

although I have addressed a note of inquiry to him, I have not yet heard in regard to his condition.

The foregoing cases appear to me to prove, not only the reality of that form of chronic spasmodic stricture, which I have (from its analogy to *vaginismus*), venture to term "Urethrimus," but they also demonstrate its dependence upon anterior strictures, or even less prominent causes of irritation.

They demonstrate the fallacy of the claim that spasmodic stricture may be readily distinguished from organic stricture, and that the administration of ether necessarily causes the complete relaxation of reflex spasm.

LESSON LVII.

REFLEX IRRITATIONS THROUGHOUT THE GENITO-URINARY TRACT.

Reflex irritations now generally accepted as a cause of varied painful affections—Confirmation of this by eminent authorities—Incontinence of urine caused by contracted prepuce—Clinical cases in illustration—Incomplete erections, nocturnal emissions and various other troubles caused by phymosis—Dittels' case—Pitha's—Dr. Black's case of sympathetic irritation—Syncope caused by introduction of a catheter—Such accidents not rare—Dr. Brown-Sequard's case of supposed cerebral ramollissement caused by reflex irritation initiated by a contracted prepuce—Dr. Sayre's cases showing the pernicious influence of contracted prepuce—Cases by Sir Henry Thompson showing the influence of a contracted urethral orifice—Civiale's views on the influence of urethral contraction in producing varied reflex disturbances.

The influence of the irritation of peripheral nerves in producing centric disturbance in the spinal cord, which may thence be transmitted to distant parts of the animal economy (first claimed by Dr. Marshall Hall more than twenty years ago), has found corroboration in the testimony of every medical scientist since his time; and besides, so much clinical proof has been accumulated by the medical profession at large in support of this proposition that it is no longer a matter for discussion. Morbid reflex disturbances are now accepted as occupying an important place in the recital of human suffering.

Varied and grave disturbances, influencing the entire nervous system, are often ascertained to be dependent upon so apparently insignificant a cause as a decayed tooth, an indigestion, a simple erosion upon the cervix uteri, ceasing at once on the cessation of the cause. Dr. D. Campbell Black, of Glasgow, in his very interesting and valuable work on the renal and urinary organs, cites cases of retention of urine from reflex irritation, the result of an operation for hæmorrhoids. Trousseau has recorded cases of incontinence of urine

dependent solely upon the irritation caused by a preputial contraction. Dr. Sigismund Waterman, of New York, has shown me a case of this sort, which was promptly relieved by division of the prepuce. I have seen other similar cases, and also one marked case of *retention* of urine in an infant nine months old, which, after lasting four days, was completely relieved within one hour by slitting up the prepuce. Seminal emissions are well known to occur as a result of phimosis, relief occurring promptly on ablation of the prepuce.

Dittels relates a case where a man twenty-six years of age had a slight phimosis, and was the subject of incomplete erections, nocturnal emissions, frequent desire to urinate, and also of many hypochondriac symptoms, all of which were promptly and completely cured by removal of the prepuce.

A similar case is related by Pitha. Sweigger-Seidel cites a case where the simple introduction of a catheter caused complete syncope, and yet no urethral disease was present. I have the record of a similar case where complete unconsciousness instantly followed the introduction of a bulbous sound through the meatus urinarius. Every surgeon of much experience has recognized the tendency to syncope in a considerable proportion of nervous patients, on the first introduction of instruments through the meatus.

Spasm of the bladder is noted by Dr. D. C. Black as occurring from sympathetic irritation, and to a degree, resulting in the complete closure of the orifices of the ureters, producing retention of urine in the ureters and pelves of the kidneys. Such a case I believe I have seen, resulting in death from uræmia, and caused by the rude introduction of a catheter, through a narrow stricture at the posterior border of the fossa navicularis. Forcible and painful contraction of the bladder followed immediately, with complete suppression of urine. The patient died uræmic twenty-four hours after. The bladder was found empty (with the exception of a few drachms of grumous blood and mucous), closely contracted and free from disease. The ureters were normal, the kidneys highly engorged with blood, but pre-

senting no evidence of disease. The case was accepted as one of *acute suppression* of urine. The ureters are known to contract vigorously under the influence of the galvanic current. The above case,* it now seems to me, was one of spasm of the ureters and bladder, reflected from the irritation of the end of the penis.

Dr. Brown-Sequard, in the year 1874, related to me the following case:

"While in London, during the past year, a gentleman was brought to me who presented all the rational signs of advanced cerebral *ramollissement*. I had looked upon the case as quite a hopeless one, until noticing that the patient frequently applied his hand, in an absent sort of way, to his genital apparatus. Permission being accorded, examination of the parts revealed an aggravated inflammatory phimosis, complicated with acute balanitis. On making this discovery," said Dr. Brown-Sequard, "I expressed to the medical gentleman accompanying and in charge of the patient my belief of the possibility that the *apparent* ramollissement might be due to reflex irritation, caused by the evidently chronic and severe irritation of the glans penis. I advised complete division or ablation of the prepuce, and treatment of the balanitis, as the best and only hope for the patient's recovery from the brain trouble from which he was suffering."

The operation was performed, and the effect upon the mental and physical condition of the patient was almost immediate. "So rapid was his recovery," said Dr. Brown-Sequard, that within six weeks from the date of the operation, he presented himself at my office perfectly well in every respect."

Dr. Sayre, of New York, in the Transactions of the American Medical Association for 1870 has reported several cases of partial paralysis of the lower extremities, associated and evidently dependent upon adherent and contracted prepuce. One was of a boy five years of age, unable to walk without assistance, or to stand erect—his knees being flexed at an angle of forty-five

* Reported to the New York Pathological Society, March, 1872.

degrees. The operation of circumcision was performed on this lad by Dr. Sayre, and "from the very day of the operation the child began to improve," and without other treatment made a rapid and complete recovery. In a second case, a lad of fourteen years had been under treatment for paralysis of his legs for several months without marked improvement, when it was found that a contracted and adherent prepuce was present, causing great local irritation, dysuria, and painful erections. The preputial contraction was recognized as a possible important factor in causing the paralytic trouble. Circumcision was performed, resulting in complete recovery from the paralysis in six weeks.

Sir Henry Thompson says:* "I have given complete relief to distressing symptoms of very long continuance, the cause of which was not suspected, by dividing an external meatus, which, nevertheless, admitted a No. 6 English catheter. I have met," he further states, "with three marked examples of a similar kind, in which the very simple operation necessary was followed by complete disappearance of urinary difficulties, which had been long regarded as of an extremely obscure character."† He cites a single case: "J. J., aged thirty-four, a gentleman whom I had visited at the request of his medical attendant, in the spring of 1857, had been suffering from painful, prolonged, and frequent micturition for five years previous. He was compelled to pass water from three to five times every night, and every two hours during the day; experienced severe pains in the back and loins, and general ill health. Urine was purulent, alkaline; results of habitual retention and partial engorgement of the bladder. He had been treated for renal disease without any good effect. On examination I found a simple narrowing of the urethral orifice, and marks of previous ulceration in a small cicatrix. I learned," says he, "that he had had chancre seven years, before, which involved a large portion of the meatus, after the healing of which his present symptoms almost

* "Stricture of the Urethra," second edition, p. 249.

† Op. cit., page 253.

imperceptibly appeared. A probe only passed through the opening. I divided the contraction so as to make a free opening. A No. 10 catheter was passed easily into the bladder, demonstrating that there was no other obstruction, and twelve ounces of urine were drawn off, although he had passed water just before. The relief was almost instantaneous—in a week it was complete. He has had perfect immunity from his urinary complaints ever since."

The following quotations are from M. Civiale's "Traité Pratique des Maladies Génito-Urinaires, 2, Paris, 1850."

At page 45 et. seq. of this work, M. Civiale writes thus: "*Independent of its local sensitiveness, the urethra possesses another kind which may be termed sympathetic.* . . . When this sensitiveness is aggravated, it may awaken sympathetic response in every organ and function of the body. . . . In many cases sympathetic (reflex) phenomena were manifest in the lower extremities, particularly in the soles of the feet."

Again, at page 354 et seq. "It is not rare to observe that slight encroachments upon the urethral calibre induce marked difficulty in micturition; those at the meatus having this effect not less than those located farther in."

Again, at page 160: "Strictures seldom exist for a long time without exciting a series of disorders of the genito-urinary functions, and, consecutively, in remote parts of the body. . . . Among these, gleet, retention of urine, difficult micturition. . . . That which has struck me forcibly in dividing a meatus, only slightly contracted, is the sudden and complete change effected in the general condition of the patient. The constriction, which seemed hardly to impede the flow of urine, is no sooner divided than all morbid symptoms vanish: *the urethral walls which were rigid, hard, and inelastic, immediately recover their normal condition; the bougie, which at first passed only with difficulty and pain, slips into the bladder with ease, and in five or six days the slight incision in the meatus heals perfectly, and the patient finds himself in a state so satisfactory, that it would be incredible, but for the fact that the*

instances are again and again repeated. An effect so prompt through means of which the significance is plain, shows that *the slightest obstruction in the urethra is able to produce the gravest symptoms local and general.*"

By the cases already cited, and many others scattered through the periodical literature of the past few years, and the positive testimony of the great French surgeon, M. Civiale, in support of the capacity of such obstructions to produce reflex irritations in great variety, it is sufficiently shown that paresis, more or less pronounced, may result from irritations reflected through peripheral nerves, without any coincident morbid change in the structure of the spinal cord, and that incontinence of urine, retention of urine, suppression of urine, involuntary seminal emissions, may, in the same manner, result from irritation at the *extremity of the glans penis*. The case of simulated cerebral *ramollissement*, related by Dr. Brown-Sequard, occurring as a direct sequence of like irritation, indicates the wide range of sympathetic disturbances which may be initiated by simple inflammatory action at this point. Now, aside from the fact that the glans penis is known to be extraordinarily rich in sympathetic nerve cells, that it is the recognized initial point from which the physiological sexual excitement is transmitted throughout the male genitalia, the records of clinical experience abound with evidences of the capacity and proneness of this especial region to produce reflex disturbances, often of a grave and lasting character, throughout the entire nervous system. Notwithstanding these facts, I believe that the full significance of this locality as a source of reflex irritations along the genito-urinary tract has not yet been appreciated; and, further, I am convinced that many heretofore obscure difficulties and diseases of the genito-urinary organs may be distinctly traced to the locality of the meatus urinarius as the source of their initiation and continuance.

LESSON LVIII.

CLINICAL CASES IN ILLUSTRATION.

Clinical cases in the author's experience—Case I.—Irritation at neck of bladder cured by division of a contracted meatus—Case II.—Great nervous irritation cured by a similar operation—Case III.—Spasmodic stricture caused by contracted urethral orifice, cured by its division—Case IV.—Imperfect erections—Despondency and nervousness dependent upon contracted meatus—Cured by its division—Case V.—Intense irritation in the urethra and at the neck of the bladder promptly cured by division of a contracted orifice—Repeated re-contractions—Followed by return of trouble—Repeated operations finally resulting in permanent cure—Case VI.—Pain on seminal emissions—Gleety discharge—Acute cystitis—Frequent micturition cured by division of stricture.

CASE I.—A. Y., physician, aged twenty-eight, contracted first gonorrhœa November 20, 1873. Severe—lasted four weeks; treatment by alkalies, internally; continued application of cold, and mild injections. Was then under my care. I noticed, on examination, that his penis was large and the meatus small, and called patient's attention to this fact when he first presented for advice, and assured him if he did not have a fair recovery, it would be necessary to enlarge the meatus.

January 19. Patient presents, with gleety discharge without known cause, great irritation at the neck of the bladder, and frequent desire to urinate; is certain that his former disease was imperfectly cured, and that it has come forward from the deep urethra to which it had extended in his original clap. I reminded him of his contracted meatus; he is certain he needs deep injections, but submits to operation for enlargement of meatus. Cut it to 30 f.,* after which 30. f bulb passes

* Wherever in the course of this work the letter f. occurs, following a number it indicates millimetres circumference on French metric scale.

throughout the canal with ease: to keep the incision open until healing is complete.

January 24. Patient reports immediate cessation of irritation in the perineal portion of the urethra on division of the contraction. The discharge ceased within forty-eight hours, and he has had no trouble since.

CASE II.—September 10, 1872, Mr. W., a Swede silk-weaver, was brought to me by his medical attendant, complaining of pain and general discomfort about the perineum, and especially of a nervous uneasiness in that region and in the glans penis, which prevented him from pursuing his avocation; he could not sit still. Had had a gonorrhœa several years previous. Had been treated for stricture by dilatation for several months, but without relief. Examination showed a narrow meatus, No. 20f. Stricture at two and a half inches, defined by 18f. A free division of the meatus was made with Civiale's *bistourie cachée*, and of the stricture with the dilating urethrotome; 27f. passed readily through: to be kept open by daily introduction of sound until healed.

September 20. Patient reports entire cessation of the irritation and nervous feeling immediately following the operation, but this returned yesterday. Examination shows recontraction of the meatus to 20. Cut again freely.

November 16. Patient again called, with the statement that he had been able to work until the day previous, when the irritation again returned, and he desired to be cut again. Examination showed a recontraction at the meatus to 24. Cut again, and introduced 30f., which passed easily through the site of stricture at two and a half inches, and down to the bulbo-membranous junction. This patient called two months after (January 20), and had had no return of his trouble—no recontraction of meatus.

CASE III.—Mr. W., aged twenty-seven, had gonorrhœa in 1870, lasting one month, when a fresh exposure resulted in another attack, which lasted, under a sharp fire of injections, for six months longer. Since that

time, has always had a return of the discharge after connection. Has been under treatment for stricture by several physicians, but none succeeded in entering the bladder. His last medical attendant, after treating him for a couple of months, said that he had no instruments small enough to pass, and advised him to put himself under my care. Examination (April 16) showed organ unusually well developed, meatus contracted to 24f. and red and pouting, and bathed in a muco-purulent discharge. Twenty-four sound is arrested at five inches; only fine filiform will pass, and that is closely hugged.

April 19. Pass filiform with ease, follow with No. 10, and then, with some effort, with No. 16f. after this the filiform is again closely hugged in the membranous portion; divided the meatus freely, and introduced No. 30 steel sound, which passed literally by its own weight down through into the bladder, thus proving not only the spasmodic character of the deep obstruction in this case, but its entire dependence upon irritation caused by the stricture at the meatus.

CASE IV.—October 30, 1873. J. W., thirty-two, had gonorrhœa ten years ago, very severely, lasting, with pain and difficulty of micturition, fully six months. After being apparently well for three years, a gleet discharge appeared without new exposure. Masturbated daily from fourteen years of age to twenty, when he abandoned the habit. At twenty-six began to have nocturnal emissions, which, growing gradually more frequent since the last two years, have occurred almost nightly. He has had occasional sexual intercourse. Erections have been imperfect for last eighteen months, ejaculation taking place before the erection was complete. He has suffered much from despondency and nervousness. Has had no treatment except for general health, which much of the time has been indifferent. Examination shows genitals well developed and apparently normal, with the exception that while the circumference of the flaccid penis is three inches, the meatus is contracted to 22f. (the size of urethra in a

penis three inches in circumference is, as a rule, fully 30 f.*

November 1. Divided meatus thoroughly, and passed 31 bulbous sound readily through contraction.

November 11. Has had no emission since date of operation.

December 1. Found himself getting so much better in spirits and feelings generally, that he ventured to marry on the 25th. Since that time he has had no trouble of any sort. *Considers himself a well man.*

CASE V.—Mr. W., aged twenty-five, came under my care † December 1, 1872. Contracted first gonorrhœa early in June, 1872. Was treated by the use of injections locally, and alkalies internally, until August 1st, during which time he had no freedom from the discharge nor from acute suffering. About this time the vesical neck became involved, and he suffered much from frequent painful micturition. Came then under the care of a skilled endoscopist, who discovered numerous spots of granulation in the course of the canal, extending quite into the prostatic portion, and applications of a strong solution of nitrate of silver were made through the endoscope, which gave temporary relief; urination still painful every hour.

By September 1st, after the use of pencils of tannin and glycerine, discharge decreased to a slight mucus. A spell of damp weather brought back the purulent discharge, with return of perineal pain and frequency of micturition. Tannin pencils again used, but after continuing for four weeks, and no improvement, patient was put to bed, and hot hip-baths every two hours, etc.

* I have recently operated for congenital contraction of the meatus in a child ten years old, where the circumference was two inches. After the operation 22 f. was passed easily through the urethra.

3½ inches indicates urethral calibre	32 f.
3¾ " " " "	34 f.
4 " " " "	36 f.
4¼ " " " "	38 f.
4½ " " " "	40 f.

† Case V. and also Cases X. and XI. were published by me in Dr. Brown-Sequard's "Archives of Medical Science," 1872, page 152, et seq.: "Cases of Stricture of the Urethra of Large Calibre, producing Reflex Irritations, etc."

After five weeks of this treatment and various other, local and general, he came from his bed to me, December 1, 1872. On examination, I found no difficulty in introducing No. 20 f. bulbous sound, and discovered a firm cartilaginous stricture, extending from just within the meatus, one-half inch back. This I cut freely with Civiale. Immediately following the operation, he expressed himself as feeling "like a new man." In his written report of the case (he was a physician), he stated that, "on the division of the stricture, the relief *was wonderful.*" The discharge ceased within twenty-four hours, the perineal pain and frequency of micturition and the ardor urinæ also ceased, and he returned to his hospital duties, which were most active, on the following day (after having been laid up for over five months). The prostate, which I found double its normal dimensions on the first visit, is now found to be reduced in size fully one-third. The complete cure in this case was delayed by repeated reconstrictions, which finally necessitated a division up to 40 f., after which he had no further trouble. He was married several years since, and now, May 1883, has several children, and is in every respect free from his former troubles. It is interesting to note that the stream of urine after the final operation, was compact and strong, and could be propelled easily a distance of three feet.

CASE VI.—Mr. B., aged forty, from early boyhood has had more or less irritation of the urethra, usually referred to the region of the meatus urinarius. Twelve years since, he had an attack of gonorrhœa, which continued for nearly a year, in spite of a variety of treatment. Suffered much during this attack, especially with pains in the glan penis. After a continence of several months, on having sexual intercourse, found the act of seminal emission accompanied by an intense burning pain, extending through the perineum and lasting for half an hour, described like red-hot lava running over a raw surface. On subsequent similar occasions, finding the same result, his physician being consulted, called it a sexual weakness, and treated him by introduction of bougies. This failing to afford relief, he es

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 gleet 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 IRRITATIONS 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 gonorrhœa, 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