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OBSERVATIONS
ON
THE DISEASE
OF
GONORRHŒA;
SUBMITTED, AS
AN INAUGURAL THESIS,
TO
THE EXAMINATION
OF THE
REVEREND JOHN ANDREWS, D. D.
(PROVOST PRO TEMPORE);
THE
TRUSTEES AND MEDICAL PROFESSORS
OF THE
UNIVERSITY OF PENNSYLVANIA,
ON THE 8th DAY OF JUNE, 1803.
FOR
THE DEGREE
OF
DOCTOR OF MEDICINE.

BY COSMO GORDON STEVENSON,
OF BALTIMORE, MARYLAND.

1802

“ Ne nostros contemne orsus, medicumq; laborem

“ Quidquid id est.”

Hiero. Fracastor. Carm. de Morb. Syph.

PHILADELPHIA:

PRINTED FOR THE AUTHOR, BY A. AND G. WAY.

.....
..1803.
..

TO BENJAMIN SMITH BARTON, M. D.

PROFESSOR

OF

MATERIA MEDICA, NATURAL HISTORY, AND BOTANY,

IN THE

UNIVERSITY OF PENNSYLVANIA;

THIS ESSAY

IS DEDICATED, AS A TRIFLING MEMENTO

OF HIS INNUMERABLE

MARKS OF ATTENTION AND FRIENDSHIP

BESTOWED UPON, AND WHICH WILL BE EVER

GRATEFULLY REMEMBERED, BY

THE AUTHOR.

TO JAMES WOODHOUSE, M. D.
PROFESSOR OF CHEMISTRY
IN THE
UNIVERSITY OF PENNSYLVANIA,
THIS DISSERTATION
IS INSCRIBED, IN REMEMBRANCE OF THE
ESPECIAL MARKS OF ATTENTION
WITH WHICH
HE HAS BEEN PLEASED TO HONOUR
THE AUTHOR.

TO CASPAR WISTAR, M. D.

ADJUNCT PROFESSOR

OF

ANATOMY AND SURGERY,

IN THE

UNIVERSITY OF PENNSYLVANIA.

TO COMMEMORATE

THE PARTICULAR FAVOUR AND ATTENTION

WITH WHICH

HE HAS ALWAYS BEEN HONOURED FROM HIM,

THIS ESSAY

IS GRATEFULLY INSCRIBED, BY

THE AUTHOR.

GONORRHŒA.

IT has long been a contested point, whether Gonorrhœa and Lues Venerea are distinct diseases, or the same complaint differently modified.

The latter opinion, for a long time, evidently attracted the most adherents; and it is but lately that the consideration of their being distinct and different from each other, both as to the matter of infection, and the nature of the affection, has received any considerable support. For, while lues venerea is, at present, generally allowed to be a disease which affects the whole system; gonorrhœa on the other hand, is now almost universally admitted to be a local disease.

While these two diseases were considered as the same, mercury was the only remedy relied on, and employed in the cure of both; but the observation that gonorrhœa cured itself in many persons who would not undergo the disagreeable and painful operation of a salivation, gave origin to the opinion of their being two distinct diseases.

Among the many arguments which might be adduced in support of this opinion are the following :

1st. Gonorrhœa and lues venerea have not appeared at the same time, in the same country.

The lues venerea appears to have been known in Europe for a greater length of time than gonorrhœa, which could not have been the case had the diseases been the same. In the time of Dr. Astruc, gonorrhœa had been known in China for a short period only: whereas lues venerea had prevailed in that country for a very considerable time; and it is well known that lues venerea was imported to the island of Otaheite a long time before gonorrhœa manifested itself there.

2nd. Gonorrhœa and lues venerea do not produce each other.

Notwithstanding the many arguments which have been brought forward to refute this position, yet I think it still stands unshaken and well supported. If gonorrhœa were capable of inducing lues venerea, it would, in all probability, manifest this disposition in the course of five or six weeks, and yet I have known a number of instances wherein, by the negligence of the patients themselves, gonorrhœa has continued for the space of 3, 4, and 5 months, without a single syphilitic symptom supervening. I am corroborated in this assertion, by the testi-

mony of a great number of respectable practitioners, under whose immediate observation similar cases have occurred. Mr. Bell observes, that in various parts of Scotland, particularly the Highlands, in Galloway and Dumfrieshire, the common people have, for a great length of time, been afflicted with the lues venerea under the denomination of Sibbens; which, from those distressed with it having no communication with those infected with gonorrhœa, has retained its original unmixed form, without (as far as he knows,) a single instance of gonorrhœa being produced by it. This, he adds, must have happened from the disease prevailing there almost entirely among the poor country people, whose habits do not expose them to the hazard of being infected with gonorrhœa. The duration of this disease amongst them, appears, from sufficient evidence, to have been upwards of seventy years.

The favourers of the opinion, that lues venerea and gonorrhœa are the same, dwell strongly upon the circumstance of these two diseases sometimes occurring at the same time in the same person. This objection to the distinctness of the two diseases appears very plausible; but it is probable, when one disease supervenes upon the other, that it has been owing, either to a subsequent connection, or to the person having been infected with both diseases at one and the same time.

Two cases which have come within my own observation, will tend to favour and support this opini-

on. In the one, gonorrhœa was the disease which first appeared; this was, however, shortly succeeded by lues venerea. I suspected the latter disease to have been occasioned by a recent connection, but this the patient strenuously denied; and upon a more strict inquiry, I found, that the person from whom he had received the infection, laboured under both gonorrhœa and lues at the same time. In the other case, lues made its appearance in the first instance; and in the course of a few days a puriform discharge ensued from the urethra. Upon putting the question, the patient candidly confessed that he had committed some excesses in dancing and drinking, a day or two previous to the appearance of the running.

Moreover, if those diseases produced each other, we ought to find them constant companions in every case; but who is there to be found, so hardy as to assert this to be the fact? On the contrary, the average number of cases of gonorrhœa without syphilitic symptoms, and of lues venerea is about three of the former, to one of the latter, a proof positive of the fallacy of the opinion of these diseases being one and the same.*

If then, as has been shewn, lues venerea and gonorrhœa have appeared at different periods, in

* To this may be added a fact known by almost every surgeon, *viz.* that chancres very often exist a long time, and occasion the continued application of venereal matter to the orifice of the urethra, without producing gonorrhœa, or any other affection of that duct.

the same country, and for a considerable time, without inducing each other, I can see no reason for hesitating to reject the opinion of the identity of the two diseases.

3rd. The two diseases require different modes of treatment for their cure.

This argument alone ought to have been sufficient to have convinced even the most sceptical. Lues venerea being a disease of the general system is treated with general remedies, and mercury alone appears to be the specific in this complaint, while gonorrhœa is a local disease, never affecting the general system, and never requiring the aid of mercury, but always to be cured by local remedies.

Gonorrhœa may be defined to be a puriform discharge from the urethra in males, and vagina in females, in consequence of *inflammation* of the part. The term "*Gonorrhœa*," is improperly applied to this disease, as it implies a "*discharge of semen*," whereas this discharge is owing to an increased secretion of the mucus lining the internal surface of the urethra, altered in its appearance and caused by an inflammation of that part, but more especially of the lacunæ of the urethra.

It was for a long time imagined, that gonorrhœa proceeded from a suppuration of ulcers in the ure-

thra, nor was this opinion controverted, although many doubts were entertained of its truth, until actual dissection proved the fallacy of this ideal doctrine, and put the matter beyond dispute. Doctor Stoll, of Vienna, had an opportunity the most favourable to his wishes, of dissecting a man who had died while labouring under a virulent gonorrhœa. Upon cutting into the urethra carefully, he discovered its internal surface preternaturally red; two of the lymphatics preternaturally white, and enlarged; and the puriform matter oozing out from the internal membrane, and especially the lacunæ, where the seat of the disorder was, without the least appearance of ulceration or even of excoriation. Since that time many other dissections have been made, with a view to ascertain the cause, as well as the seat, of this disease, which all tend to prove that it is caused by inflammation, and seated in the internal membrane of the urethra, and particularly in the lacunæ.

That gonorrhœa is a local disease is fully evinced, not only from dissection, but also from the method of cure, topical applications alone having been found sufficient to eradicate the affection, without the aid of mercury or any other general remedy.

Writers have divided gonorrhœa into *gonorrhœa benigna* or *simplex*, and *gonorrhœa virulenta*: to which a third has lately been added, to wit, *gonorrhœa spuria*. This last is a puriform discharge which

takes place from the corona glandis of the penis, between it and the prepuce. Upon gently compressing the glans, the matter, by means of a glass, may be seen issuing from it. This seldom occurs; but when it does, it is to be cured by astringent lotions.

Gonorrhœa benigna or *simplex*, is a puriform discharge from the urethra in males, taking place without any connection with an infected person.

Women are subject to a disease which often puts on the form of gonorrhœa, and is sometimes attended with a scalding sensation upon evacuating urine. The disease I allude to is the fluor albus or whites. It, therefore, behoves a young practitioner to be upon his guard, in distinguishing between such cases when called to them: for by an error in judgment he might destroy, not only the character of the person, but often the peace and happiness of a whole family. If the person to whom the physician is called be of respectable connections, and unblemished character, I conceive there could be no harm in terming it a fluor albus, even if the disease be very suspicious. This would be the more justifiable since it has been happily found that both diseases may be cured by the same remedies, to wit, moderately astringent injections; and as it might preserve the happiness of a family. But in most cases the two diseases may be distinguished by proper and delicate inquiry.

The *Gonorrhœa benigna* or *simplex* may be induced by the application of any foreign substance to the urethra so as to produce an inflammation of its internal surface; such as acrid powders, bougies, &c. &c. This disease may be speedily cured in a few days by a moderately low diet, and the following injection:

R. Sulph. zinc....xv grs.

Aquæ font.... $\bar{3}$ viii.

Solve.

This injection should be thrown up the urethra of males, by means of a syringe, at least 4 or 5 times a day. If it produce a smarting of the part, it may be diluted with a little water; but it is necessary that it cause a slight degree of smarting. The patient himself will be the best judge of the degree of strength it ought to be by his own sensations.

We come now to consider that most common form of gonorrhœa denominated *gonorrhœa virulenta*.

Every puriform discharge from the urethra, in consequence of a connection with an infected person, is denominated *gonorrhœa virulenta*.

The manner in which gonorrhœa is produced, seems to me to be by the application of the infecting substance to the orifice of the urethra, or near it. And it appears probable, that in 9 cases out of

10 the matter of infection is lodged under the frænum penis, and extends its effects from thence; and as that part is the least attended to in the practice of washing the penis, after connection with women, we may account for the reason why we meet with some instances of the disease occurring notwithstanding ablution had been practised. Hence it is that practitioners recommend careful ablution of the whole glans penis, and especially of the frænum and the adjoining parts, immediately after connection with a suspicious person.

This disease generally makes its appearance from 24 hours to 4 days after an impure connection, although in some instances it occurs sooner and later.

It is first announced to the patient by a pricking sensation in some part of the urethra, most commonly on one side of the glans penis, upon making water. In a few hours after this is felt, a slight discharge, of a puriform nature, is perceived to take place from the urethra, and now the patient begins to be troubled with a scalding pain on passing his water, which continues at every attempt for this purpose.

If these first symptoms be neglected, the discharge increases in quantity, puts on a greenish yellow tinge, and in every respect becomes more virulent; the desire to make water is very frequent, and

although but a small quantity be passed at a time, the heat and pain attending it are sometimes rendered so intolerably excruciating, that the patient dreads to make the effort to discharge it. An aching pain is sometimes felt in the perinæum, and a disagreeable, and frequently painful, irritation about the lower extremity of the rectum. When the disease has arrived at that degree in which the bladder becomes inflamed, it is then indeed most serious and nearly insupportable. Frequent micturition is induced in consequence of the irritable state of the bladder, and blood is frequently passed with the urine, while the anguish suffered in the discharge of it is beyond description.

The penis sometimes becomes sore and painful to the touch, and the orifice of the urethra appears swelled. The discharge is often rendered extremely fœtid and disagreeable, and more particularly if the patient neglects keeping the parts very clean. The quantity of matter discharged in the course of 24 hours is various in different persons. In some instances I have known nearly 4 drams; but in most cases the quantity evacuated is much less. The discharge at first puts on a yellow appearance, but it soon changes its colour, and tinges the linen of a greenish yellow with a brown edge.

The symptoms of gonorrhœa which are commonly the most troublesome, and which demand

the most immediate attention and relief, are the *scalding pain* or burning sensation which attends the evacuation of the urine, and the *chordee*. On each of these I shall offer some remarks, and then proceed to treat of the consequences which sometimes succeed to gonorrhœa virulenta.

The burning pain which almost universally attends the discharge of urine in gonorrhœa virulenta, appears to be owing to the urine coming in contact with the inflamed and irritable surface of the urethra: it is a very painful symptom, and if not soon relieved, may be the means of increasing that inflammation, and rendering the disease still more obstinate and distressing. We should therefore endeavour to remove it as soon as possible. For this purpose numberless injections have been proposed, but those which I have seen the most useful and efficacious, are composed of the sulphate of zinc, or white vitriol, gum arabic, and water. The following is a very good formula.

R. Sulph. zinc....xv. grs.

Gum arabic....℥ss.

Aq. font....℥viii.

Misce fiat injectio.

This is to be thrown up the urethra, by means of a syringe, 5 or 6 times a day, or oftener, retaining it at each time about a minute or two in the urethra. But as the method of using the syringe in this case may not, perhaps, be understood clearly by every one, I shall, in this place describe it.

The syringe being filled with the injection to be thrown up, the patient is to take hold of it about midway with the thumb and middle finger of the right hand, the fore finger of the same hand being at the same time passed through the ring at the top of the piston. Then taking hold of the head of the penis with the left hand, the fore finger thereof being applied upon the frænum penis, and the thumb on the glans immediately above and opposite, the pipe of the syringe is to be carefully introduced about half an inch within the urethra; having introduced the syringe, moderate pressure is to be made upon the pipe of it with the thumb and finger of the left hand, while the fore finger of the right hand, moving the piston downwards, throws up the injection. The syringe is then to be withdrawn, and the pressure of the glans continued a proper time to prevent the liquid from returning. I should not have been thus minute in this description, were I not convinced that the cure of gonorrhœa by injection is often greatly protracted by the ignorance of patients in the method of using the syringe.

In using an injection, care should be taken to avoid throwing it up with more force than is necessary; that force is thought sufficient in common cases, which empties the syringe in a gradual manner. Patients should always evacuate their urine before they inject; this prevents the matter of injection from being washed away by the stream of urine so soon as it otherwise would have been; and it also

guards against the ill consequences which are supposed to result from carrying the matter of gonorrhœa towards the neck of the bladder and upper end of the urethra.

However strange and contradictory it may appear, it is nevertheless a fact, that certain spirituous liquors, diluted with water and taken into the stomach, have the effect of easing that scalding which attends the evacuation of urine in cases of gonorrhœa. The liquor which possesses this property in the most eminent degree is the Holland gin. This taken in moderate quantities, well diluted with water, has a remarkable effect. It is a diuretic, like most other spirituous liquors, and it is (in my opinion) to its exciting the kidneys to an increased secretion of urine, which is evacuated before it becomes in any degree acrid, that we are to attribute its effects in relieving this distressing symptom. A drink composed of flaxseed tea, or a solution of gum arabic in water, with a portion of nitrate of pot-ash or salt-petre dissolved in it, is very useful in alleviating this pain. Sweet oil and many mucilaginous liquids have been used, both internally and by way of injection, to remove this scalding sensation upon making water. I have seldom had any occasion to make trial of any of them, having found the gum arabic in every instance to answer the purpose. The addition of the sulphate of zinc, as in the before-mentioned mucilaginous injection, renders that preferable to most others, as its

astringent properties are peculiarly adapted to stop the discharge gradually, by at first lessening and then entirely obviating the inflammation of the urethra. Nor need we be surprised at this practice, when we reflect, that every day we observe astringent applications used in the cure of burns and other local inflammations, and as it is now clearly ascertained, that gonorrhœa proceeds from a local inflammation, it is not to be wondered at then, if the treatment of these be similar.

The *chordee* is another distressing symptom which occurs in almost every case of gonorrhœa virulenta. By this we mean an involuntary erection of the penis, attended with great pain, while the head of the penis appears to be drawn downwards towards the perinæum, and in some instances the penis is almost bent double. The pain is so intolerable that the patient often compares it to the effects of an instrument lacerating the tender parts.

The remedies which have been used for the removal of this symptom have also been very numerous. If circumstances require it, blood-letting, general or topical, should be employed. Rubbing the penis with camphorated oil or laudanum, has been highly extolled. But the remedy most to be relied on is opium: an opiate should be administered every night during the continuance of this painful symptom, and for a short time after it is removed, to prevent its recurrence, due regard being had to

the state of the system; for if plethora attend, or the pulse be tense or active, a little blood first taken away, will render the effect of the opiate more certain and efficacious. Leeches applied to the perinæum are often serviceable, and will probably be found preferable to general bleeding.

The practice which I have found most useful and most immediate in its effect, is dipping the penis into a basin of cold water, during the erection. This in a few minutes destroys the morbid irritability of the part; and almost instantly, as it were like a charm, dispels that excruciating torment under which the patient labours.

As the *chordee* is most troublesome at night, when the patient is warm in bed, or his mind occupied with lascivious ideas, this practice is a little inconvenient: yet I am fully satisfied that the inconvenience attending it is greatly overbalanced by the relief obtained; and I believe, that few persons would prefer suffering such anguish to rising out of bed for a few minutes, when such certain and immediate assistance is so near at hand. This practice has been opposed, on the grounds that the relief obtained is but of short duration, and that the patient will be subject to a return of the complaint as soon as he is warm in bed again. This I grant is at first the case; but after rising a few times, this disposition vanishes, and more especially if the penis be suffered to remain a few minutes each time in the water.

In some persons who have been so hardy and imprudent as to indulge themselves in their venereal passions, during the time they were affected with this symptom in a slight degree, I have known it entirely cured by it, nor did it return. But they informed me, that the pain at the time of emission, was extremely severe and almost insupportable. I would not be thought to recommend this practice, as it certainly must be often injurious ; but I only mention it as having sometimes been serviceable.

Having thus taken notice of two of the most prominent symptoms of the disease, and of their method of cure, I shall in this place point out the formulæ of some of the best injections, before I proceed to speak of the effects consequent to gonorrhœa virulenta.

The preparations of medicine which are mostly used for this purpose, are from the mineral kingdom, and consist of the combinations of zinc, lead, and mercury, with the acids. The principal preparation of zinc, is the sulphate of zinc or white vitriol ; of lead, the acetate or sugar of lead ; and of mercury, the muriate of mercury, known by the name of corrosive sublimate, and the mild muriate of mercury or calomel. The following formulæ, are found very efficacious.

R. Sulph. zinc....xv grs.

Aquæ font.....℥viii.

m. f. i.

If heat of urine attends, gum arabic may be added as before stated.

R. Acet. lead vel sach. sat....xv grs.

Aquæ font..... ζ viii.

m. f. i.

Or it may be combined with the sulphate of zinc, as in the following formula :

R. Sach. sat....x grs.

Sulph. zinc....v grs.

Aquæ comm.... ζ viii.

m. f. i.

The sach. saturn. was formerly employed in almost every injection, but since the introduction of the white vitriol into practice, it has been less resorted to, at least by most practitioners of modern times. I think I have seen strong injections of the sugar of lead, very often produce swelled testicle, by an improper and incautious use. But I shall again speak of this, when I come to treat of swelled testicle.

The corrosive sublimate, is almost the only preparation of mercury now employed in injections for the cure of gonorrhœa. The following formula may be used.

R. Merc. corros. sublim....ii grs.

Aquæ font..... ζ viii.

m. f. i.

Calomel, or the mild muriate of mercury, is sometimes employed in injections, as the following :

R. Calomel ppt.... \mathfrak{z} ii.
 Muc. g. arab.... \mathfrak{z} ss.
 Aquæ font. vel rosar.... \mathfrak{z} vi.
 m. f. i.

Or,

R. Calomel ppt.... \mathfrak{z} i.
 Sulph. zinc vel sach. sat....xv grs:
 Gum arab.... \mathfrak{z} ss.
 Aq. font. vel rosar.... \mathfrak{z} viii.
 m. f. i.

Or,

R. Calomel ppt.... \mathfrak{z} ii.
 Bals. capaibæ.... \mathfrak{z} i.
 Vitell. ovi.... \mathfrak{z} ss.
 Aq. rosar. vel comm.... \mathfrak{z} iv.
 m. f. i.

This last formula is taken from Mr. Bell's work on the venereal disease, and he observes, that the formulæ of mercurial injections seem to act as astringents, like all the others. The gum arabic and the yolk of egg, are added to suspend the mercury, and to alleviate any scalding in the urine which may be present.

Besides these, various other substances have been employed in injections, such as alum, cortex querci, galls, gum kino, opium, and the balsams, with a

great many others, for the formulæ of which, consult Mr. Bell on the venereal disease.

Doctor Barton, Professor of Materia Medica, Natural History, &c. in the University of Pennsylvania, has found the uva ursi a very beneficial, and, at the same time, safe remedy in the cure of gonorrhœa. Sometimes he employs it in the shape of an injection, made by infusing the leaves in boiling water. More generally, however, he uses the decoction, or the powder of the leaves, internally.

Whatever form of injection is used, it should be of such a strength as the patient can bear, without much pain. We should begin with the weaker astringent injections, and gradually increase their strength. The vial should be always well shaken before filling the syringe, and the injection should be used as often as possible through the day, at least five or six times. It is owing in part, to a neglect of these rules, that the cure of gonorrhœa has so often failed or been protracted.

The diet of the patient should be adapted to the state of his system. If he be plethoric and robust, a low diet, with moderate depletion should be enjoined for some days: but if he be of a weakly constitution and already debilitated, he may be allowed a more nourishing diet.

We come now to speak of the consequences which sometimes succeed to gonorrhœa virulenta. These are gleet, swelled testicle, enlargement of the lymphatic glands of the groin, suppression of urine, phymosis, paraphymosis, strictures in the urethra, fistulæ in perinæo, inflammation of the prostate gland and bladder, &c.

All these affections do not occur in the same person, but yet in the course of practice they will be frequently met with. It is, therefore, necessary, that we be acquainted with the mode of treatment of each, as we shall perhaps be frequently consulted for their relief.

They are all local disorders, never affecting the general system with syphilis or any other disease.

OF GLEET.

By Gleet, I mean a discharge of a serous fluid from the urethra, brought on in consequence of a long continued gonorrhœa, producing a relaxation and debility of the parts. Sometimes it is said, that the discharge assumes a puriform appearance, but this is not capable of producing infection. Such a case has never come within my observation.

This is a very troublesome, although not painful complaint, and frequently proves astonishingly

obstinate. It has sometimes continued for six, eight, and ten months, notwithstanding every remedy was used, and at length has disappeared of itself. It sometimes troubles persons for the remainder of life. By its long continuance in some cases it debilitates the body very much; but, generally speaking, it induces no such effects, and is only extremely disagreeable from the constant stillicidium which takes place from the urethra.

As it is a local disorder, local remedies have been recommended and used in its cure. The principal mode of employing these, has been by injection. For this purpose the infusion of oak galls, corticis querci, &c. in water, and solutions of alum, and preparations of zinc, lead, and mercury, with many other mineral and vegetable substances have been used.

The cold bath, and especially sea bathing, have been known to cure a gleet of long standing, and by some it is esteemed an infallible remedy, washing the parts frequently with cold water, is very useful.

A gleet after continuing for a great length of time, often disappears spontaneously, but it sometimes remains by the patient for life, as I have before observed. By means of astringents and the cold bath, gleet is frequently cured in the course of five or

six weeks ; but generally, a much greater length of time is required for their removal.

In some instances the gleet, when long protracted, debilitates the system by its evacuant effects. When this is the case, the remedies indicated under such circumstances should be prescribed. These are tonics, such as the Peruvian bark and wine, the preparations of iron, bitters, &c. together with a generous diet and moderate exercise ; the cold bath is likewise useful in these cases. These brace up the system, and give tone and vigour to every part thereof.

Matrimony has, in many instances, proved a radical cure for gleet, and this remedy is especially recommended by Dr. Rush, Professor of the practice of medicine in the University of Pennsylvania. But our chief dependance, where this cannot be admitted of, must be upon astringent injections. I believe that injections of this nature may be used in every stage of gleet, care being taken not to use them of too great a strength, and varying them according to their effects.

Seminal weakness and impotency, are said to be the consequence, sometimes, of a long continued gleet and gonorrhœa. If strict attention be paid to, and proper remedies used for, the first appearance of gonorrhœa and gleet, this accident seldom ensues. When it does come on, all that can be done, is to

put the patient upon a high nourishing diet, and enjoin exercise and a frequent use of the cold bath. All provocations to venery, are more prejudicial than beneficial, and should be avoided.

OF SWELLED TESTICLE.

We come now to the consideration of that frequent and serious effect of gonorrhœa virulenta, the swelled testicle.

It produces the most excruciating torment that can be imagined, when violent in its degree; and appears, from the sufferings and expressions of anguish of the patients, to be equal to, if not surpassing, a twinge of the gout, or a fit of the gravel or stone in point of torture.

This swelling is commonly confined to one testicle; but it sometimes attacks both at once, sometimes each alternately, and sometimes the disease leaves the one and seizes the other, and then returns to the first again, thus affecting each testicle alternately; this, however, is a very rare occurrence. It begins in the epididymis at first, but in a few hours time the testis becomes affected and swells to a great degree. The scrotum also becomes tense, and appears red and highly inflamed, while a serous effusion takes place and the testicle becomes so tender and painful, that the patient cannot

bear it to be touched. It is very frequently sudden in its formation; and happily, we are acquainted with remedies which will as suddenly relieve it. For were not this the case, I am fully convinced the patient could not long withstand the pain which it sometimes induces. It is attended with a retraction of the testicle, while a most violent pain passing from it in the course of the spermatic cord, seems to fix itself in the lumbar region, causing the person to bend his body forward, nor is he capable of supporting himself in an erect posture.

This disease has been supposed to be caused by the matter of gonorrhœa falling down upon the testis, and hence it has been termed *hernia humoralis*. This idea was founded upon the circumstance of the running in gonorrhœa stopping upon the first appearance of a swelled testicle. But this opinion is so absurd that it does not need refutation; for besides that there is no communication between the urethra and testicles, for matter to pass, the swelling is devoid of that soft and elastic feel which it should possess, were it produced by matter: on the contrary, it is hard and unyielding, without any fluctuation of matter being perceived.

The true cause of this disease I am inclined to think, with Mr. Bell, is an inflammation in the course of the *vas deferens*, however induced. This opinion is supported by the circumstance of the *epididymis* being first affected, and then the testis: and from

the disease, in many instances, being induced by the improper use of strongly astringent injections in gonorrhœa virulenta. And here I would again observe, that injections of the sugar of lead, have been known to produce this complaint much more frequently than any other injection. This effect appears to be owing to the high degree of astringency which this medicine possesses, and to its being used in too great a quantity. I have known it, when used in this manner by ignorant persons, to stop the gonorrhœal discharge in the space of a few hours, and bring on a swelled testicle in as short a period.

The remedies which have been employed with the greatest success, for the removal of this affection, are all of those denominated antiphlogistic. If the pulse admits of it, bleeding in the arm should be practised. Leeches applied to the scrotum and perinæum are of excellent service; but as these cannot be obtained in all situations and cases, we must resort to other remedies. The best application that I know of, is a strong solution of sugar of lead in water. Soft linen, doubled three or four times, is to be wetted with this solution, and applied to the scrotum over the whole swelling; this is to be wetted again, as often as it dries or becomes warm, and constantly kept on. This I have seen, in many instances, prove effectual in relieving the pain and inflammatory swelling in a short time;

and in the course of a few days entirely remove the disease. Together with these, a low diet and abstinence from all heating drinks and spirituous liquors, should be enjoined. On the first attack a purge should be administered, and the body afterwards kept open by means of gentle laxatives. The practice of warm fomentations and poultices, in the early stages of the disease, is very injurious, inasmuch as they at first increase the inflammation, and commonly leave the testicle or epididymis in a schirrous state. By strictly pursuing the antiphlogistic plan, this disease may, in a few days, be perfectly cured. When great irritability prevails, opiates may be exhibited with advantage. The cold bath to the scrotum and perinæum is also employed with advantage.

As the gonorrhœal discharge frequently, and almost universally, ceases upon the appearance of the swelled testicle, it has been recommended to bring on a fresh running to cure this disease. This is found useful in many cases, but oftentimes it is a difficult matter to produce this effect. This intention is answered by applying gonorrhœal matter to the urethra; but it sometimes requires to be repeated several times before that discharge is brought, which is deemed sufficient for the purpose*.

* This practice was found serviceable in a remarkable instance which is related by the celebrated De Haen.

I have never yet had an opportunity of making this experiment; but am convinced it would be essentially useful in those cases of swelled testicle, where the enlargement continues after the pain and inflammatory symptoms have been subdued: but the pain is so intolerable in the first instance in this complaint, that we cannot wait for the slow operation of this remedy.

A schirrous state of the testicle, and particularly of the epididymis, is apt to follow this disease, where proper evacuating remedies have not been at first sufficiently used, or the disease is uncommonly obstinate; when this occurs, mercurial ointment may be rubbed upon the part; emollient poultices should be applied and fomentations used, provided no inflammatory symptoms prevail. From having observed a solution of muriate of ammoniac, or crude sal ammoniac in water, of service in many indurated swellings, I am induced to believe that in this complaint it would also prove serviceable; I would, therefore, advise a trial of this remedy when others fail.

In every case of swelled testicle, the suspension thereof should be advised from the first, and continued through the whole disease. Indeed, I think that suspending the testicle upon the first appearance of every *gonorrhœa virulenta*, may often be the means of preventing the swelling.

OF GLANDULAR SWELLINGS

OF

THE GROIN.

Swellings of the lymphatic glands of the groin frequently, are a consequence of gonorrhœa virulenta. Mr. Bell, mentions a swelling of the lymphatic vessels of the penis, as a complaint which sometimes follows gonorrhœa; and he observes, that this inflammation extending to the glands in the groin, is the cause of the swelled glands in that part. But whether this be the case, or that some of the matter is absorbed by these lymphatics, and arrested in its course by those glands, I will not take upon me to determine; but I am convinced from observation, that the disease, however produced, is local. It is of great consequence to make a distinction between glandular swellings of the groins from gonorrhœa, and buboes produced by the absorption of the venereal virus. When the patient has been affected by chancre, the swelling is to be considered as venereal. But if he has not, nineteen cases out of twenty the swelling is from gonorrhœa alone, and to be treated with local remedies.

This affection, if attended to in time, may very generally be repelled. For this purpose, blood-letting, general and topical, should be employed,

according to the state of the system. The application of leeches to the part is very beneficial. Rags wet with a strong solution of sugar of lead in water, and applied to the part, as in swelled testicle, are highly serviceable. Gentle laxatives, so as to keep the bowels free, should be used; and a low diet should be ordered.

Even after the inflammatory symptoms are reduced, the glands frequently remain in a tumefied and schirrous state. In this case, emollient poultices may be employed with advantage. A mercurial plaster kept constantly applied to the part, or a solution of the muriate of ammoniac in water, have been found of service in such cases. Cold bathing to the parts is also of use. It has likewise been recommended in these cases, to bring on a gonorrhœal discharge from the urethra for the relief of these indurated glands; but this appears to be a precarious remedy, although in some instances, it has seemed to be useful. Much depends upon the proper treatment of the swelling during its first stage, while inflammation attends, for the prevention of this last affection; and it is highly necessary to discriminate between these swellings and venereal buboes. For this purpose it may not be unnecessary to observe, that mercurial frictions, in almost every instance of the former affection, are of evident disadvantage, inasmuch as they increase the inflammatory symptoms; whereas in venereal buboes, mercurial ointment, well rubbed in, is always of

great service. When the glandular swellings of the groin terminate in suppuration, which is seldom the case, if properly attended to at first, their edges do not assume that ragged and swelled appearance which those of buboes generally put on; but they are smooth and equal, and require the same mode of treatment as sores of other parts from other causes; mercury being never absolutely necessary for their cure.

OF PHYMOSIS.

This is an inflammation of the prepuce before the glans penis, in such a degree as to prevent it from passing over the glans in the usual manner. It is induced by whatever excites a great deal of inflammation in the penis, and hence it often appears in gonorrhœa. I have already observed, that a puriform discharge sometimes takes place from the glans penis itself, in that form of gonorrhœa, which is termed gonorrhœa spuria. This matter, by inattention, becomes acrid, and produces excoriations of the glans and prepuce; and hence, by inducing inflammation, is a frequent cause of phymosis.

In this complaint, emollients, poultices of bread and milk, with sweet oil, &c. and fomentations, have been recommended; but they should be used

after the inflammation is somewhat subdued. This may be effected in most cases, by solutions of the sugar of lead, &c. in water, applied by means of rags, to the swelling. Bleeding, by leeches applied to the part, might be used with advantage ; a low diet should be advised.

After the inflammation has, in some measure, abated, emollients prove more serviceable. Dipping the penis in warm milk, or a decoction of althea root, or of lintseed, is supposed by Mr. Bell to be the most effectual method of applying these remedies.

Weak injections of sugar of lead or white vitriol, or warm milk and water, should be frequently thrown up, by means of a syringe, between the glans and the prepuce, to wash away any matter that may be collected there, and to allay the inflammation. These injections are also very proper and useful where the phymosis is brought on by gonorrhœ spuria, or excoriations of the glans and prepuce.

It sometimes happens that, notwithstanding all these remedies have been tried, the disease still remains. We are then to have recourse to an operation for its removal. The operation of circumcision has been advised by some, but I believe this is now generally laid aside, and that of laying open the prepuce preferred to it. For the method of per-

forming this operation, and the mode of treatment afterwards, I refer to surgical authors. It has been recommended by some, for the prevention of this disease, at each time that the patient makes water, to seize the end of the prepuce so as to prevent the urine from passing out; the urine of course, passes between the glans and preputium, and swells this out; washing away any matter that may have lodged there. I think I have seen this of service.

OF THE PARAPHYMOSIS.

This disease occurs from a *contraction* of the *preputium* behind the glans penis; or to a swelling of the glans itself.

This is a more painful, as well as serious, disease than the phymosis, and by its long continuance a mortification of the glans may be produced.

The remedies for this, are the same as for the last-mentioned complaint. Local blood-letting, either by the lancet or leeches; cold water and vinegar, with solutions of the sugar of lead, are the most useful.

When these fail, an incision should be made through the stricture, so as to divide the prepuce completely. This may be done by cutting upon the stricture: the wound should afterwards be dressed with lint and the saturnine ointment; for further particulars, see surgical books.

OF OBSTRUCTIONS
IN
THE URETHRA.

Obstructions frequently take place in the urethra, either from *excrescences* of the part, or from *strictures*. When excrescences are the cause of the obstruction, which is seldom the case, the disease is not so distressing or dangerous, as when it occurs from strictures. These caruncles are seldom found farther within the urethra than an inch, or an inch and an half. As ligatures can seldom be used in this affection, our chief dependance must be placed upon bougies. These by causing an inflammation and a suppuration in these spongy excrescences, remove them, and thus cure the complaint: but in many cases it is a long time before this purpose can be accomplished; probably bougies may act in a mechanical manner, by compression, and thus assist in removing the disease. Mr. Bell, in his volume on the venereal disease and gonorrhœa, has given some very good formulæ for preparing bougies. A bougie may be left in the urethra for about half an hour, two or three times a day. The obstruction may be known to be removed, when the patient makes water without any sensation of a stoppage in its passage.

Strictures in the urethra frequently produce very serious obstructions in that passage. These appear to be of two kinds, which may be termed *spasmodic*

or *temporary*, and *permanent* or *fixed*. By spasmodic strictures, I mean, those sudden and temporary contractions which sometimes take place in the urethra during an attempt to evacuate the urine, which prevent its flowing for a short time, and then disappear of themselves, often in the course of a few minutes, without any evident cause. By permanent strictures are meant, those contractions of the urethra which steadily impede the passage of the urine, and which rarely or never disappear of themselves, but always require remedies for their removal. They both seem to owe their origin to a morbid irritability of the urethra.

Spasmodic strictures may be known by their appearing at one time in a violent degree, and again disappearing in the course of a few hours, though in some cases, they continue for a greater length of time. In every instance of stricture, we should inquire particularly of the patient, the history of the disorder. For it is often by this alone that we can be able to distinguish between the two diseases, which is of great consequence.

For the cure of the spasmodic kind of stricture, bleeding, both local and general, according to the state of the system, opiates and emollients are the most serviceable : an opiate has been known to remove a stricture of this kind in a few hours. Rubbing the perinæum and penis with anodynes, have been recommended. Warm emollients may be used with

advantage in this disease. A moderately low diet should be advised. Electricity has been said to have cured this complaint; blisters to the perinæum have been employed : but our chief dependance is to be placed upon opiates. After the inflammatory symptoms have been subdued, bougies may be employed with advantage, as they are the most effectual means of preventing a return of the disease. They act mechanically by compression : but they should never be used while any degree of inflammation exists, as by their irritation in such cases they tend to increase the complaint.

The *permanent* or *fixed stricture* of the urethra, is a disease, both more serious in its consequences to the patient, and more perplexing to the practitioner, than any which I have yet mentioned. The pain and distress occasioned by an obstruction to the flow of urine, is almost inconceivable, while the consequences which result from this suppression of urine, are equally distressing and serious.

Whatever may be the cause of this disease, bougies are among the first remedies. For the proper directions for using these, and many other pertinent observations on this subject, consult Mr. Bell's volume on the venereal disease. To do good, bougies should be frequently introduced, and suffered to remain in the urethra, in contact with the stricture, for such a length of time that no pain be excited by their presence.

When suppression of urine takes place for any considerable period, the most alarming consequences are to be dreaded. We should endeavour to remove this symptom, therefore, as soon as possible. For this purpose frequent attempts should be made to pass the catheter. But in some instances, all such endeavours prove fruitless and vain. Under these circumstances, a catheter with a bougie point fixed on it, in such a secure manner, as to prevent its slipping off, and introduced into the urethra, will often succeed in drawing off the urine. This method has been employed with the greatest success, by Doctors Wistar and Physick, of Philadelphia.

When these means fail, Doctor Philip S. Physick recommends the stricture to be perforated by means of an instrument, which consists of a lancet concealed in a case of silver of such a length as to reach the strictured part. To the lancet is affixed a handle, rather longer than the case. The lancet being drawn a little within the case, the instrument is introduced into the urethra, until it meets with the stricture, when this is accomplished, the lancet is to be suddenly thrust through it, and the instrument is to be then withdrawn. The Doctor says he has succeeded in this manner, after all the other remedies had failed him. It is obvious to every one, that much nicety and judgment are requisite to perform this operation, lest parts should be wounded

unnecessarily, which, perhaps, might induce very disagreeable and distressing consequences.

A practice has lately been employed for the removal of these spasmodic strictures, which consists in attaching a piece of lunar caustic to the end of a Bougie, in such a manner that it shall be in no danger of slipping off, and that nothing but its extremity shall be exposed. This is introduced into the urethra, and applied to the stricture for a short time. This is said to be an effectual remedy, but much caution is required in its use. In the course of five or six days, or thereabouts, the eschar comes away with the urine. This is certainly a dangerous remedy, unless in the hands of a skilful surgeon; and I think it should be resorted to in such cases only, where all other remedies have failed. See Mr. Home's ingenious treatise.

The operation of the paracentesis of the bladder, is seldom performed in this complaint; as by the frequent attempts to evacuate the urine, and its passage being obstructed by the stricture, the urethra is burst, and a disease denominated fistula in perinæo, is produced.

The urine having escaped from the urethra, insinuates itself into the surrounding parts of the perinæum, and in a short time, a protrusion of the part is observed. The patient at first feels somewhat easier than he was a little time before; but

too soon his pain is renewed and increased to a great degree, by the irritation, and the distention of the parts. The tumour increases in size at every attempt to discharge the urine, by its passing through the laceration in the urethra ; a fluctuation is soon perceived in it, the tumour suppurates, and at length bursting, discharges itself outwardly. The patient again finds immediate relief, and vainly hopes his disease is nearly at an end. But alas ! he is in a much worse state now, than he was before. At every attempt to make water, the urine passes out at this new-formed aperture, and continues to do so, until the stricture is removed.

To accomplish this, our only chance now for a recovery, is from an operation, for an account of which, I beg leave to refer to surgical writers.

OF WARTS.

Warts frequently appear upon the glans and prepuce, as a consequence of gonorrhœa, most commonly after the disappearance of the running. They are entirely local, and yield only to local applications, not being affected by general remedies. They are sometimes so numerous as to become very troublesome, and oftentimes painful ; and as they are apt to produce ulcers, if not carefully attended to and kept clean, they should be removed as soon as possible.

For this purpose the scalpel or ligatures may be used; but as these cannot be employed in every case, we must have recourse to other remedies. A solution of corrosive sublimate, or muriate of ammoniac, in water, may be tried. Caustic applied to these excrescences has been used; but the most effectual remedy for their removal, is a powder composed of equal parts of ærugo æris and savin, and sprinkled on the warts; this causes them to drop off in a few days. This I learned from Doctor Physick, while attending at the Pennsylvania Hospital. An infusion of savin, in water, has also been found very useful in removing these affections. They may frequently be taken off with a pair of sharp scissars, with little or no pain. They sometimes occur about an inch within the urethra: in this case, bougies must be depended on for their removal.

INFLAMMATION

OF THE

PROSTATE GLAND AND BLADDER.

Inflammations of the prostate gland and bladder, are frequently the effects of a gonorrhœa virulenta, attended with a high degree of inflammation. They are caused by the inflammation of the urethra extending to these parts. In some instances, they occur from an improper and injudicious use of

very astringent or stimulating injections. By early attention to the first appearance of gonorrhœa, and by the proper application of such remedies as have been before recommended in this disease, these inflammations may very often be prevented from occurring.

When, however, these are present, they may be known by a frequent inclination to make water; which is discharged in small quantities, and sometimes only to the amount of a few drops, attended with great pain and often mixed with blood. At the same time a fixed burning pain is felt in the Perinæum, and an irritation about the lower end of the rectum, attended with a tenesmus.

The remedies are blood-letting from the arm, if the pulse will bear it: leeches should be applied to the perinæum: bathing the perinæum and anus frequently in cold water is very useful. Ice pounded and put into a bladder, and applied to the perinæum, has been found of excellent service. A solution of the sugar of lead in water, with a small proportion of vinegar, applied to the perinæum by means of pledgits, has been found serviceable. Mucilaginous injections thrown up the rectum, are of great benefit; especially if opium be combined with them. Opium is of great use in these complaints, and should never be omitted. It allays the irritation, and quickly procures ease. It may be given by the mouth, but it is most effectual

when used in the form of glyster; as it then comes more immediately in contact with the parts affected. The bowels should be kept open and free, by means of laxatives. A low diet and mucilaginous drinks, such as flax-seed tea, barley water, and the like, should be ordered. By persisting in these remedies for some time, almost every case will terminate favourably.

MODE OF PREVENTION.

As gonorrhœa, however slight, is a loathsome disease, and when violent in its degree frequently induces such a train of painful and distressing concomitants, it has been long an object to discover some remedy for its prevention. But hitherto no specific one has been found out. Those means of prevention which have been most advantageously used are topical; and of these, the washing the parts immediately after a connection with a suspicious person, has been observed to be the most beneficial.

For this purpose, cold water is as good as any thing else, and preferable, on account of the facility with which it is obtained. The washing should be performed immediately after the connection, otherwise it frequently fails. Particular attention should

be paid, not only to the exterior parts, but the prepuce should be drawn back, and the frænum and parts immediately adjoining thereto, should be thoroughly washed. It is owing to an inattention to this circumstance, that the practice of washing, often is of no service, for the matter of infection, in most instances, remains in the foldings of the frænum, and communicates the disease, even after the person has performed lavation, and thinks himself secure. I have also known the practice of washing to fail, where it has been neglected for too long a time, and in one or two instances, where it has been disregarded, even for fifteen or twenty minutes.

Soap and water, either warm or cold, have been used for this purpose; also, brandy, gin, or any spirituous liquors. A solution of the carbonate of pot-ash, in water, has likewise been employed; but I do not suppose any of them are preferable to simple water. The patient before washing, should always discharge his urine, this serves to wash away any matter that may be situated about the end of the urethra.

Rubbing the penis and glans with mercurial ointment, has likewise been tried, and I am credibly informed, this prevented, in one instance, infection from lues venerea. But it is dangerous to rely on this practice in such cases.

The following recipe is a very good one, as a prophylactic.

R. Calomel....ʒ ii.
 Gum arab....ʒss.
 Sach. sat....ʒss.
 Aquæ rosar....lb. i.
 Misce sec. art.

The parts are to be carefully washed with this, as directed formerly. It has proved effectual, also, in four or five instances, in preventing infection from lues venerea, where the persons had been so imprudent as to expose themselves to it.

Before concluding this dissertation, I would remark, that *gonorrhœa* has sometimes been observed to *alternate* with puriform discharges from the *nose* and *eyes*, resembling the matter of gonorrhœa. Some instances of this nature are recited by Mr. Bell; and these are confirmed by Doctor Wistar, Adjunct Professor of Anatomy, &c. in this University; who, in the course of his lectures, mentions two decided cases of gonorrhœa, alternating with an inflammation, and purulent discharge from the eyes, after the use of calomel injections, which he supposes are more apt to produce it than any other.

The method of cure in this, is much the same as in any other inflammation of these parts. Blood-

letting, general or topical, according to the state of the system, may be used. But moderately astringent lotions of *sach. saturni*, white vitriol, &c. are most to be depended on, and their use should be strictly enjoined.

It has been further remarked, that as soon as the gonorrhœal discharge returns, or can be reproduced, all inflammation, in a wonderful manner, quickly leaves the eye, and nothing seems to be so effectual in obtaining a cure, as the reproduction of this running from the urethra.

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