chewed sexual indulgence entirely. Occasionally nocturnal emissions were accompanied and followed by the same pain previously referred to, but less severe than in connection. In June, 1873, after seven years of continence, he noticed a slight gleety discharge from his urethra, with pain in the glans penis, aggravated by motion, walking, or riding. After a variety of opinions by various surgeons as to the nature of his complaint, it was finally decided to be a stricture of the urethra, and was treated by the semi-weekly introduction of bougies. His stricture was supposed to be in the deep portion of the canal, and after six months of treatment, his urethra was said to have been raised in calibre from 8 to 11 of the English scale. He then had an attack of acute cystitis, lasting two or three weeks, and since that time he has been subject to frequent trouble in micturition, frequency, and pain along the urethra, especially at the glans penis, and "a feeling of wetness," as the patient describes it, "that is depressing in the extreme." He also had weekly seminal emissions. Examination in this case showed full development of penis. 26 f. defined stricture one-third of an inch from the meatus. Examination of bladder fails to detect any calculus. No evidence of contraction at any other point in the urethra with No. 21 f. bulb. I divided the stricture at the meatus, and passed 30 f. solid steel sound, easily through the urethra and into the bladder. This was in July, 1873. The operation was followed by immediate relief from pain and frequency of micturition. The discharge soon ceased, a gradual improvement took place in regard to the pain after emission, for several months, when it began to return, and also some of his vesical irritation. Examination revealed a recontraction of the stricture. This was again divided, and the patient soon after wrote me that he had done well since the last operation and was entirely relieved of all his most troublesome difficulties, but an occasional feeling of irritation in the perineal region, induced him to think that slight recontraction might have again recurred, and he proposed to return at some convenient time for examination upon this point.

LESSON LVIX.

CLINICAL CASES IN ILLUSTRATION OF REFLEX IRRITA-TIONS CONTINUED.

Case VII.—Irritability of the bladder—Frequent urination—Pain following sexual connection—Feeble stream in urination—All promptly relieved by division of contracted meatus urinarius—Case VIII.—Incomplete erections—Involuntary emissions—Premature seminal discharge cured by division of meatus—Case IX.—Pain in back—Hypogastric region—Groins—Testicles—Inner side of thighs and knees—Also slight accumulation in tunica vaginalis of both sides (hydrocele) promptly cured by division of meatus urinarius—Case X.—Retention of urine from spasmodic stricture and cystitis—Cured by division of meatus and deeper stricture.

CASE VII.—Mr. S., aged forty-five, has had gonorrhœa twice, followed each time by a gleet lasting many months, finally cured by introduction of steel sounds. He had several attacks of irritability of the bladder since first attack of gonorrhea, and long ago noticed that this was affected by the use of any alcoholic stimulant, and also that he did not completely empty his urethra after micturition. To effect this, he was in the habit of pressing his finger along the urethra, from the perineum. Unless he did this, a sense of irritation in the canal and a desire to urinate, would come on in a few moments. Complained of feebleness in making water after a week or two of continence. On having connection, the stream was at once greatly improved. Any sexual excess was followed by pain in the perineum. His trouble now thought to depend on spasmodic stricture, and large sounds advised. In order to admit them, it became necessary to incise the meatus. This done, 32 f. was easily introduced, but not continued as contemplated, as all trouble passed off in a few days. A few months subsequently, however, his old troubles returned, and were not relieved by the use of the sound. At this point he came under my care. Penis found to be four inches in circumference, which

would indicate a capacity of urethra of at least 38 of the French scale. No. 28 bulbous sound detected contraction at the meatus. This was freely divided, with the immediate result of relieving the irritation of the bladder, and in a short time pain following connection had almost entirely disappeared, and the stream of urine was increased in force, and the ability to empty the

canal much improved.

CASE VIII. Mr. Z., aged forty-six. Regular and chaste in habits until going to China twenty years since. Following the custom of foreigners in that country, he indulged excessively in sexual intercourse for several years. Had a single attack of gonorrhea, from which he recovered completely in a few weeks. For the last few months he has been troubled with involuntary emissions as frequently as once a week, and latterly, in his attempts at sexual intercourse, he has failed, on account of the seminal discharge having occurred before the erection was complete. He feels quite certain that his genital apparatus is less in size than formerly. Examination shows penis of normal size, three inches in circumference and three in length; some enlargement of the left spermatic veins; testes soft, full size, left largest; meatus urinarius contracted to 22 f. On introduction of the bulbous sound through it, as it was quite unyielding, it required some slight pressure, a, ndas it suddenly slipped into the fossa navicularis, a regular spasmodic retraction of the penis occurred at intervals of three or four seconds (retraction about a quarter of an inch), and continuing during the half minute that the instrument was retained, and continuing with rhythmical regularity for three or four minutes after its withdrawal. The result of the introduction of the sound was repeated several times at that sitting, the intervals between the contractions gradually lengthening, until an interval of five or six seconds occurred, when it ceased. These movements, so evidently of reflex origin, suggested the dependence of his seminal troubles on the same cause. I therefore divided the meatus thoroughly, and introduced thirtyone sound without difficulty through the urethra.

After the operation, the introduction of the thirty-one bulb failed to excite any spasmodic contraction of the penis, nor in frequent subsequent experiment was I able to reproduce this phenomenon. An immediate improvement in the general condition occurred. His involuntary emissions ceased without other treatment, and in six weeks after the operation he informed me that he had entirely recovered his sexual powers.

CASE IX.—I. W., aged thirty-four, came to me in September, 1873, complaining of frequent seminal emissions, one or two every week, pains in the lower part of the back, in the hypogastric region, in the groins, running into the testicles and extending down the inner aspect of the thighs to the knees. He was of chaste habits up to some four or five months previous, when he became engaged to be married. After this time he was the subject of frequent and prolonged venereal excitement and ungratified desire. In a few weeks, involuntary emissions became frequent and finally painful, with suffering for some time after. Gradually the previously described pains of the back, hypogastrium, groins, testicles, etc., came on, resisting all treatment by his family physician until the present time. I prescribed for him absolute abstinence from sexual contact, general care of diet, side position in sleep, cold ablutions, etc., and a mixture of bromide of potassium with the bromide of ammonium and tincture of ergot. December 3d, three months after (living several hundred miles distant), he came again to see me, with the report of an entire relief from the seminal emissions, but had had swelling of testicles, and still suffered from almost constant pain in the back, over pubes, in the groins, and, especially of late, in the testicles, extending down the thighs. Examination revealed a serous effusion into the tunica vaginalis of both sides; in the left some three drams of fluid; in the right rather more, and which backed well up to the external abdominal ring. The light test showed this fluid to be quite transparent. I at first thought of treating it as an ordinary hydrocele, by withdrawing the fluid; but on finding a meatus, situated on the superior aspect of the glans, contracted to

15 f., and holding the bulb for fully one third of an inch. and further finding that he had long been troubled with dribbling after micturition, I explained to the patient the possibility of all his trouble arising from this congenital deformity. He promptly consented to an operation, and I divided the contraction thoroughly, passing afterwards a thirty-four steel sound through the urethra. (Circumference of penis three and a half inches.) Several sensitive points were recognized by the patient during the passage of the sound, indicating a granular condition of the mucous membrane. Immediate relief of the pain in the testicles and down the thighs followed the operation. Within a month all trace of fluid in the tunica vaginalis had disappeared; he had had a single nocturnal emission without pain, and with the exception of a feeling of nervous anxiety through the hypogastrium (which came on occasionally), and some pain in his back, after general fatigue, he was quite recovered from his troubles. No internal remedies were made use of subsequent to the operation. Subsequently this patient married, had several children, and has continued well up to the present time, May, 1883.

CASE X.—Mr. De F., aged forty-three, came under my care in March, 1867, suffering from retention of urine following a debauch. As no great amount of urine was present in the bladder, I gave him mur. tr. ferri, advised a hot bath, and left him. On the following morning he expressed himself free from any trouble, and declined an examination of the condition of his urethra. In December, 1871, he again presented, complaining of incontinence of urine. He was also suffering from intermittent fever (which I suspected was due to his urinary trouble.) Said he "made his water freely, but could not hold it." I found some accumulation in the bladder. As the patient lived out of town, I made no examination, but advised him to make arrangements to come in town on the following day for treatment.

He did not present again until November 30, 1872, when he came with the statement that he had then lost

all control of his urine; had had none for the past year. On the day previous, while riding, he noticed a swelling in the perineum, and "wished it looked after." Examination revealed a firm elevation of the left of the raphé, one and a half inches in diameter at the base, and about an inch in elevation, extending from just behind the anterior border to the anus to the junction of the scrotum with the perineum; solid, resilient and painless; no constitutional disturbance; temperature, 982°. On examination of the urethra, expecting to find a deep, tight stricture, I was surprised to find myself able to pass No. 13 f. catheter into the bladder, and to draw off a full pint of fetid urine, although he had just urinated. During the day the swelling increased, and interfered with the calibre of the urethra, so that I could only pass a No. 1 catheter into the bladder, and that with difficulty. Attaching this to Dienlafoy's aspirator, I drew off a pint and a half of urine. This, on examination, was found to be free from any evidence of organic disease of the kidney.

I then incised the tumor down through the superficial perineal fascia, and gave exit to a thin layer of pus, in

quantity about a drachm. It was only on the fourteenth day after (the swelling gradually subsiding) that urine was found flowing through the wound. In the meantime, the patient suffering from cystitis, his bladder was washed out with a double-channeled catheter, No. 20 f., which was passed without difficulty, although a perceptible clinging was recognized near the meatus. His bladder trouble increasing so that he made his water every hour, and it was loaded with pus. I urged an operation on the stricture, which, from the easy passage of the catheter, I had not before considered of much importance. Introducing bulbous sound, No. 20 f., I could not detect any stricture; on it withdrawal it was arrested at a point half an inch from the meatus. Incising the stricture with the dilating urethrotome, which I introduced with some difficulty; I then passed No. 30 sound, without obstruction, down into the bladder. On the following day I found that the frequency of evacuation of the urine had decreased from one hour to six between the acts; that the purulence had decreased, and that much less urine flowed through the opening in the perineum. From that time the patient continued to improve; his control of the flow of urine was restored; the purulence gradually disappeared, and within a week his perineal incision had healed, and he left for his home apparently well, not having had any treatment whatever since the healing of the wound at the point of stricture. Circumference of penis in this case, three inches. Up to the present time, May, 1883, (eleven years from date of operation) he has continued well.

LESSON LX.

Clinical cases continued—Case XI.—Chronic irritation of the bladder, and gleet—Division of stricture followed by complete cure—Patient continues, after thirteen years, to be free from urinary difficulties—Case XII.—Neuralgia of testicles—Spasmodic contraction of the cremaster muscles—Pain in the groins, extending to knees and feet—Cured by complete division of meatus and deeper strictures—Case XIII.—Irritation in glans penis—Gleet—Frequent desire to urinate—Suspicion of calculus—None found—Division of meatus urinarius affords prompt relief to gleet and to reflex irritations—Case XIV.—Lack of virility—Frequent seminal emissions—Imperfect erections—Sense of weakness in urethra—Dribbling after urination—Unceasing desire to urinate—Cured by division of contracted meatus.

CASE XI.—February 12, 1872, Mr. A., aged fifty, came under my care, through the courtesy of a professional friend, with the statement that he had been suffering from chronic irritation of the bladder, accompanied by a slight urethral discharge, more or less troublesome, for a period of five years.

He was thought by his physicians to be the subject of "gravel," and for a long time had been much treated, and was finally sent abroad, in the hope that entire change of habit and climate might afford relief. He returned somewhat benefited. Soon after (about three months previous to his visit to me), and subsequent to a a season of prolonged exertion, physical and mental, acute irritation of the bladder recurred, with re-establishment of the urethral discharge, the latter quite like gonorrhæa, and was treated as such, although he had lived in the odor of marital sanctity for more than twenty years. Anti-blennorrhagics were administered with no benefit. Injections afforded only temporary relief.

The patient presented to me in usual general health; digestion good. He gave a history of an attack of gonorrhœa twenty-five years previous, which was treated solely by internal remedies. A profuse muco-purulent discharge was present. On urination the stream was

irregular and contracted. Meatus of moderate size, and admitted 18 f. bulbous sound; this was passed slowly and with some pain for half an inch, when it suddenly slipped into a capacious urethra beyond. On withdrawal, it was firmly held at half an inch from the meatus. On the same day I incised the stricture freely with Civiale's bistourie caché and passed No. 30 f. and sent him home with directions to his professional attendant to have dilatation practiced daily until healing of the wound was complete. Returning July 2d, he reported himself as having had entire relief from his bladder trouble, and from the discharge since the healing of the incision. For a few days previously, however, he had suffered with some vesical irritation. Examination revealed some contraction still remaining on the site of the stricture; this I at once relieved by the use of the dilating urethrotome, and passed 30 f. down into the bladder. For over thirteen years this patient has been free from all urinary difficulties.

CASE XII.-T. W., aged thirty-five, had gonorrhœa fifteen years ago; has had it several times since. The last time, four years ago, coming on forty-eight hours from date of exposure. After the discharge had existed ten or twelve days, he states that he "stopped it with a powerful quack injection." Three or four days subsequent to this he began to suffer with a neuralgic pain in the left testicle, the scrotum became tender and red, testicles moved up and down alternately much of the time, and the penis was greatly contracted; there was likewise pain in the groins, described as drawing and sickening, which extended down into his knees and the bottoms of his feet. This continued with varying severity almost without cessation up to February 22d, when he came to New York for treatment. He fell into the hands of an endoscopist, who discovered numerous granular spots deep in his urethra. Applications made at regular intervals for about three months without benefit. An application of carbolic acid to the scrotum gave some relief to his nervous feelings, but this caused vesication, and the relief was but temporary. About May 1st, he sought the advice of a surgeon skilled in

genito-urinary diseases. Slight stricture was discovered near the meatus, and several indurated points farther down. 28 f. solid steel sound was introduced, and after some repetition during one month was given to the patient to be regularly used once in three days until his trouble ceased.

Went back to his home, some eight hundred miles distant, and pursued the plan laid out for him, but received no benefit. The motion of his testicles was almost constant, and the nervous feeling this induced drove him almost frantic. Compared with it the pains in his groins, knees, and feet were a positive relief. He became very low-spirited and despondent. Early in October his physician (who had accidentally met with an article of mine in the second number of Dr. Brown-Sequard's Archives on "Reflex Irritations of the Genito-Urinary Apparatus, resulting from Stricture") advised him to return to New York and put himself under my care. My examination discovered a penis of normal size, three inches in circumference; scrotum greatly relaxed and covered with eczematous scales produced by the carbolic acid; testicles hanging very low. My attention was at once drawn by the patient to the rhythmical contraction of the cremaster muscles, through which a see-saw motion of the testicles was kept up, and which constituted his chief annoyance. Bulbous sound 30 f. passed the meatus, but was arrested at one half inch, a point to which his greatest sensitiveness, during passage of instruments, had always been referred. Bulb 28 f. passes through and detects another stricture at two inches, and still another at two and a half.

On Friday, October 17, at my invitation, the patient was examined by Dr. Coldham, of Toledo, Dr. J. De Forrest Woodruff and Dr. Frank Howe, of New York, especially in reference to the spasmodic action of the cremasters. This was very marked and constant, and continued until the patient was placed under the influence of ether by Dr. Howe. I then demonstrated the size and locality of the strictures before mentioned, and divided them in succession with the (my) large dilating urethrotome, after which I passed with ease a 30 f. steel

sound through all and into the bladder. As the patient emerged from the influence of the ether, it was observed that there was no longer any of the spasmodic action of the cremasters. When he became conscious, he stated that he already felt less of his nervous feelings than for many months. He was "certain that the right chord had been struck."

October 8. Improvement continues—no return of

spasmodic motion.

October 20. Examination with 30 f. bulb shows a slight clinging at one-fourth inch from the external orifice. Cut this at once, and freely, with straight bistoury, and pass 31 f. The patient, on the following day, expressed his belief that a complete cure had been effected; that since the final division of the meatus he had not the slightest return of the abnormal sensations and pain with which he had, in some degree, constantly suffered for the previous four years. Daily introduction of the bulb was kept up, in this case, until all bleeding ceased, when the patient was dismissed with the promise on his part to inform me by post if he had any return of his trouble. No such information was received.

CASE XIII.—Mr. H. D., aged fifty-one, had been under my professional care for several years; suffered from renal colic on two occasions—once in 1869, and again in 1871. Was not conscious of having passed any stone through the urethra. Came to me in February, 1872, complaining of a sense of irritation at the glans penis, and a frequent desire to urinate. Careful exploration of the bladder failed to discover any calculus. but the meatus urinarius was red and tender, and contracted to 20 f. This contraction was at once divided freely; size not noted. The relief from the irritation was immediate and complete. In May, 1873, Mr. D. called, stating that his old irritation had returned. Examination showed that the meatus had recontracted to 23. This was again divided, with relief equally prompt as on the first occasion; but in the subsequent daily introduction of a glass tube, size, 30 f. an unnecessary degree of violence was used by the patient, setting up an inflammation, which extended back as far as the

prostate, and threatened to culminate in an abscess of that organ. This inflammation was accompanied by a discharge which did not differ from an ordinary gonorrhœa in the declining stage. After two months of treatment the discharge still continued, with more or less irritation of the vesical neck. Meatus re-contracted to 24. Again cut to 30 f. This operation was followed by immediate relief from the vesical irritation. The discharge ceased without other treatment, and up to May, 1883, the cure has remained permanent.

CASE XIV.—Mr. M., aged twenty-seven, had a history of seminal weakness, following self-indulgence from fourteen to seventeen. Has never had venereal disease. Began to notice a lack of virility a year ago. Seminal emissions weekly. Erections imperfect. Frequent desire to urinate, which is promptly relieved by tr. ferrimur.; but this soon caused constipation (in spite of any. thing short of brisk cathartics), and increase of seminal discharges. Has a constant and annoying sense of wetness about the glans. Always dribbles in his clothes after urination. Microscopic examination of urine shows nothing abnormal but a few shreds of mucous. Prescribed mixture of bromide of potassa and bromide of ammonium, which arrested seminal emissions for a full month. He returned in better spirits. Had much less sexual desire than formerly, and occasional imperfect erections. Had not been obliged to urinate more than three or four times a day, since taking the bromides. When he came to me he described the desire to urinate as unceasing. After a month he returned with some measure of his urinary irritation, although still taking the bromides. Great annoyance at the dribbling after urination, and says that the constant sense of wetness is depressing to the last degree. Examined meatus critically; 30 f. passes, but hugs slightly on return; 31 will not pass. Size of flaccid organ three and one-half inches in length, and four in circumference. From this I estimate the normal caliber of the urethra at 38 f. at least. As the dribbling seemed to indicate some retention at meatus, I concluded to divide it freely. This was done without pain, under the influence of local anæsthesia,

when bulbous sound No. 38 f. was passed with ease through the length of the urethra, detecting several small sensitive granular points in its course. The relief from the dribbling in this case was immediate and complete. The sense of wetness (as the patient always expressed it), which gave him so much annoyance, was completely removed. Although taking no internal remedies, he has no return of emissions; the irritation of the bladder also disappeared. In this case the difference between 30 f., which measured the size of the evidently contracted and unresilient meatus, and 38 f. which was easily passed after division of the stricture, viz., eight millimeters, showed the extent of the contraction.

CASE XV.—A. W., aged twenty-seven, seventeen years ago had first attack of gonorrhœa. Afraid and ashamed to speak of it, he suffered greatly for four or five months without any treatment whatever. Has had several attacks since, which were treated solely with injections. About six months ago had an attack of subacute prostatitis, which caused him much pain, both in urination and defection. This lasted several weeks. Since that time he has had desire to urinate more frequently than natural—several times during the day, and also disturbed frequently at night. For the last five days he has been obliged to pass water almost every hour during the day, and at least every hour during the night, suffering great pain in the perineum, also in the rectum, at each act of micturition. He has, besides, a constant desire to defecate. January 10, 1874, examination per rectum reveals a tender and enlarged prostate, fully double the normal size. External genital organs normal, except the meatus urinarius, which was contracted to 20. Circumference of penis three and one-fourth inches. On passage of 20 bulbous sound, a distinct, unyielding fibrous ring was detected, which held the bulb firmly at one-fourth inch on its return. 19 detects second stricture at one inch, and a third at one and three-fourths.

For the patient's immediate relief, half a dozen Swedish leeches were ordered to be applied to the perineum at the anterior border of the anus. Morphia supposi-

tories every four hours. Under this treatment, with rest in bed, the rectal discomfort abated. Frequency of micturition, with pain in the perineum and rectum, remained without much amelioration until January 16th. On this date the patient was etherized, and with the assistance of Dr. Beach Jones and Dr. Weisfelder, I first divided the stricture at the meatus freely with Civiale's bistourie caché; then introducing the small urethrotome, I dilated to 30 f. and cut the second stricture at one inch; readjusted and cut the third at one and three-fourths, after which 31 steel sound was passed readily into the bladder.

The relief from pain and irritation in the rectum and at the neck of bladder followed the operation almost immediately. By the following day the desire to urinate was reduced to the normal standard, and the patient was disturbed only once during the night. February 10th, twenty-six days after the operation, he reports himself as having no further trouble, and as passing his water two or three times during the day and once at night. Examination per rectum shows the prostate free from tenderness, but fully double its normal size. Thirty-one steel sound passes through the urethra without the slightest trouble.