LESSON LXI.

Clinical cases continued—Case XV.—Subacute prostatitis—Frequent urination—Pain in the perineum and rectum on micturition—Acute enlargement of prostate—Prompt and complete relief on division of meatus and deeper strictures—Case XVI.—Frequent and painful micturition resisting all treatment—Cystitis—Pains in testicles, back and abdomen, promptly relieved by division of strictures—Case XVII.—Frequent urination—Cystitis—Ordinary treatment ineffectual—Pains in hypogastria, thighs, testicles—Immedidiate relief upon division of contracted meatus urinarius—Cure permanent.

CASE XVI.—Mr. X., aged fifty-four, seen in consultation with Dr. Ives, his family attendant. Had a history of gonorrhœa twenty-eight years previous; severe, lasting two months. Second attack eight years ago; not severe; subsiding entirely in ten or twelve days under the use of injections of acetate of lead alone. Three years ago he began to be troubled with frequent micturition during the day and four or five times at night, associated with pain extending from the end of the penis to the neck of the bladder; also pain in the testicles and perineum, and extending down the thighs. Urine occasionally stopped and required to be drawn off with a fine catheter. Was taught to do this himself, and has often obtained relief in that way. About the first of August last, after using the catheter, he discovered a small bit of gravel in the eye of the instrument. Since that time he has voided a large quantity of the same sort, with fine, whitish sand, mucus, pus, and blood. Was under the care of a prominent surgeon in Brooklyn last summer, who, after careful examination, assured the patient that he had no stone in the bladder. This surgeon treated him at first by frequent washings out of the bladder; afterwards he used the galvanic current, with one pole in the bladder and one on the back. This was continued *daily* (!) for six weeks, but no improvement was manifest, and as the patient was much debilitated, he was sent into the country to

recruit. Since that time he has had no treatment except the use of Lee's lithontriptic pills, and the use of the catheter when required by attacks of retention of urine.

November 24, 1873. Present condition: Is in feeble general health. Has an expression of great and constant pain; is very restless and moans frequently, although evidently attempting control; skin pale and yellow; says his weight is 130; weight formerly 160. Genital apparatus well developed. Right testicle invaded inferiorly by a mass of fibrous feel, involving one-half the body of that organ. Left much the same, but softer. Passes urine in my presence in a small, divided, uncertain stream. Urine of strong, stale odor, thick and muddy in appearance. Albumen present in considerable quantity. Cursory microscopic examination shows cells of pus and blood. Epithelium from urethra, bladder, and pelves of kidneys, but no casts. Meatus urinarius apparently normal. Twenty-nine bulbous sound passes to the depth of one-third of an inch; it is, however, abruptly arrested at this point, and only 20 f. will pass. This (No. 20) found no farther obstruction in the deeper portion of the canal, but, on return, was firmly held at three-fourths of an inch, thus defining a stricture more than one-third of an inch in breadth. Visiting the residence of Mr. X., November 26th, he was found walking the floor with constant moans, begging to have the operation done at once to relieve his agony. Assisted by Dr. Ives, the patient was promptly anæsthetized. The stricture near the meatus was then thoroughly divided, and No. 30 f. bulbous sound passed through to one inch—here it was abruptly arrested; 24 f. only would pass, and was held firmly on return at one and one-third inches. I then introduced the dilating urethrotome, turned up to 30 f. and cut; 30 f. bulb was passed down to two inches, where it was again arrested; 28 f. only will pass, and, on withdrawal, is held at two and one-fourth inches. Readjusting the urethrotome, this band was also divided, when 31 f. steel sound was passed without force through the entire urethra. Ferguson's short-beaked sound was then introduced into the blad-

der and thorough search made for stone, but without success. Hæmorrhage slight, ceasing within fifteen minutes after the operation. Dr. Ives remains in charge.

November 29, three days subsequent to the operation, Dr. Ives called, reporting that the patient had no pains of any kind following the operation, up to his visit of yesterday. Under the influence of ten grains of quinine and a quarter grain of morphia he had slept for six hours, and on waking passed water with freedom, with slight smarting, but no pain. After this, the intervals between the act of micturition averaged about four hours. Passed the steel sound 31 with ease. Purulence in the urine greatly decreased.

December 16. Dr. Ives reports Mr. X. as having suffered for a day or two past with pain in the penis. Purulence in the urine has entirely disappeared; 30 steel sound drops through the urethra into the bladder by its own weight. The possibility of slight recontraction of the stricture at the meatus as cause of trouble was suggested.

Decembar 23, Mr. X. called with Dr. Ives. He reports personally that, while he passed his water every half hour with great straining and pain before the operation, that since then he has not been called to urinate oftener than once in three or four hours, up to within a week since, when it has been once in two hours. All the pains in the back and the lower part of the abdomen, in the testicles, and extending down the thighs, passed off entirely within a few days after the operation. During the last ten days he has had pain, referred to the vicinity of the prostate, when urinating, and the stream has been small and weak; could void it only by straining. He had himself passed 30 f. steel sound the day previous.

Examination of the prostate, per rectum, reveals no enlargement or tenderness; 30 f. sound passes without difficulty into the bladder, except a little hugging near the meatus; 29 f. bulb is arrested at one-fourth of an inch, and holds, on return, at three-fourths. I introduced a straight bistoury and cut through the contractions, so that No. 34 f. bulb passed in and out without obstruction, to keep this well open until healing is complete. Entire relief followed.

CASE XVII.—October 9, 1873, I was called to see a gentlemen, aged sixty-four, whose general health had always been good; he had lived generously, but regularly. He stated that for the ten years previous he had occasion to urinate on an average every hour during the day, and through the night even more frequenly; for the previous six months he was confident that he had micturated every half hour, unless some necessity prevented, when he always suffered from the delay. At no other time had he any pain; the frequency of micturition was simply an inconvenience. He stated that he had never had any gonorrhœal trouble. Several years previously he had consulted an eminent surgeon in regard to his urinary trouble, and was said to have "stricture just beyond the middle of the penis." For this he was treated by the occasional introduction of bougies for a couple of months, at the end of which time, no benefit being apparent, he ceased bestowing any attention on the matter. About three months previous he began to notice a creamy sediment in the urine, which would cling to the floor of the *pot de chambre*. It was not, however, until about three weeks ago that he began to suffer actual pain and straining on passing his water. To this was soon added pain *in the testicles, through the hypogastrium, and also in the perineum, and extending down the inner aspect of the thighs to the knee*. The stream of urine was subject to frequent sudden arrest, and the straining which followed was severely painful, and pain extended throughout the regions previously mentioned. The urine soon became of a deep reddish brown color, with occasional strings of blood and mucus mixed with the copious creamy sediment, which was now persistently deposited. Notwithstanding all this, he continued to ride daily, a distance of some three miles, to his office. About a week since, finding the motion of his carriage greatly aggravating his penis, he consulted an eminent medical personal friend of his, who informed him that he had a

grave cystitis, and commended him to my care. I found him sitting on a hop poultice, which had been prescribed for him by his wife's medical attendant (a homœopath), and ascertained that he had been taking frequent doses of a homœopathic preparation of belladonna.

Present condition: Constitutional disturbance very slight, pulse 80 f. temperature 93¾. Inspection of urine in the the *pot de chambre* (which was about one-third filled, and had been standing for several hours) showed a deposit of mucus and pus, stained and streaked with blood, fully one and a half inches in depth. Examination per rectum determined the prostate to be of even less than the normal size, and free from tenderness.

The introduction of Ferguson's short-beaked sound (No. 20 f.) into the bladder was effected with great gentleness, with ease, and without meeting with any abnormal impediment in its passage. The bladder was then thoroughly explored for calculus, but with a negative result. Confident, at first, from the history and condition of the case, that it would prove to be one of stone in the bladder, I had, thus far, only cursorily examined the meatus urinarius. Ferguson's sound (No. 20 f.) had passed through it easily. 22 f. and 23 f. bulbous sounds were now passed with ease, but 24 f. was held at one-third of an inch. After slight pressure for a few seconds it slipped suddenly through a ring of fibrous tissue and passed, without obstruction, down to the bulbo-membranous junction. The patient was then put upon a free use of infusion of tricum repens, and suppositories of belladonna and hyoscyamus every six hours.

A subsequent microscopical examination of the urine showed pus and blood in abundance, some urethral and vesical epithelium; none from the ureters, or pelves of the kidneys; no casts; albumen slight; specific gravity 10.20.

On suggesting to the patient that division of the strictured meatus was likely to be a necessity before much relief would occur, he desired that his friend, Dr. J. Marion Sims, should be called in consultation.

On Thursday, the 14th, after an exhaustive consideration of the case, Dr. Sims coincided with me as to the possibility, nay (in the absence of calculus and prostatic disease), of the probability, that the well-defined contraction at the meatus was the original cause of the cystitis, and might be justly held responsible for its continuance. The operation was at once decided upon, and the patient placed under the influence of ether by Dr. Harry Sims. I then thoroughly divided the contraction—first by the use of *Civiale's bistourie caché*—completing the division of some remaining elastic fibres with a straight blunt bistoury, until the opening admitted bulbous sound 31. This was then carried easily down to the membranous urethra, without discovery of any farther obstruction. The bladder was again thoroughly explored for calculus by both Dr. Sims and myself. It was found to be much contracted and thickened, but contained no stone.

On the 15th (the day following the operation) I ascertained that, since the division of the contraction, our patient had not had the necessity of passing his water more than once in two hours, and that the pains in the testicles, the hypogastrium, the perineum, and down the thighs, which had previously been his chief points of suffering, had *entirely disappeared.* There was manifestly less blood in the urine. By the 16th the pus had diminished one-half in quantity, the blood had entirely disappeared, and the intervals between the acts of urination had increased to two hours and a half. From this date the only treatment to which the patient was subjected was the daily introduction through the meatus, into and not beyond the fossæ navicularis, of a No. 31 bulbous sound. By the 26th (twelve days from the date of operation) the purulent sediment in the urine had entirely disappeared; riding or walking no longer gave him discomfort, and he had resumed his business. The intervals between acts of urination now vary from two to three hours. There is an occasional occurrence of spasm during the act, which causes the sudden stoppage of the stream, and the urine is voided slowly, and with but little more force than before the operation,

but he is not conscious of any other abnormality remaining. He expresses himself as feeling and being in better condition than for years. A few days subsequent to this interview with the patient he went abroad to remain during the winter.

LESSON LXII.

Clinical cases continued—Cases XVIII.—Chronic inflammation of the bladder—Gleet—Resisting every sort of treatment—Neuralgic pains in the groins, thighs, and in the perineum—Enlargement and discomfort in testicles—Detection of contracted meatus and deeper stricture—Immediate relief through division of the meatus and stricture—Complete recovery without other treatment within four weeks—Summary of foregoing cases—Explanation of causes which produce reflex disturbance—Manner in which relief is afforded—Method of operation in such cases—Results proving the correctness of diagnosis—Urethrismus.

CASE XVIII.—Aaron B., aged sixty-eight. History of a first gonorrhæa at twenty-one. Married at twenty-seven; had seven children, and no trouble with genito-urinary apparatus until four years ago, when he contracted another gonorrhœa. This, after a month, subsided into a gleet, and to this, in about three months after, catarrhal cystitis was added. The cystitis resisted every treatment, and has continued, in a greater or less degree of severity, up to the present time. About a year since he began to suffer with neuralgic pains in the groins and in the perineum, and he experienced a very uneasy sensation in his testicles, one of which became suddenly enlarged.

November 26, 1874. Penis only two inches in length, flaccid, three and one-fourth in circumference. Meatus 18 f. Left testicle half usual size; right normal, but with a greatly enlarged and soft epididymis, almost entirely covering in the glandular structure, and forming a swelling above it as large as a Madeira nut, and described as the seat of long-standing and very troublesome irritation. Some muco-purulent secretion from urethra. Has been treated for some time by use of soft bougies with pain and no relief. Complains of pains in back and groins, extending down along inner aspect of thighs; urination every half hour, day and night; freshly voided urine, loaded with pus and mucus; reaction alkaline; strong urinaceous odor; no renal

epithelium or casts; albumen slight; is uneasy and restless in manner, and full of anxiety, quite like a confirmed hypochondriac. Examination with 18 f. bulbous sound detects a stricture at the meatus, extending back for half an inch, after which it slips down the urethra without giving evidence of any farther obstruction.

December 22. I saw the patient in consultation with Dr. Willard Parker. Division of the stricture at the meatus agreed upon. Ether administered by Dr. Charles Turnbull. The stricture at the meatus was first divided. Dense cicatrical tissue, extending for fully one-half inch. Bulbous sound 32 f. was then passed to two and three-fourth inches, when it was arrested by a second stricture. 29 f. defined its calibre. The dilating urethrotome was then introduced, turned to 34, and the stricture divided. 31 solid steel sound then passed without obstruction through into the bladder. Relief to the neuralgic pains followed the operation almost immediately. Within forty-eight hours the intervals between the acts or micturition had increased from one-half hour to four or five hours. Purulence in urine greatly decreased. Irritation in the scrotum ceased, swelling of epididymis gradually went down, and the patient made a complete recovery, without other treatment, *within four weeks*.

In the foregoing cases, presenting features more or less grave in their conditions and consequences, a point of significant interest is common to all, viz., an abnormal contraction at or near the meatus urinarius, the well determined sequel in the majority of instances of antecedent inflammatory action. Abnormal spasmodic muscular action plays a prominent part in every case. Spasm of the urethral walls, of the accelerator urinal muscles, of the cremasters, of the vesical neck, and of the seminal ducts, etc.; spasm, as in Case X., so firm and persistent that the urethral walls finally gave way behind it; spasm that for months resisted the introduction of the smallest instrument, as in Case III.; spasm so persistent that the bladder was not allowed to completely empty itself for years (as in Cases XVII., XVIII., and XIX.), and thus producing the chronic catarrh, which finally became so grave an element in these cases; spasm, as in Case XII., where the testicles played at see-saw for nearly three years, and until the poor wretch who owned them was driven to the verge of suicide.

Some one or several of these conditions appear as a persistent feature in each. Spasm, a well-recognized result of irritation, is equally significant of debility. Most of the cases, if not all, were subjects of sexual excess. Irritation supervening upon nervous debility, spasm naturally results. Irritations which are known to give rise to reflex disturbance are *not of necessity painful irritations*, or which by any special sensation invite attention at once to the source of trouble. Dr. Hanfield Jones (in his work on Functional Nervous Disorders, page 704) says: "It seems to be well ascertained that *unfelt* irritation may give rise to very various morbid phenomena, affecting both the motor and sensory nervous organs. Dr. Brown-Sequard maintains that various forms of insanity, of vertigo, chorea, hysteria, tetanus, etc., may be due to irritations, starting from a centripetal nerve, and frequently *slightly* felt or *unfelt*, and that the suppression of these irritations may promptly cure the patient." He cites a case where a married lady suffered for a considerable time with a uterine neuralgia, which ceased completely on the extraction of a tooth that had not caused any considerable annoyance.

In the excellent little *brochure* on Stricture of the Urethra, by Samuel R. Wilmot, London, he says: "It is easy to conceive with what ease morbid irritation in the urethra may elude detection, and which, though slight, may be capable of exciting perfect reflex action, particularly in systems of high nervous mobility, and, where the slightest irritation exists within the urethra, the mere influence of the mind, derangement of the digestive organs, and various other remote causes will lead to spasm." What, then, in these cases of evident reflex nervous trouble, is suggested as the cause of the irritation? Division of a contracted meatus, as has been shown, relieves the reflex disturbance; and yet simple contraction of the meatus cannot be sufficient to

produce such morbid nervous actions as cited; for it is well known that congenital contractions at this point are frequent, and yet no irritation ensues. In congenital contractions, however, the muscular surroundings of the urethral orifice are in a normally supple condition, and able efficiently to play their part in completely emptying the urethra after micturition. Let this delicate muscular structure become infiltrated with plastic material, and the complete discharge of the last drops of urine, through its action, is rendered impossible. A *dribbling* after the act is the necessary consequence, and this is also an *unvarying* feature in all the foregoing cases. It is this inevitable retention of a few drops of urine which I believe to be the starting-point of the irritation. As time goes on, and the resulting plastic exudation becomes organized, cicatricial tissue forming and necessarily condensing, a permanent contraction results, which adds to the muscular inefficiency, especially when it occurs in an orifice congenitally insufficient. It is this condition which often prolongs a gonorrhœa, and is the most fruitful source of chronic urethral discharge following a gonorrhœa. That the retained urine causes the irritation I am led to believe still farther, inasmuch as behind strictures at the meatus granular spots of inflammation occur, sometimes extending throughout the urethra, and on relief of the stricture promptly disappear without other treatment, as in the third case cited. I have seen many such. Local points of tenderness were present in almost, if not quite all the cases of reflex urethral irritation that I have met.

Then, as the urethral orifice becomes permanently contracted and unyielding, a distinct and sudden *arrest* of the stream of urine repeatedly occurs during the forcible acts of urination. Is it too much to believe that the force of this blow at the point of arrest will add to the irritation, and that the effect of its recoil should be felt back even to the vesical neck? It seems to me that this may, after long years of such constant irritating influence, prove an important element in disturbing the harmonious action of the complex sensory,

motor, and sympathetic nerve distribution, in the deeper parts of the urethra.

Considering the force and persistence of the spasm in certain cases, the idea of its *tetanic* nature has suggested itself, induced by pressure and irritation of the nerves of the glans, in the cicatricial contraction. The treatment of the contractions by complete division, resulting in prompt and notable relief in all the cases, is equally suggestive of simple mechanical obstruction, (causing urinary retention), or cicatricial irritation. To be effectual, however, the division must be absolute and entire. It is not sufficient that the meatus be enlarged up to the normal urethral caliber. The incision must reach down *through all cicatricial tissue*, and so completely that the largest sized bulbous sound which can be passed through the opening shall pass in and return *without the slightest sense of resistance*. If it is less than this, the contraction is absolutely certain to return within a few weeks, often within a few days, in spite even of every possible effort to keep the parts dilated. Once, however, the stricture tissue is completely divided, it is then only requisite that the edges of the wound be kept asunder by the occasional introduction of a sound, until granulation is established throughout its extent. After this (if no new inflammatory action is set up) not only will no recontraction take place, but the old abnormal fibrous material will in time become wholly absorbed. This important statement, applying virtually to all strictures of the urethra wherever located, I do not make without the ability to prove it by the results of this plan, as presented in many cases thus treated.

URETHRISMUS.

The term *spasmodic stricture* has usually been applied to all temporary contractions of the urethra, which interfere in any degree with either the passage of instruments into the bladder, or the voluntary discharge of urine from it.

As thus understood, it has been described as varying in degree from the slight localized muscular spasm, which but momentarily arrests the progress of an ingoing instrument, to the firm, close contraction which more or less persistently resists its introduction in skilled hands. Or, from that which occasionally diminishes the strength and volume of the outgoing stream of urine in urination, to that producing complete and enforced retention of urine.

In whatever degree present in any case, it is claimed by all authorities to be characterized by its *transient* duration and its ready yielding to simple remedial measures. In accordance with this teaching all permanent or habitual interference with urination or with the passage of instruments (except in some rare instances complicated with vesical paralysis), must have an organic cause, and depend either upon the presence of an intra-vesical growth, an enlarged prostate or a true organic stricture. Not unfrequently, however, persistent difficulty of urination, and even retention of urine requiring habitual use of the catheter, has been observed by surgeons, where no proofs of intra-vesical growths were present, and where the easy passage of an ordinary catheter precluded the idea of enlargement of the prostate or of close organic stricture. It is also within the experience of many surgeons to have seen supposed subjects of close organic stricture placed upon the operating table for performance of external perineal urethrotomy, and, when fully anæsthetized to astonish the operator by permitting the full sized exploratory staff to slip easily into the bladder.

In other cases the entire absence of that peculiar resistance to the knife, which the experienced surgeon recognizes when dividing cicatricial tissue, and the failure to locate with exactness the contracted point, will suggest to the memory of some that occasional patients, *perhaps* similarly affected, have not escaped so easily. It is scarcely an argument against these suggestions that reports of such cases have not found their way into the published records of urethral surgery. If now it can be proven that *purely spasmodic*

urethral contraction may, and not unfrequently does, present *all* the important diagnostic features of *true close organic stricture;* and farther, if it can be shown that polypoid and prostatic obstruction are often simulated by a chronic spasm of the accelerator urinæ muscles—producing obstruction and persistent closure of the membranous urethra—then it will be conceded that failure to appreciate so important a complication will conduce to grave errors in diagnosis, terminating possibly in an operation for conditions which exist only in the mind of the surgeon.