contains much sound common sense. He says: "We meet with cases of gonorrhœa which defy all treatment. Shall we in these cases persist and struggle on, piling one remedy and one injection upon another? I believe that this practice will more frequently aggravate the disease than cure it. In my opinion it is better to desist, to stop all medication, to encourage the patient and leave to time what art has not been able to accomplish. I am not afraid to say that there are many patients, who, after exhausting all the resources of therapeutics, get well through time alone. Moreover, in most instances, the disease subsides into a mere inoffensive oozing from the canal It is better to put up with a small evil than to expose one's self to a worse one by seeking a cure which remains uncertain. Now there can be no question but that medication continued for a long time, and incessant irritation of the urethra, may result in serious accidents and in grave complications. In the face of this danger springing from the treatment, the physician must know when to stop in time. Unable to cure in every case, he should at least not make the case worse."

Within the past few years a number of microscopists have discovered a micro-organism in the pus of gonorrhœa, which is termed by Neisser, who made the first observations in 1879, *micrococcus gonorrhœæ*. This organism, it is claimed, is only found in the pus of gonorrhœa, whether from the urethra, vagina, or conjunctiva, and is peculiar in its size, shape, and mode of reproduction. Neisser's observations have been confirmed by Ehrlich, Gaffky, Aufrecht, Löffler, Leistikow, Bockhart, and a number of others. Dr. Sternberg, of the United States Navy, however, thinks that this organism is not peculiar to gonorrhœal discharges, but that it is the *micrococcus ureæ* of Pasteur. Bokai, of Pesth, claims to have induced gonorrhœa in three out of six medical students, by inoculation of the urethra with this organism, which he calls *gonococcus*, artificially cultivated. I think that the criticism of Dr. W. T. Belford, of Chicago, is very pertinent on this point. He says: "For one familiar with the natural history of medical students, the experiments would have been far more convincing if the dauntless three had been kept in solitary confinement for a week before and after the inoculation." Bockhart, however, claims that, having cultivated the organism on gelatine, he inoculated with the fourth culture a paralytic hospital patient, and observed a typical gonorrhœa on the sixth day. The subject is as yet in an unsettled state.

On the theory that gonorrhœa is due to a micro-organism, Cheyne, of London, has recommended a new and peculiar method of treatment. The chief point of it is, the use of thin bougies, made of iodoform, eucalyptus oil, and butter of cocoa. I have tried this method faithfully, in fully ten cases, and have not derived satisfactory results from it.

CHAPTER II.

GLEET.

WHAT is the difference between chronic gonorrhœa and that affection known as "blennorrhœa" or "gleet?" If half a dozen surgeons be asked this question, it is not probable that the answers of any two of them will exactly correspond, and this because a gleet is, in most cases, preceded by a gonorrhœa, the latter terminating in the former, without any broad line of demarcation between them. Yet if gleet be worthy of a separate name, it must possess some distinctive features, and these we will endeavor to describe.

Let us understand then by a gleet a chronic discharge from the urethra, unattended by pain, or other symptoms of inflammation, and containing only a very small quantity of pus, of a milky or opaline color, so scanty as to be seen only when a very long time has elapsed since passing water, as in the morning on rising, when the lips of the meatus may be found glued together, and, possibly, a small drop of the fluid may be pressed from the canal. At other times the fluid is absent or is only detected by the presence of long shreds, looking like vermicelli, floating in the urine. This fluid deposited upon the linen leaves a diffused grayish patch, slightly darker (possibly faintly yellow) at the centre. Another characteristic of gleet is that, unlike chronic gonorrhœa, it is not readily lighted up into an acute stage of inflammation by excesses in diet or coitus, although it is not entirely free from this risk.[1]

In addition to gleet, we might admit with Diday, still another chronic discharge from the urethra, which is characterized by its entire freedom from pus or muco-pus and which consists merely of a transparent, viscous fluid, that can be stretched to some distance between the fingers. Its appearance is not constant in the morning as is the discharge of gleet, nor does it depend upon the time passed since urinating. It shows itself from time to time, independently of erections, and especially on straining at stool, etc., and the lips of the meatus are more moist than they used to be (or than the patient supposes them to have been). In short, such cases should properly be included under the head of "prostatorrhœa," in which mental treatment is of quite as much importance as physical, not to say more so.

[1] When a patient has exposed himself in coitus and has observed an aggravation of an old discharge, the question often comes up, whether he has simply revived the acute stage in consequence of his imprudence or has contracted a fresh clap. The former is probably the case if the aggravation of the symptoms appeared the next morning after exposure; the latter, if the aggravation has been delayed a few days (Diday).

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The recognition, however, of these three chronic urethral discharges, viz., chronic gonorrhœa, gleet, and chronic urethral moisture in excess, is of such importance that we will present their diagnostic symptoms in a tabulated form :

Chronic Gonorrhœa.	Gleet.	Chronic Urethral Moisture.
Objective Symptoms.—If urine has not been passed for three or four hours, a whitish or yellow drop may be pressed from the urethra. Meatus slightly reddened.	*Objective Symptoms.*—Discharge, seen only in the morning, is of a milky or opaline white color, never decidedly yellow. Sometimes merely glues the lips of the meatus together or is observed only as filaments in the urine.	*Objective Symptoms.*—Not constant in the morning nor after many hours' retention of urine. Consists simply of a drop of transparent fluid, appearing especially on straining, which can be stretched between the points of the fingers from an inch and a half to two inches.
Subjective Symptoms.—Slight pain in passing urine and in erections.	*Subjective Symptoms.*—Pain absent; possibly sensation of tickling or of "cold," occurring irregularly and of short duration.	*Subjective Symptoms.*—None.
Liabilities.—The discharge and pain aggravated temporarily by excess in diet, coitus or other imprudence.	*Liabilities.*—Excess of any kind much less likely to aggravate symptoms.	*Liabilities.*—Not affected unless by extraordinary imprudence.
Danger of contagion great.	Danger of contagion slight.	No danger of contagion.

Thus it will appear that, although gleet has certain claims to be considered as an affection distinct from chronic gonorrhœa, yet the two have no broad line of distinction between them, and the latter may gradually merge into the former. Much in the way of treatment is also applicable to the two affections, and I have, therefore, deferred speaking of certain means adapted to chronic gonorrhœa until the present chapter.

Gleet generally follows, without interval, an attack of gonorrhœa, as a consequence of the neglect or unsuccessful treatment of the latter. In many cases, however, gonorrhœa runs through its successive stages, and is apparently cured, then, after an interval of several weeks or even months, the patient returns with the report that he has recently noticed in the morning on rising that the lips of his meatus adhere together, and, on separating them, that the urethra contains a small amount of matter; he suffers no pain or inconvenience, but is still anxious about his discharge, and desires to be free from it. In such instances, it is probable that the cure of the preceding urethritis was only apparent, and that a slight degree of inflammation was left in the deeper portions of the canal, not manifesting itself externally until aggravated by some exciting cause, as coitus, alcoholic stimulants, fatigue, etc. Or, again, it is not improbable that there is a stricture of the urethra, which is the most frequent cause of the con-

tinuance of a gleety discharge following an acute attack of gonorrhœa. Other organic changes may exist within the canal and be productive of gleet, as a granular condition of the mucous membrane, vegetations similar to those met with upon the internal surface of the prepuce, and, in rare instances, polypoid growths.

Idiopathic gleet, or gleet not preceded by acute urethritis, may be dependent upon various affections of the prostate, and especially upon the hypertrophy of this gland so common in old men. It may also arise from disorder of the digestive function, and from disease of the bladder or kidneys, whereby the urine is rendered abnormally irritating.

Gleet is often maintained by a state of general debility, or by a strumous, rheumatic or gouty diathesis. That general debility is a fruitful source of the persistence of gleet, is evident from the frequency of this disease in persons of broken-down constitutions, and from the beneficial influence of tonics and general hygienic measures in its treatment. Again, gleet is peculiarly frequent and obstinate in persons of a strumous diathesis who are subject to chronic inflammation of other mucous membranes, and under such circumstances it is benefited by the administration of anti-strumous remedies. The influence of rheumatism and gout in the production of discharges from the urethra has already been mentioned in connection with gonorrhœa.

Symptoms.—In many cases of gleet, the discharge is the only symptom. There is, as before mentioned, an entire absence of pain in the part, of redness and tumefaction of the lips of the meatus, and of scalding in passing water. In some instances, however, the patient experiences a feeling of uneasiness in the penis or perinæum, or an itching about the glans or in the deeper portions of the canal, which may either be constant or attendant only upon the passage of the urine. Again, at the first act of micturition in the morning, the obstruction offered to the exit of the stream by the matter which has dried around the meatus, and glued its lips together, often gives rise to forcible distension of the canal, and a sharp momentary pain in the urethra, which may be avoided by previously separating the lips of the orifice.

The discharge in gleet varies in its character, quantity, and in the time of its appearance. In some cases it is evidently purulent, especially when the gleet has followed a recent attack of gonorrhœa. In other instances, it is perfectly transparent, and, examined under the microscope, is found to consist of a clear fluid, containing epithelial cells and free nuclei, either with or without a few pus-globules. Again, coagulated masses, like the white of an egg, are sometimes forced from the canal. In some cases, the discharge is constant, and sufficiently copious to stain the linen; but in the majority it is perceptible only in the morning on rising. When dependent upon inflammation of the deeper portions of the canal, or of the prostate, it may only appear during the efforts of the patient at stool, or be min-

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gled with the last drops of urine in micturition. The small amount of the discharge in most cases of gleet, and the frequency of this disease among soldiers, has given rise to the name "goutte militaire," employed by the French.

Hunter, in his work on Venereal, states that "a gleet is perfectly innocent with respect to infection," and that in the relapses which sometimes occur, "the virus," in his opinion, "does not return." This statement, although often refuted, still finds place in many elementary works which are in the hands of medical students. A doctrine more dangerous to the peace of families could scarcely be promulgated. It is, indeed, true that men are occasionally met with who have for years suffered from gleet, and who have yet had frequent connection with their wives with impunity, but where contagion ceases and immunity begins, no one can tell; and even if we were able to pronounce a discharge of a certain degree of purity innocuous, we could not foresee the effect upon it of a few hours' sexual indulgence. It may at the present moment be wholly mucous, and entirely innocent of contagious properties, and yet a short time hence be purulent, and in the highest degree dangerous. The fact is, no one can pronounce sexual congress safe so long as a urethral discharge exists, and, in replying to the frequent questions of patients on this point, the surgeon should not only avoid incurring the responsibility of allowing it, but do all in his power to dissuade from it.

Pathology.—The pathological changes in gleet are the same as those met with in chronic inflammation of other mucous surfaces, as the conjunctiva, tear passages, the external meatus auditorius, etc. This fact had already been regarded as probable from a few post-mortem examinations made by Rokitansky,[1] Mr. Thompson,[2] and others, but has been placed in a much clearer light since the introduction of the endoscope.

Fig. 7.

Urethral Polypus.

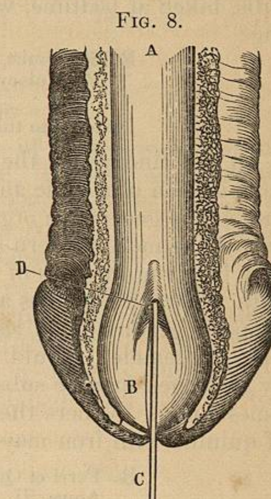
The changes revealed by this instrument as occurring in chronic gonorrhœa have been described in the previous chapter, and the same may be found in gleet. More especially some remains of a granulating surface, a slight stricture, or recurrent attacks of herpes within the canal, will account for the persistency of a discharge. The presence of polypoid growths is not common, but they are occasionally met with, and the accompanying wood-cut represents one, of the actual size, which was removed by Grünfeld through the tube of the endoscope. The continuance of the inflammation within the ducts opening into the urethra, after the canal itself is free from disease, will also explain many cases of gleet. The lacuna magna (Fig. 8) upon

[1] Pathological Anatomy, Sydenham Society's Translation, vol. ii., p. 233.
[2] Stricture of the Urethra, 2d ed., 1858, p. 74.

the superior wall of the fossa navicularis is peculiarly exposed from its situation to participate in the inflammation of gonorrhœa, and its internal surface is not readily accessible to injections. Dr. Phillips[1] states that he has succeeded in curing four obstinate cases of gleet by introducing a director along the upper surface of the urethra until its extremity entered the lacuna magna, and slitting up the wall of the follicle with a narrow bistoury.

Treatment.—Ricord used to say to the students at his lectures: "Gentlemen, if I am to go to——well, the bad place, I know what my punishment will be. I shall have a lot of fellows with the gleet standing round me, with their lamentations, their importunities, and their prayers to me to make them well." This *mauvais mot* but faintly indicates the annoyance which a case of gleet often gives both to patient and surgeon!

Fig. 8.



A. Superior surface of urethra. *B.* Fossa navicularis. *C.* Probe inserted in *D*, the lacuna magna. (After Guérin, Eléments de chir. operatoire, 1855, p. 526.)

The treatment of gleet should be addressed to the general condition of the patient as well as to the local disease. It may be laid down as a rule, to which there are but few exceptions, that in gleet the tone of the general health is more or less reduced. Not that all patients with gleet are necessarily weak and emaciated; on the contrary, many appear to be robust and hearty; but it is almost always the case that they are not capable of the same amount of exertion as formerly; they are sensible that they have lost a portion of their animal vigor; and the benefit of general hygienic measures and tonics in their treatment is unmistakable. The diet should be plain but substantial, consisting of fresh meat, vegetables, eggs, etc., to the exclusion of salt meats, cheese, and highly-seasoned articles; and secretion from the skin should be promoted by means of frequent sponging or bathing. With regard to exercise, although a long walk or ride, especially

[1] This experience of Dr. Phillips was given in the first edition of this work, 1861, p. 87. The "Dr. Phillips" referred to was Dr. Charles Phillips, *Traité des mal. des voies urinaires*, Paris, 1860, p. 34. With singular coincidence of the name of Phillips and the number of reported cases (4), Prof. Otis (Stricture of the Male Urethra, N. Y., 1878, p. 9) says: "Dr. Benjamin Phillips, in his treatise on 'Diseases of the Urethra,' states that he has found the continuance of a chronic gonorrhœa to depend upon the engagement of the *lacuna magna* in the disease, and cites four cases of cure by slitting up the inferior wall of that sulcus on a director."

Mr. Milton, "On Gonorrhœa," 4th ed., p. 312, says he has "sought in vain for the work referred to by Dr. Otis, of which no date or page is given," and my own efforts have been equally unsuccessful. Further information of Dr. Benjamin Phillips and his work on "Diseases of the Urethra" is evidently called for!

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when carried to fatigue, will be found to aggravate the discharge, yet when commenced with moderation, and gradually and steadily increased in proportion to the strength, it is found to be highly beneficial. Healthy exercise of the mind is no less important than that of the body, and the attention of the patient should be distracted as much as possible from his disease, and all books and associations calculated to excite the passions be avoided. The bowels should be opened daily, if possible, by selecting such articles of food as are laxative, and by regularity in the hour of going to the closet, or, if required, by the administration of medicine. One of the following pills, taken at bedtime, will usually insure a free stool in the morning:

℞. Strychniæ, gr. ss . . . . |03
Pil. Colocynth. Comp., ʒss . . . . . 2|
M.
Divide into thirty pills.

In the tincture of the chloride of iron, we have a most valuable combination of a tonic and an astringent; which in most cases of disease of the generative organs in the male and female, is unequalled by any of the more modern and elegant preparations of this mineral. It may be given in doses of from five to twenty drops, largely diluted with water, three times a day, directly after meals. If the dose be properly graduated, it less frequently excites headache in the male than the female; should this unpleasant symptom occur, iron reduced by hydrogen may be substituted for it, in doses of three grains, three times a day. Where the constitutional debility is marked, the union of quinine with iron may be desirable, as in the following:

℞. Ferri et Quiniæ Citratis, ʒj–iij . . . 4|—12
Aquæ, ℥j . . . . 30|
Syrupi Limonis, ℥iij . . . . 120|
M.
A teaspoonful (5.00) after each meal.

℞. Tincturæ Cantharidis, ʒj . . . . . . 4|
Quiniæ Sulphatis, ʒss . . . . 2|
Tincturæ Ferri Chloridi, ʒij . . . . . 8|
Acidi Sulphurici diluti, gtt. xxx . . . 2|
Aquæ destillatæ, ℥viij . . . . 250|
M.
One ounce (30.00) three times a day. (Childs.)

Other salts of iron, as the tartrate of iron and potassa, or the pyrophosphate of iron, may be substituted for the citrate, in the first of the above prescriptions.

With patients of a strumous diathesis, cod-liver oil, the syrup of the phosphate, or Blancard's pills of iodide of iron, may often be used with advantage. I have found that the iodide of potassium has a tendency to increase the discharge from the urethra, as it often does the secretion from other mucous membranes, and I do not therefore administer it. This effect of the iodide may frequently be observed, when we are giving it for tertiary syphilis to patients, who, at the same time, are affected with gleet.

From what has already been said of copaiba and cubebs, it is evident that but little good can be expected from their administration in cases of chronic urethral discharge. Moreover, most patients whose disease has arrived at this stage, have already taken them *ad nauseam* for the preceding gonorrhœa; hence, we are rarely called upon to administer them in pure gleet. In those cases, however, in which the gleet has relapsed into a clap, they may be given with benefit, especially when combined with a tonic, as in the *dragées* of copaiba, cubebs, and citrate of iron; in Méot's pills, the formula for which has already been given; and as in the following prescription:

℞. Copaibæ, ℥ss . . . . 15|
Tincturæ Cantharidis, ℥ss . . . . . 15|
Tincturæ Ferri Chloridi, ℥j . . . . 30|
M.
Dose.—Thirty drops (2.00) three times a day.

The reader will observe that the tincture of cantharides is an ingredient of several of the above prescriptions. Experience has shown that this drug exerts a decidedly curative action in many cases of gleet, and in gonorrhœa also, in the chronic stage. It is a favorite remedy with the homœopaths, in doses of a fraction of a drop of the tincture every few hours, in the acute stage of clap, and is considered by them to be indicated by scalding in micturition, chordee, and a greenish or bloody discharge. I have used it, however, only in the chronic stage. The tincture may be given in doses of three or five drops three times a day, or it may be combined with iron, as follows:

℞. Tincturæ Cantharidis, ʒij . . . . . 8|
Tincturæ Ferri Chloridi, ʒvj . . . . 24|
M.
Ten drops (0.65) in water, three times a day.

In some cases of gleet there is considerable irritability of the neck of the bladder, as shown by a frequent desire to pass the urine and unpleasant sensations in the perinæum. In these cases benefit will be derived from the administration of the salts of potash, combined with hyoscyamus, or from the oil of yellow sandalwood or copaiba.

Bougies.—In all cases of gleet, the urethra should be carefully examined with proper instruments, in order to detect the presence of stricture; and if the slightest contraction be discovered, it should at once receive appropriate treatment, since upon its removal will probably depend the cure of the discharge.

Of late years, my friend, Dr. F. N. Otis, has especially insisted upon the dependence of gleet on a narrow meatus or on a slight stricture, "stricture of large calibre," within the canal; indeed excluding cases of polypoid growths and inflammation of urethral sinuses, he believes that gleet is always symptomatic of stricture, as the following quotations from his writings will show:

"*Chronic urethral discharge means stricture.*

"When there is *discharge*, there will in every case be found, if

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the examination is efficiently made, a *well-defined* and *unmistakable* point of *stricture*.

"The complete division of stricture has, in my experience, resulted *uniformly* in its complete disappearance within a period varying from three months to one year, and the *cure of gleet has, as a rule, followed the complete division of stricture within a period varying from twenty-four hours to four weeks after the final operation*."[1]

While believing with Dr. Otis that *every undoubted stricture of the urethra should be removed*, and that *without its removal no case of gleet can be permanently cured*, I have yet seen quite a number of cases in which, after the most thorough operation for the stricture and when no traces of the same remained, the discharge still continued for months, and even years; I cannot, therefore, agree with him, that always "chronic urethral discharge means stricture," or that the removal of all strictures invariably cures gleet. The removal of the stricture is in all cases required, but may not be sufficient to stop the discharge.

Dr. Otis has done great service by calling attention to the influence of strictures of large calibre, both immediate and reflex, which had been generally ignored, and his *urethrameter*, to determine the size of the urethra and the presence of coarctations, is a great advance in our means of diagnosis. For a full account of this instrument, as well as of his "dilating urethrotome," the very best devised for division of strictures of large calibre, the reader is referred to the chapter on stricture.

Acorn or olive-pointed sounds, first proposed by Charles Bell, are also essential for the diagnosis of slight strictures. As frequently made, the shaft is unnecessarily long, for, with a straight stem, they are only adapted to detect strictures in the straight portion of the canal. If you want to explore the urethra beyond the bulbous portion, use a flexible *bougie à boule*, or, better still, a stiff acorn-pointed steel sound bent in the proper curve. Even then look out that you do not mistake the contraction at the triangular ligament or at the neck of the bladder for a stricture. This mistake has often been made, not only by novices, but by those who ought to have known better.

We have already remarked that the tendency of gonorrhœa in its last stages is to limit itself to certain points of the canal, and these points may often be discovered on passing an olive-pointed sound. If we find on repeated introductions that the patient always complains of sensitiveness at the same spot, we have reason to believe that this is the seat of abnormal changes. If granulations exist, there may be a flow of a few drops of blood, or the bulb on withdrawal be found smeared with the same. Pus may also be withdrawn in the same manner from the urethral pouch just behind a stricture, even when the urethra might be supposed to have been cleansed by the passage of urine a short time previous.

The frequent passage and retention of bougies is one of the best

[1] Am. Clinical Lectures, edited by Seguin, vol. i., no x. The italics are in the original.

means known for the treatment of gleet, even when no stricture can be discovered. The manner in which bougies effect a cure of chronic urethral discharges is somewhat obscure, but is probably to be explained on the ground that they distend the canal, expose lacunæ in which matter would otherwise lodge, and separate for a time the diseased surfaces; or, again, they may serve to stimulate the vessels of the part, and thus change their action.

Bougies, tapering towards the extremity and terminating in an olive-shaped point, are well adapted for the purpose. They are introduced easily and with little inconvenience to the patient, and the contraction near their point facilitates the introduction of medicated ointments into the deeper portions of the canal. The instrument should be large enough to fully distend the canal but not to stretch it, and is best smeared with vaseline. The bladder should previously be emptied, and the patient placed in the recumbent posture. However gently it may be introduced, the first passage of a bougie usually excites a more or less disagreeable sensation, which sometimes gives rise to syncope, and which generally renders it advisable to withdraw the instrument in a few minutes; but, after two or three insertions, it ceases to give annoyance, and may be retained for half an hour or an hour.

It sometimes happens that the bougie aggravates the discharge, and revives the acute inflammation, which has for a time disappeared. In such cases it is best to suspend the treatment and resort to injections, which will often effect a permanent cure. This aggravation of the symptoms, however, according to my experience, takes place in a minority of cases only.

With this exception, the passage of the bougie may be repeated every second or third day at first, and afterwards every day, or, in some instances, as often as twice a day.

Bougies may be medicated in various ways. Calomel, rubbed up with sufficient glycerine or oil to cover it, forms a very cleanly and excellent mixture, with which to anoint the bougie, and I think materially assists the curative action. Mercurial ointment may also be used either alone or combined with extract of belladonna, the latter being added in case the urethra is irritable.

℞. Unguenti Hydrargyri, ℥ss	15	
Extracti Belladonnæ, ʒss	2	
M.		

For the purpose of stimulating the mucous membrane, we may employ the diluted ointment of red oxide of mercury, or an ointment containing a few grains of nitrate of silver, but such applications should not be continued for any length of time, lest they keep up the discharge.

℞. Ung. Hydrarg. Oxidi Rubri, ʒj . . .	4	
Adipis, ʒiij	12	
M.		

℞. Argenti Nitratis, gr. v–x . .		30 — 60
Adipis, ℥j	30	
M.		

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