LESSON LVI.

SPASMODIC STRICTURE, OR URETHRISMUS.

Spasmodic urethral stricture—Chronic spasmodic stricture, or urethrismus—Clinical cases in illustration—Case I., of seventeen years' duration—Complicated with incontinence of urine, etc.—Cured by division of a contracted meatus urinarius combined with over-distension of the membranous urethra — Case II.— Case treated for close organic stricture by eminent surgeons—Subsequently proved to be spasmodic and cured by division of anterior strictures of large calibre—Case III.—Treated for close, deep organic stricture for three years—Completely relieved by division on anterior stricture of large calibre—Case IV.—Treated for impassable deep stricture for years—Repeated aspirations of the bladder for prolonged retention of urine—Promptly and permanently relieved by division of anterior strictures of large calibre.

The occurrence of obstruction to the passage of instruments through the deep urethra is frequent, and yet it has been shown that organic stricture beyond the bulbous urethra is exceedingly rare. In the very largest proportion of cases this obstruction is due to the spasm of the muscular or membranous urethra, caused by the irritation consequent upon stricture in the anterior portion of the canal. The following cases will show how readily the error of mistaking spasmodic stricture for organic stricture may be made:

CASE I.—A gentleman, æt 39, holding an important government position, came under my observation in October, 1875, with the following history: Acute urethritis, from contagion, at the age of fifteen, (1857,) severe, and followed by a gleet, which lasted, under a varied treatment, for three years. In 1856, another acute attack, following a suspicious contact, lasting several months. No subsequent exposure. In 1858 took a long, hard, horseback ride, with a young lady, during which had urgent desire to urinate, but was obliged to postpone for several hours. When opportunity occurred, could not; retention complete; was finally relieved by the introduction of a catheter. Since that time has always had more or less trouble in urination; frequent attacks of retention after vinous excess, or fatigue, one lasting for thirty hours. In 1862 came under the care of a distinguished surgeon who, after examination, attributed the trouble to a close, organic, stricture in the membranous urethra. Internal urethrotomy was performed. After recovering from this operation, the patient, as directed, passed a catheter himself, at stated intervals, often leaving it in from one to two hours. After a few months, neglecting the use of the catheter, he had another attack of retention. Another surgeon was called in, who attempted divulsion. The instrument "got jammed," (as the patient expressed it,) and, in withdrawal, several shreds of mucous membrane were found attached to it. Much and prolonged suffering resulted. His general health became impaired, suffering also from occasional retention up to 1867, when, without special treatment, he began to improve, and went on active duty. He was, however, at this time, much annoyed by habitual incontinence of urine. In 1871 went under the care of the late Dr. Armsby, of Albany. Then followed two months of treatment; patient confined to bed. During this time systematic and prolonged but fruitless efforts were made to enter the bladder. The operation of external perineal urethrotomy, without a guide, was then proposed as the last resource. This was declined. Some improvement in the incontinence taking place during the following few months, patient went on special duty. From 1872 to the present time, has had much incontinence, and occasional attacks of retention which were caused either by excitement, cold or wet feet, or any interference with the general health. Relief had been attempted by various surgeons, resulting in much hæmorrhage in several instances, but in no instance was the surgeon successful in entering the bladder. *Relief always came spontaneously during sleep.* After rising from stool, a certain amount of urine habitually escaped. This seemed to the patient to "collect in the urethra just in front of the anus." Can now control the urine during the day; voiding it

at will, but in short, irregular jets, or in drops—never having the feeling of completely emptying the bladder. During sleep the urine dribbles off, *completely emptying the bladder*. Retention occurring during the day is often relieved by *letting warm water run on the wrists*. Urine can never be passed, even in drops, in the presence of any one.

Present Condition.—Great nervous debility; easily excited; very irritable; tremulous, starting on slight occasions; appetite variable—generally poor; weight 114 lbs. Urine examined, and found to be normal. The patient refused to submit even to the most superficial physical examination, except under the influence of an anæsthetic, and this he desired to postpone for a couple of weeks. He was directed to take quinine and iron, and to rest in a recumbent position for three days previous to the proposed examination.

At 1½ P.M., October 29th, the patient was brought under the influence of the nitrous oxide gas, and then of ether, (through the apparatus of Mr. Clover, of London,) by my associate, Dr. L. Bolton Bangs. An examination was then made, resulting as follows: Genital apparatus well formed, circumference of penis, 3⅛ inches, meatus 24 f. urethra 31 f. to 2½ inches, at which point it was contracted to 26 f. Three distinct bands in the succeeding inch, urethra then enlarging to 32 f., was clear for this size bulb, to the bulbo-membraneous junction. Here, however, an obstruction was met, which resisted the passage of gradually decreasing sizes, of both solid and flexible instruments, down to the finest filiform bougie. I then divided the contracted meatus to 31 f., and with the dilating urethrotome raised the same point, incised the contractions from 2½ to 3½ inches. Then began a patient and systematic endeavor to pass the deeper obstruction. This lasted a little more than one hour, (during which time, the anæsthetic was repeatedly carried to *stertor*,) when, finally, a fine English filiform guide-bougie was insinuated, closely hugged, through the obstruction and well into the bladder. After remaining for a minute or two, it was found to be free, and easily movable; suddenly, it was again closely held.

This occurred, first in my own hands, and subsequently in those of my associate, Dr. Bangs. From the outset, I had strongly suspected the obstruction to be, in a great measure, spasmodic. The first occurrence of trouble after the long, hard ride, and a prolonged voluntary retention of urine; the subsequent failure to get substantial relief by the deep urethrotomy; the frequent subsequent retentions and incontinence, and failures of skilled surgeons to enter the bladder with even the smallest instruments; more than all, the spontaneous and thorough emptying of the bladder *during sleep*, and finally, the obstruction playing "fast and loose," with the small bougie I had succeeded in passing.

All these considerations combined to give me an assurance, almost positive, of spasmodic stricture, dependent upon an anterior urethral irritation; but I had already removed the anterior obstructions, and yet the passage of large instruments was resisted. I fully believe that, with patient effort, the spasm of the *compressores* would give way; but the patient had been under æther for more than an hour, and I could not consent to forego the advantages already gained, on an uncertainty. I therefore screwed on the staff of the urethrotome of Maisonneuve, and attempted its entrance. After passing it down three or four inches the guide was arrested: gently pressing it for a few minutes, without the assurance of free progress, I withdrew it and found that the filiform guide *was doubled back upon the staff*. I then unscrewed the guide and attempted the passage of the plain staff. This, after gentle, persistent pressure, some five minutes or more, guided by a finger in the rectum, resulted in its passage through, and well into the bladder. The blade of the instrument, (cutting up to twenty-two, was then passed down, *meeting with scarcely any resistance in the membranous urethra*. On its withdrawal a 31 f. solid steel sound was passed and without force into the bladder.

I was then fully confirmed in my original impression that the deep obstruction was mainly if not entirely spasmodic. The blade of Maisonneuve which had been passed could only cut up to 22 f. and yet it had been

easily followed by a solid-steel sound number 31. The bare fact, however, that *cutting* had been done, more or less, would warrant the inference that the obstruction was *organic* and had been removed by the 22 blade of M. Maisonneuve. It was a matter of great regret that a more prolonged trial with a large sound had not been made before resorting to the knife, but this was unavailing, and the question of the true nature of the obstruction was necessarily left in doubt. The operation was completed at 3 P.M. of the 29th of October, having occupied one and a half hours. A suppository of quin. sulph. gr. x and morph. sulph. ¼ was administered and the cold-water coil applied.

8 P.M.—Patient suffers from neuralgic flashes in both hips, quite severe; has frequently suffered in the same way during attacks of retention. At 10 P.M., *he passed water in full stream*, but with considerable pain. Four hours after, (30th, 2 A.M.,) had a sharp chill, lasting an hour; followed by fever and sweating. Suppository quinine 10 gr., and morphia ¼, repeated. At 10 A.M. again passed water in full quantity, with much less pain. At 12 o'clock, (two hours after urination,) had another chill, but much less severe than the first. Mental depression very great. Some sciatic pain.

October 31st, M.—Has had no more chills, passed water in good stream; no more neuralgia. Pulse and temperature normal. No more incontinence during the day, much less at night. Still much demoralized, but hopeful.

November 1st—Still improving. Nitrous oxide gas administered by Dr. Bangs, and 31 steel sound introduced. No resistance to the passage of the instrument; bleeding slight. Four hours after the introduction of the sound, he had another chill, followed by a temperature of 103°. Quinine and morphia administered as before, and stimulating liniment applied along the spine. Another chill six hours later, one hour subsequent to urination. After this, patient improved rapidly. Free from pain. No incontinence day or night. Quinine 5 gr. three times a day. No other treatment up to November 4th. On this date the gas was again administered, (without which the patient would not submit to the least interferenee,) and 31 solid sound again introduced. Chill followed four hours after, temperature rising again to 103° Fahr. Nothing noteworthy subsequent to this until the 6th, when under gas, the sound was again passed. No recurrence of urethral fever. Sound passed again on the 8th. Went out walking on the 9th. From this the improvement was steady and rapid up to date, November 13th. No further introduction of instrument. Urine is now held, with ease, for six hours, and passed in large stream, promptly and without discomfort. General bodily and mental health greatly improved. Goes into the country to-day for a few weeks.

November 26th.—The patient again presents, saying that, after leaving New York on the 13th of November, he had continued to improve for a week or more, neither troubled with incontinence nor pain; nor any marked difficulty in emptying the bladder. At the end of that period, however, he began to notice less control over his urine at night, and the stream diminished in size within twenty-four hours, so that he was in as bad a condition, apparently, as ever. He stated, however, that he had no pain, and could empty the bladder at will, though only by drops, or fine, short jets. The return of trouble was attributed by the patient to exposure in a cold out-side water-closet, repeatedly, during a long and severe storm; confinement to house, and want of his accustomed exercise. He is much discouraged on account of the return of his incontinence at night, and his frequent necessity to urinate during the day, but suffers no pain.

The sudden return of incontinence and difficult urination, pointed very squarely to a *spasmodic* cause, rather than to recontraction of stricture. The patient was at once put under suppositories of extract hyoscyamus gr. 4, and extract belladonna gr. ¼, every six hours, with quinine and iron internally. During the next three days, the condition of the patient was not materially altered, although the constitutional effect of the suppositories had been had.

On the 29th of November, an examination under

the nitrous oxide gas, showed *a re-contraction of the urethral orifice to* 24 f. This was now freely divided to 33, and 32 solid steel sound passed without difficulty to the bulbo-membranous junction, where it was abruptly resisted. Decreasing sizes were then tried, but without avail, until a filiform No. 1 was used. This passed into the bladder, but was quickly grasped in the membranous urethra, as on the occasion of the first operation. The spasmodic element was now so pronounced at this point, that it was thought wise to defer any further interference until the full effect of the division of the re-contracted meatus should be ascertained.

*November 30th.—Urination easy in a full, round stream.** This improvement, with complete relief from incontinence, continued until December 2nd, when the tissues at the meatus became inflamed, and the urinary troubles returned, dribbling as bad as ever: urination frequent; lotio plumb. et. opii applied.

December 3d.—Inflammatory condition better, and patient passes quite a fair stream. Only 30 bulb can be introduced through the meatus.

At 12½ P.M. of this date, patient was again brought under the influence of the nitrous oxide gas and ether, and the meatus incised, so that 34 f. bulb passed with ease.

A large and very flexible bougie (11 f. at the point and 30 from three inches,) slipped over a small sound to give it resisting power, was then passed down to the bulbo-membranous junction. Here it was steadily held in line with the sub-pubic curve, for five minutes, no yielding, although the patient was well under the influence of ether. I then withdrew it, and passed down a 32 blunt-pointed solid steel sound and held it gently, and steadily pressed against the resisting muscular spasmodic contraction, for nearly ten minutes. The ether was then carried to profound anæsthesia, when suddenly the sound slipped into the bladder. I then

* At 6.30 P.M. of the 29th, patient writes a note, saying: "Dear sir: I have just passed an unbroken, fair-sized, and nearly round stream, with no dripping, until it was nearly all out, and no pain. When I say *fair-sized*, I mean compared with anything except my few days of first great relief. Yours truly,—— ——."

took No. 34 f., and passed it, closely hugged, but without undue force, up to the handle, and thus well into the bladder. My object was, mainly, to over-distend the muscular urethra, as in the operation for vaginismus, to which the condition of the membraneous urethra and its surroundings seem to me to be analagous. Bleeding very slight, and apparently from the incised meatus; administered suppository, 10 grs. quinine, and ¼ gr. morphine. At 5 P.M., patient had a sharp chill, with severe sciatic pains, and followed by fever and sweating. At 8 P.M. six drops of Magendie were administered by hypodermic injection; asleep in two minutes. Patient had a fair night, free from pain. Urine passed into urinal during sleep.

December 4th.—At 9½, temperature 98½°, pulse 100, feels well; no further interference, except to continue quinine, 5 gr. every eight hours.

December 5th.—Passed a good night; some sciatic pains, no fever; passes a full large stream, emptying the bladder with a single effort.

December 8th.—Still doing well; no incontinence, passes his urine at will, in full stream; is much troubled with sciatic pains. For the last three days No. 32, solid sound, has been passed daily through, and somewhat beyond, the meatus, but always with the effect of bringing on or increasing the sciatic pains. There is now slight purulent urethral discharge. To stop all instrumentation. General health has not improved, appetite poor, and digestion difficult. Is taking quinine, Horsford's acid phosphates before, and pepsin after meals; to go out for a ride.

December 13th.—Sciatic pains have been relieved by the galvanic continued current; digestion improved. Urination free and painless; no incontinence. Goes home to-day with directions to continue the acid and quinine, to take exercise in the open air, but to cease all interference with genito-urinary apparatus, except by use of a mild injection for the slight urethral discharge which has remained since the last operation.

A few days later I received a letter, dated December 16th, from which the following is an extract: "The

journey (two hundred miles,) had no ill effect on me, further than to make me stiff and tired, my sciatic leg holding itself upon the verge of mutiny; so I laid quiet and petted it. The next day I got up and down two pair of stairs, forty-six steps, twice; taking a three block walk, and two quite heavy meals. Leg still stiff and sore. That brings me up to to-day, which records "better." *My stream of water retains its large size*, and gives me a good deal of satisfaction and no discomfort. The discharge and irritation are improved, but the former is not quite over. My appetite is good, and I think I shall gain quite rapidly now that I have begun to walk and eat."

January 29th.—A little more than seven weeks from last operation, patient called and reports: From date of last minutes, a gradual improvement for three weeks; then improved rapidly, as only then did the sciatica quite leave him. The sciatic trouble was not in shooting pains as before, but in sore spots from the middle of the gluteal region, passing down the thigh of the same side. No sense of soreness, on pressure, at any point. Appetite good; has increased in weight from 114 lbs. to 122 lbs. Makes a full stream, *which he can project to the distance of three feet*, but thinks, after long fatigue, his stream is not so strong. His spirits are good. He has entirely recovered from his mental demoralization; works perfectly well on close mathematical problems for six hours on a stretch. For two years before the operation no semen passed, although he had all the sensations. Since then it passes perfectly at every orgasm. This trouble he states was the cause of his depression of spirits; feeling, as he expressed it, "like a eunuch."

March 9th.—Called; this morning, in good condition. Has gained seventeen pounds since the operation, and is quite well of his urinary trouble. When he is much fatigued, mentally, thinks the water comes too slowly; when he is rested, it is all right, is in fine spirits. Has been overworked, and is off for a week in the Adirondacks.

May 20th.—Called; has gained in flesh, and is in perfect health, with not a sign of his former genito-urinary trouble.

November 12th, 1876.—A grateful letter received, in which he, my patient, says: "I write to tell you that *I am in the very best of health.* My old enemy, conqured at almost the moment of victory, has taken his place where memory alone can reach him. Literally, I weigh 142 lbs., *and am well.*" The last report from this patient was in 1881 at which time there had been no recurrence of his urinary trouble and he was in good general health.

In concluding the report of this remarkable case, I will only say, that it is in the line of my experience and observation, to find strictures at the meatus, and anterior portion of the urethra, associated with all the symptoms of deep organic stricture. In my article on Spasmodic Strictures, published in the *Archives of Dermatology*, *Vol.* 1, *No.* 3, (1875,) several such instances will be found. The foregoing case exemplifies, in a striking manner, the influence of anterior contractions in producing and perpetuating spasmodic stricture, of a character *identical in every respect* with true organic contraction of the deep urethra, and which, as shown in the above case, resists every form of treatment, which does not include complete restoration of the anterior portion of the canal, to its normal dimensions.

CASE II.—"Bernard O. C.,* æt. thirty-five; was admitted July 31, 1878. Patient had gonorrhœa nine years ago, the discharge becoming gleety and lasting for six years. In the fifth year of the disease he had a perineal abscess, which healed after remaining open for ten weeks. other formed at the same site about four weeks before admission, having a fistula which had not yet closed. When admitted he passed stream of urine about size of knitting-needle. Examination of urethra detected obstruction about five inches behind meatus, admitting only filiform bougie. At the same point, steel sound

* This case was reported by the late Dr. C. M. Allin to the Medical and Surgical Society of New York in 1878, and published in the *Hospital Gazette* of June 28, 1879, in the author's controversy with Prof. H. B. Sands on spasmodic stricture. Cases III. and IV. are also from the same.