or gonorrhœal pus there is a host of other irritating causes, acting from within and from without, capable of producing inflammation of the urethra.

A priori there is no reason why the influence of cold should not produce a catarrhal discharge from the mucous membrane of the urethra, just as well as from that of the other mucous expansions; but clinical experience teaches that this is the rarest of all causes, if, indeed, it exist at all for the healthy canal. An irritating substance acting locally seems to be essential to urethral inflammation. The only exceptions to this rule are those cases where prostration or excessive fatigue has given rise to a discharge in broken-down constitutions of the strumous or gouty order, where prolonged ungratified venereal excitement has been followed by actual inflammation of the canal, as in the case reported by Latour, and alluded to in most text-books,[2] or where some inflammatory trouble, usually affecting other parts, has accidentally appeared in the urethra. Some author has reported a case of ordinary herpes of the urethra with discharge alternating with herpes of the thigh. Bassereau and Bumstead speak of cases of muco-purulent urethral flow coming on with the first appearance, or with a relapse of secondary syphilitic eruptions; the cause of which was the development of mucous patches upon the urethral mucous membrane. Ricord[3] details a case of tubercular deposit within the urethra, attended by urethral discharge. A patient under the authors' care with tertiary syphilis has had a muco-purulent discharge on several occasions, depending upon the development of a tubercular eruption in the urethra, growing sufficiently to occasion obstruction to the free escape of urine, and supplying a decided discharge; symptoms always relieved, and the calibre of the urethra restored by the internal exhibition of iodide of potassium. Syphilitic tubercles around the orifice of the urethra are not very uncommon.

Mechanical Violence—sufficiently intense or prolonged—will always produce urethritis; but in these cases the inflammation is usually developed in proportion to the extent and character of the injury, and tends to get well rapidly. To this class of causes belong the rough use

[1] Rollet, "Traité des Maladies vénériennes," Paris, 1864, pp. 211, *et seq.*
[2] Rollet, *op. cit.*, p. 236. [3] "Bull. de l'Acad.," vol. xv., p. 565.

of instruments in the urethra, instruments left *à demeure* (tied in), violence inflicted by foreign bodies, introduced from without or passing from the bladder (stone fragments). The abundant formation of large crystals of uric acid in the urine acts also mechanically by scratching, but usually is insufficient to cause urethritis in a perfectly healthy subject. As a rule, urethritis from mechanical violence commences at once, and tends to get well speedily, if the cause does not continue to act.

Chemical Violence.—Irritants acting chemically are potent for evil. Under this head come strongly concentrated acid urine; the action of certain substances ingested—cantharides; strongly acid or alkaline injections; rancid or acrid fluids or secretions—leucorrhœal discharges, lochiæ, and the menstrual flow.

Of these chemical irritants the last group mentioned deserves special notice. As a rule alone they are unable to cause urethritis; something else must intensify their action in order to make them effective, and that something is either prolonged and excessive sexual excitement and indulgence, a weakened condition induced by fatigue and excitement, an impaired state of urethra coinciding with stricture or left behind by previous attacks of inflammation, or individual idiosyncrasy, or coincidence of some other cause, as irritating urine. If this were not the case, married men would be much more afflicted than they are, for few women (especially in large cities) are free from more or less leucorrhœa, and young married couples are very apt to disregard the beginning and the end of the menstrual flow. Viewing the subject from this standpoint, it becomes easy to account for the fact that one man may live with impunity with a woman having a leucorrhœal flow, while another who attempts to share her favors (under stronger venereal excitement) immediately acquires a discharge. The "acclimatation" of Ricord is accounted for in the same way; that is, where a man in his earlier and more amorous approaches acquires a urethritis from a woman with leucorrhœa, but afterward lives with her unharmed, although her discharge may continue unabated. Finally, in this way is explained Ricord's celebrated "receipt for getting a gonorrhœa" ("*recette pour attraper la chaude-pisse*), which consists in taking a young, amorous, pale, blonde girl (preferably with a leucorrhœa), dining with her, drinking white wine, champagne, coffee, and liquor in abundance, dancing with her vigorously, performing the sexual act as frequently as possible during the night, taking a prolonged warm-bath in the morning—and a "precautionary" injection. Such a course would undoubtedly be effective, especially if the individual testing the "receipt" were lymphatic, with a large meatus and a tight prepuce, or had a slight hypospadias; and especially if his urethra contained patches of congestion or slight stricture left behind by old attacks of inflammation.

Before passing to the symptoms of inflammation of the urethra, it is well to take a short, comprehensive view of the three most common forms

of urethral flow at their commencement as they come under the surgeon's notice. They are given below in the inverse order of their severity, and may be styled urethritis, bastard gonorrhœa, and gonorrhœa:

URETHRITIS.—Cases like the following are not very uncommon. The patient, often a lymphatic young man, perhaps not long married, virgin of all antecedent venereal disease, finds, on the first, second, or third day, after having indulged in sexual intercourse, probably to excess (possibly also after unwonted potations, and with a partner having a leucorrhœa), a slight, uneasy sensation at the meatus, a little smarting, and a pearly drop—or possibly the lips of the urethra glued together—in the morning. Here the prognosis is usually good. The inflammation will probably not run high, and may be combated by the ordinary means. Yet a diagnosis cannot be made with absolute certainty. The chances are vastly in favor of urethritis, but the discharge may become profuse, the inflammation run high, and continue many weeks, and the disease thus become indistinguishable from gonorrhœa. Such an attack may be acquired from any irritating discharge, aided by idiosyncrasy, acid urine, excessive excitement, etc.

BASTARD GONORRHŒA.—A patient comes with a little oozing from the meatus, perhaps with no itching sensation, nor any smarting on urination; but he says that he has had "the disease" on several occasions previously, and he is terrified at this sign of a new attack, which he believes inevitable. He states that (perhaps after copious libations of ale, beer, or champagne) he sinned with a suspicious party, and that while examining himself on the following morning—or after forty-eight hours—he discovered, to his horror, the little opaline drop at the meatus, and he comes at once to seek relief. This is by far the most common story. Such a patient has a damaged urethra, a patch of chronic congestion with or without thickening of the urethral walls, or perhaps a positive stricture, of which he knows nothing, has been left behind by his previous attacks, and he has irritated this surface and given himself a discharge, when the woman was, in all probability, sound, or had, at best, only a certain amount of leucorrhœa. This is not true gonorrhœa: it is bastard. A little alkali internally, rest, and a mild injection, followed by the gentle and judicious use of the steel sound, will usually soon quiet the patient's fears and overcome the threatened evil. In such cases always examine for stricture.

GONORRHŒA.—True gonorrhœa requires no idiosyncrasy, no ale or champagne, no excess, no weakened condition of the urethra for its development, but simply intercourse with a female having a gonorrhœal discharge. Here, after a period of perfect rest lasting from six to eight days, as a rule, the urethral disturbance commences, and runs the given course of virulent, specific gonorrhœa.

SYMPTOMS OF INFLAMMATION OF THE URETHRA.—The period of incubation or hatching—that period which elapses between the suspicious contact and the first appearance of discharge—varies from a few hours (rarely less than twenty-four) to fourteen days (rarely more than eight). The first symptom in true gonorrhœa is usually noticed on the seventh or eighth day. It may be stated as a rule, to which there are, however, numerous exceptions, that the shorter the period of incubation the milder will be the succeeding attack; but this rule does not hold after the ninth day. A tickling, teasing, itchy irritation is first felt at the orifice of the urethra. The lips of the meatus are found adherent, or a slight, bluish, sticky discharge is seen between them. A slight stinging is felt on urination. The lips of the meatus now swell a little, and become reddened. The quantity of discharge increases, and it becomes opaline. Greater pain is felt in passing water. The meatus feels hot and sore.

After the fifth day from its first appearance the discharge becomes much more copious. It gets thick and purulent, and soon acquires a greenish color from slight admixture with blood, which latter may appear in little streaks. If, during erection, the mucous membrane becomes cracked, hæmorrhage may be considerable. Pain is now felt all along the pendulous portion of the urethra, and the canal is sensitive to pressure. Irradiating pains may be complained of in the groins, testicles, perinæum, cord, and back. Involuntary seminal discharges at night are sometimes brought on by the local irritation, and such ejaculations may be exceedingly painful. The urethral mucous membrane becomes thickened by the inflammation, and the stream of urine is consequently small, forked, or dribbling. Retention may come on possibly from spasmodic muscular contraction, or by extension of the inflammation backward, causing sudden congestion of the prostate (Thompson) —a condition recognized by rectal examination. But retention with gonorrhœa is, of all complications, the most rare, unless the patient continues to drink hard, or has already a rather tight stricture before he acquires the disease.

As the inflammation advances, the prepuce may become œdematous (lymphitis), occasioning phimosis or paraphimosis; or, if the prepuce be naturally tight, the inflammation may extend into the balano-preputial cavity and light up balanitis. Erections, also, at this time become painful, threatening chordee. This indicates that the inflammation has extended beyond the free surface of the mucous membrane, and has included the delicate meshes of the erectile tissue of the corpus spongiosum. As a rule, the higher the grade of urethral inflammation, the greater liability is there to chordee. In actual chordee more or less of the areolar structure of the corpus spongium has become obliterated by the effusion of plastic lymph, while other portions lose their distensibility. This condition may implicate a longer or shorter distance along the urethra, sometimes nearly the whole pendulous portion. The corpus spongiosum consequently does not allow complete distention of its areolæ, and hence

the urethra is comparatively too short for the erect corpora cavernosa, and bends the penis downward like a bow during erection, the urethra being the chord to the bow. If the corpora cavernosa should become inflamed and the corpus spongiosum escape, the arching would be in the opposite direction. This sometimes, but very rarely, takes place. A sort of spurious chordee, upward or lateral, may be caused by inflammation of the lymphatics along the dorsum, or side of the penis. In chordee, great pain is felt from the stretching of the inflamed erectile tissue. This pain is measurably relieved by bending the penis, so as to increase the bow, and in this way to slacken the string; and it passes off entirely as erection disappears. Chordee is most frequent during the night and toward morning. It may render sleep impossible. The point of greatest curvature is situated anywhere along the pendulous urethra, most frequently near the glans *chordee arquê* (Ricord). The pernicious practice of "breaking the chordee," which consists in roughly straightening the penis when erect, gives rise to a hæmorrhage which may become excessive and be the starting-point of organic stricture.

After the disease has continued at its height for from one to three weeks under favorable circumstances, the pain, on urination, which had traveled down to the root of the penis, ceases, the discharge becomes more watery, chordee infrequent. The discharge diminishes down to a drop in the morning, the meatus again sticks together, and finally even this ceases, and the patient is well.

During all this local inflammatory disturbance there is little if any constitutional sympathy. There may be some feverishness for a time, or, in nervous individuals, a real or fancied feeling of prostration during the continuance of the discharge.

THE DURATION OF GONORRHŒA is variable. A well-managed case lasts from three to six weeks, as a rule; but the discharge may continue for months or even years. A first gonorrhœa is the most severe; but it is also the most certain to get perfectly well if carefully managed.

COURSE OF GONORRHŒA.—The urethral inflammation commences at the meatus and travels slowly backward. According to Desormeaux,[1] on the eighth day of the discharge, the anterior half of the urethra has become invaded, its surface is congested, without polish, and covered with little bare spots, like those seen in balanitis, where the epithelium has exfoliated. There is no ulceration. When the discharge is older, the lesions are identical, but deeper-seated. The disease tends to limit itself and to become localized at the bulb, in the fossa navicularis, or at some intermediate point, where there may have been much chordee. At these points of localization, the surface is of a vinous red, the polish of healthy epithelium is absent, and there are perhaps a few granulations. The submucous tissue thickens, impairing the vascularization

[1] "De l'Endoscope et de ses Applications au Diagnostic et au Traitement des Affections de l'Urèthre et de la Vessie," Paris, 1865.

of the part, and this process may go on to the formation of organic stricture. Where the disease runs this course, instead of getting well, we have gleet.

GLEET.—In gleet, whether due to forming stricture or not (the former condition is vastly more common), a certain amount of sticky, bluish fluid—often only a drop at the meatus in the morning—continues to be secreted after gonorrhœa—from altered patches of the urethra—or coming from the stretched and congested membrane behind a stricture.

Gleet, then, is a symptom of two structural lesions, and signifies that there are patches of congestion in the canal, covered or not by granulations, or that stricture exists, and that the discharge comes from behind it. Granulations, analogous to those seen in granular lids, may be observed, when present, through a urethral tube, as may the little vegetations, or polypoid growths, which sometimes spring from altered patches of urethral membrane. Idiopathic gleet may come on in individuals of a strumous or gouty diathesis, the immediate cause being a broken-down constitution or acid urine. Prostatic congestion and enlargement are also liable to be attended by a slight gleet, as are also mucous patches in the urethra, etc. Of these varieties, the strumous urethritis, like other manifestations of the diathesis, is usually found in early life, while gouty gleet belongs more particularly to middle age. An explosion of gout may come on in this way, a distinctly purulent urethritis of some severity appearing suddenly in a gouty individual, after chilling of the legs or excess at table, especially in regard to drink. When an individual with a gleet is found to be gouty, whether his discharge be idiopathic or not, it is particularly advisable to enforce strict urethral hygiene.

Gleet tends to last indefinitely, but is often so very slight as to be ignored. An individual so affected is a ripe subject for bastard gonorrhœa. The simple congested patches, without sensible thickening or granulations, which furnish the gleety discharge after an ordinary gonorrhœa, are kept from getting well by alcohol, malt liquors, sexual excess, fatigue, violent exercise, anæmia, gouty or strumous habit, etc. If one of these causes for the continuance of a discharge do not exist, it will usually get well of itself, or certainly with the help of some mild injection, or by a few introductions of the sound. Gleet is contagious when purulent—the more copious and creamy the discharge the greater its infecting power.

COMPLICATIONS OF URETHRAL INFLAMMATION.—Of the complications of gonorrhœa, some have already been described: balanitis, inflammatory phimosis, chordee, possible retention, and hæmorrhage. Others will receive attention when considering the organs they affect—epididymitis, orchitis, inflammation of seminal vesicles, gonorrhœal cystitis, catarrhal prostatitis, prostatic congestion, prostatic and peri-prostatic abscess. The others will be dealt with after the section on treatment—folliculitis,

cowperitis, suppurating peri-urethritis, lymphitis, and adenitis—all being extensions of inflammation from the urethral mucous membrane; finally will be considered, gonorrhœal rheumatism, gonorrhœal ophthalmia, and gonorrhœal conjunctivitis.

Treatment of Urethral Inflammation.—There are two methods of treating inflammations of the urethra:

1. The abortive—which seeks to strangle it at once.
2. The methodic—a treatment based upon the intensity and stage of inflammation.

Injection of the urethra is a proceeding so often resorted to, both early and late, in inflammations of the canal, that the subject of treatment may be well introduced by a few words upon the proper method of performing this surgical manœuvre.

First, as to a choice of instrument. The nozzle of the syringe must be short, for fear of scratching and irritating the already inflamed membrane, and must expand suddenly, so as to be adaptable to orifices of all

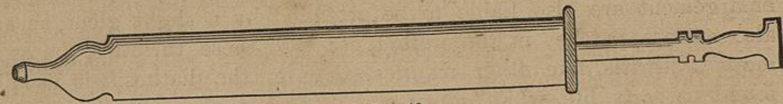

Fig. 19.

sizes. Any syringe with an ear-nozzle will do, but the No. 1 A American Hard Rubber Syringe (Fig. 19) is the most appropriate, especially for abortive injections. Glass should never be used, if any thing better can be obtained.

A preparatory injection of warm water should be made, when necessary, to free the canal of pus and expose the surface which it is desired to medicate. A preparatory micturition will answer, if care be taken to empty the urethra thoroughly of the last drops of urine, which may not only dilute, but decompose and render inactive some injections habitually employed.

Fill the syringe and expel all bubbles of air. Settle the tip of the nozzle—not more than one-quarter inch at most—into the lower

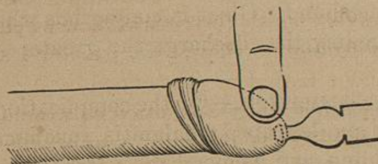

Fig. 20.—Proper Method of injecting.

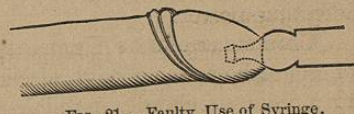

Fig. 21.—Faulty Use of Syringe.

commissure of the meatus. Above this compress the sides of the meatus tightly together (against each other, not against the nozzle), (Fig. 20), and send the piston home with a gentle, gradual motion. The

injected fluid must not be too cold. The syringe is now withdrawn, while the thumb and finger, previously placed upon the sides of the glans, close the meatus and confine the fluid in the urethra. If it is desired to bring the injection into contact with the deeper portions of the urethra, this may be effected by compressing the canal from before backward by a sliding motion of a finger of the disengaged hand. This pressure should never be carried farther back than the peno-scrotal angle. If the injection be pushed too far back, it may enter the bladder, an accident always to be avoided. If, however, it be desired only to medicate the fore-part of the canal, the urethra should be compressed from behind forward, the meatus being still held shut. In this way the canal is distended and the injection brought into contact with every part of the surface—a manœuvre always to be adopted in making abortive injections.

If the glans penis be dry, so that the fingers will not slip, injections may be made in this manner without any loss of fluid alongside of the nozzle—an accident which invariably happens in unskilled hands. It is a good plan for the surgeon to inject the urethra himself with warm water the first time, making the patient repeat the operation before him, naming the steps as he goes.

Abortive Treatment.—The idea of aborting gonorrhœa by the internal use of balsams has been abandoned. By abortive treatment is now understood the injection of any irritating soluble substance into the urethra for the purpose of inflaming the canal. Of these substances, nitrate of silver has been almost universally preferred. Sometimes only one very strong injection is given by the surgeon himself—as high as gr. xl. to the ℥ j has been used. It is unnecessary in this day of surgical enlightenment to condemn such a practice. The only allowable abortive treatment, so far as nitrate of silver is concerned, is its use at the strength of gr. ss to the ℥ j, the injection being carefully repeated every two or three hours until a trace of blood is seen in the discharges. Then all treatment must cease. The syringe used in the abortive treatment should never hold more than two drachms, and the fluid injected must be brought well into contact with every portion of the first inch and a half of the urethra. The abortive treatment is not applicable after the disease is more than, at the very most, forty-eight hours old. It is of doubtful efficacy in any case of true gonorrhœa.

Another method of abortive treatment is that recommended by Niemeyer. It consists in injecting several times daily a solution of tannin in ordinary red wine (gr. v to the ℥ j), doubling the amount of tannin after two days if the discharge has not ceased. He praises this method very highly. At least it can do less harm than the other and will abort bastard gonorrhœa sometimes.

As to the effect of attempts to cure by the nitrate-of-silver treatment, it may be said that it very rarely succeeds if undertaken more

than twenty-four hours after the commencement of the discharge. The milder, the less inflammatory the attack, the more cold its onset—in short, the more of a urethritis and the less of a gonorrhœa it is—the more efficacious is likely to be the abortive treatment. When it does no good, it invariably does harm. If the first attempt to abort an attack fail, no further trial is justifiable. The injections cause pain (painful micturition), the meatus swells, the penis becomes turgescent, a serous discharge escapes from the urethra. This soon becomes sero-purulent, continues for about thirty-six hours, in successful cases, then gets gleety, and finally disappears. The patient must avoid all alcoholic stimulants during this treatment. A mild alkaline diuretic internally is serviceable.

In true gonorrhœa there is no certainty of success in employing the abortive treatment. With urethritis better results are obtained. Should the treatment fail, the subsequent course of the disease is pretty sure to be more violent than it would otherwise have been. With the mild nitrate-of-silver injection or the tannin in red wine, no more harm than this can well be occasioned; but with very strong injections, especially if they are thrown deeply into the canal and retained for some time under the exploded presumption, once so prevalent, that the disease can be "burned out," most serious complications may follow—such as cystitis, penitis, epididymitis, lymphitis, retention of urine, peri-urethral and prostatic abscess. These complications are very rare, but they have been reported ending even in death.

One consequence of strong injections of nitrate of silver is undoubted, namely—organic stricture, usually resilient, and often peculiarly sensitive and irritable.

From the above remarks it is evident that the abortive treatment is to be condemned, or, at least, only undertaken at the urgent request of the patient, he being willing to assume all risks; and this course the judicious surgeon rarely accepts.

Methodic Treatment of Urethral Inflammation.—This term has been applied by Fournier[1] to a rational treatment, graduated according to the intensity of the symptoms, and varying in the different stages of the disease.

The hygienic part of the treatment is of the utmost importance. If it be disregarded, the best-directed efforts may fail to arrest the discharge. Many cases of simple urethritis and bastard gonorrhœa require little else than the hygienic treatment. The hygiene of gonorrhœa is as follows:

Absolute continence until at least ten days after the entire cessation of discharge, and avoidance of any thing liable to induce sexual excitement—company of a mistress, exciting books, thoughts, etc. No alcoholic stimulants of any sort, particularly no sweet fermented wine (champagne), and, above all, no malt liquor, should be drunk during the treatment. A little claret is sometimes allowable, and is often positively beneficial in the anæmic in the gleety stage. During the height of the disease, abstinence from salt, highly-seasoned food, coffee, and asparagus (Fournier), is advisable. All violent exercise (horseback, dancing, etc.) must be avoided. If the testicles are at all sensitive, a suspensory bandage should be worn. In this way epididymitis may sometimes be averted. If frequent urination come on, it is wise for the patient at once to take to his bed, and stay there until this symptom disappears. Caution must always be exercised about getting any of the discharge into the eyes. The utmost cleanliness, in all respects, is obligatory. Frequent use of the warm bath is desirable. The daily life and habits of the patient, except as above specified, need not be modified.

[1] Art. "Blennorrhagie," "Nouv. Dict. de Méd. et de Chir. pratiques."

The medicinal treatment is general and local, and varies for the four stages of the disease—the increasing, the stationary, the decreasing, and the gleety. The same hygienic treatment in a general way applies to all.

Increasing Stage.—When a patient presents himself for treatment with a commencing urethral discharge, the surgeon's first duty is to persuade him that what seems the longest is in reality the shortest course. If his discharge promise to be virulent gonorrhœa, this can be said with almost positive certainty; if, on the other hand, it seems to be a urethritis or a bastard gonorrhœa, there is but little likelihood of the disease continuing long, if it is well managed, and the abortive treatment will save no time. After the twenty-fourth, or, at most, forty-eighth hour of the discharge (in gonorrhœa), the abortive treatment is inadmissible.

The hygienic conditions under which the patient must live should be laid down in black and white, and not an inch of license allowed him. If he can be prevailed upon to remain in bed for a few days, so much the better; but this amount of obedience can hardly be expected.

The first, and perhaps only, medicine the patient need take internally, is an alkali. Of the many in use, the citrate of potash is perhaps the best. It is not powerfully diuretic, but yet renders the urine bland, alkaline, and unirritating, and can be taken longer than most of the alkalies without offending the stomach. It may be introduced in a palatable way as follows:

℞. Potass. citratis, ℥ ss–j.
Spts. limonis, ʒ ss.
Syr. simplicis, ℥ ij.
Aquæ, ℥ j.
S. Dessertspoonful, largely diluted with water, three or four times daily, fasting.

This may be pleasantly taken in Vichy water, of which siphon-bottles can now be obtained in all our large cities. Some patients prefer to take the alkali pure, in which case from gr. x to xl, according to the acidity of the urine, may be given at a dose in powder, dissolved in half a tumbler of water, Vichy water, or, if inflammation runs very high,