ON THE TREATMENT
OF
OBSTINATE STRICTURES OF THE URETHRA
BY
EXTERNAL INCISION UPON A GROOVED DIRECTOR.

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My sincere and firm persuasion being that I have devised an easy, safe, and effectual method of affording relief from one of the most obstinate and distressing infirmities to which the human body is liable, I naturally am desirous that the benefit thus placed within reach, should be extended to those who require such assistance. But as the reception of this proposal has been greatly impeded by incorrect statements, I labour under the impression, that although the truth may, and no doubt ultimately will prevail, a long time must elapse before the effect of what has been said and written can be effaced through the ordinary course of experience. In these circumstances it has seemed to me, that the best plan was to come frankly before this body, which represents the medical profession in London, to explain the plan of treatment which I have endeavoured to introduce, to state the facts upon which I am willing that its credit should rest, and to supply any farther information that may be required for enabling every member of the Society to form an independent opinion upon the subject.

In proceeding to attempt the accomplishment of this

undertaking, I trust that it will not be necessary for me to detain the Society with elementary observations on Stricture of the Urethra, my object being to direct their attention to certain forms of the disease which resist the hitherto established means of treatment, and seem to require some other remedy. In one of these forms the stricture is distinguished by an extreme degree of irritability, occasioning more than usual distress to the patient, and resenting, by violent local and constitutional disturbance, all attempts to effect dilatation; in another, the stricture, when dilated, speedily contracts again, so as to renew the symptoms attending it; and in a third, the stricture, though it may remain dilated sufficiently to permit the introduction of full-sized instruments, still continues to render the urinary evacuation painful, difficult, and uncertain.

For the remedy of these three forms of stricture, the established means of treatment, which may be all referred to dilatation, caustic, and internal incision, have too frequently proved unavailing beyond temporary palliation, or have aggravated the evil. I shall not attempt to calculate how many lives are thus rendered miserable, or how many have been cut short through vain struggles between the disease and attempts to remedy it, but may simply notice the Will of the late Mons. d'Argenteuil, who bequeathed funds sufficient for bestowing, at stated periods, a prize of nearly five hundred pounds in value, for the greatest practical improvement in the treatment of stricture. It would be difficult to express more emphatically the misery endured from this source, or the deficiency experienced in the resources of surgery for its relief.

The simple bougie is quite sufficient for the relief of stricture as it presents itself in the ordinary course of practice. But for the effectual remedy of those, which assume one or other of the peculiar forms to which the attention of the Society has been directed, I am prepared to maintain that a free division of the contracted part of the urethra is essentially required. For this purpose I introduce a grooved

director; and I believe that there is no stricture which through time and care may not be made to admit a proper instrument. The patient being then placed upon his back at the edge of a bed, and the knees held up, an incision about an inch and a half in length is made exactly in the raphe of the perineum, sufficiently deep to allow the director to be felt, and to permit the knife to be inserted into its groove, when the whole thickened, contracted, and indurated texture is freely divided to the extent of an inch, or two, or more if necessary, a number eight silver catheter being afterwards retained in the bladder for at least two, and not more than three days.

The procedure which I have now described is extremely simple, and may be easily accomplished, without any hurry, in less time than has been required for explaining its different steps. But, nevertheless, it is by no means easy, in the sense of being so, to every one who chooses to undertake it; on the contrary, there is no operation in surgery which more than this demands the most exact precision of performance, whether the attainment of its object, or its immediate effects, be held in regard. Unless the incision of the urethra is at the proper place, and of sufficient extent, no permanent benefit can result, and great embarrassment with its attendant evils may be experienced in introducing the catheter; while, if the knife is not confined to the middle line of the perineum, or is allowed to slip out of the groove, there will be the greatest risk of hæmorrhage and extravasation of urine. The Parisian Imperial Academy of Medicine, in awarding the Argenteuil prize in September last to Mons. Réybard, for extending the plan of internal incision, said, "that whatever be the form of the stricture, the incision ought always to be directed laterally, so as to avoid the artery of the bulb placed below." But in a reclamation relative to the disparaging terms in which the Academy thought proper to mention my method of treatment, I took the liberty of suggesting to that distinguished body, that, with regard to the position of the artery of the bulb, they had promulgated an anatomical error of the gravest

character and most dangerous tendency in the practice of surgery; since the vessel lies at the side of the canal, and can be avoided with certainty only when an incision is made exactly in the middle line. The exactness of incision being thus of such paramount importance, I have learned with extreme surprise that a surgeon has performed the operation professedly according to my principles, but without any grooved conductor, the only guide being a small silver catheter, upon which I do not hesitate to affirm it is absolutely impossible to make a straight continuous incision through the thickened textures of a stricture. I have read with hardly less surprise, that after the operation the catheter, instead of being retained only two, or at most three days, has been kept in the bladder six weeks, notwithstanding the long-established and well-known fact, that the presence of such an instrument, so far from promoting, greatly impedes, if it does not altogether prevent, the closure of a fistulous opening into the urethra. With feelings of, if possible, still greater astonishment, I have heard of operations being performed, ostensibly in accordance with the principles which I have endeavoured to establish, but in reality without any instrument at all being introduced through the stricture.

For the results of such proceedings, it is quite obvious that the operation which I have proposed cannot be held responsible. The only sources of danger alleged to exist are hæmorrhage and extravasation of urine. But if the knife is prevented from deviating beyond the middle line, there can be no bleeding except from the smallest twigs of the superficial perineal artery and the cells of the corpus spongiosum. There is, accordingly, at the time of the operation, seldom more than a teaspoonful of blood, and afterwards an oozing which hardly exceeds the extent of one or two ounces. If the patient is very full blooded, the quantity discharged in the latter way may possibly extend even to the amount of a teacupful, and so far as I have been able to observe, rather with a salutary effect than otherwise. But if, either to prevent soiling of the bed-clothes, or to protect

a nervous patient from unnecessary alarm, even this small amount of bleeding be deemed objectionable, it admits of being easily restrained, by placing a piece of folded lint between the edges of the wound, and applying the slightest degree of pressure for a few hours, or rather minutes, since coagulation soon takes place and prevents farther escape.

In regard to extravasation of urine, there can be no doubt that the circumstances most favorable to its production are openings through the deep fascia of the perineum, together with obstructions in the anterior part of the urethra; and hence the dangers of the operation for strictures deemed impermeable, which consists of deep incisions into the perineum, with uncertain and imperfect division of the contracted part of the canal. But according to my proposal, the only fascia concerned is that which lies immediately under the integuments; the knife is guided with unerring certainty through the whole extent of stricture, and a full-sized catheter is retained in the bladder until the cut surface is sealed up by effusion of lymph, so that extravasation of urine is impossible, even less likely to happen than hæmorrhage. It was these considerations which originally led me to regard the operation as free from danger; and having now performed it upwards of seventy times without any fatal, or even alarming consequences, I hope it will be allowed that my anticipations have not been unduly sanguine.

In illustration of what has been said, I now propose to mention some cases of stricture which have resisted the ordinary means of treatment, and yielded to external incision. But before doing so, in order to save the time of the Society, I may state generally the course of events which usually follow the operation. The catheter having been tied into the bladder, and secured by a plug to prevent the continuous discharge of urine, the patient is restored to his proper place in bed. On awaking from his chloroform sleep, he suffers so little pain or other inconvenience, as frequently to experience considerable difficulty in believing that the process has been accomplished. He then begins to

feel a pleasing consciousness of relief from what has long been a source of suffering and apprehension. He is tranquil and easily managed, not requiring opiates or any other ministrations, unless there should appear to be a greater degree of oozing from the wound than is convenient, in which case a piece of lint may be placed within the edges, and retained by slight pressure, until the bleeding ceases, which it usually does in a few minutes. The diet should be chiefly farinaceous, as animal food might cause thirst and restlessness; and mucilaginous drinks, according to the patient's taste, should be freely supplied, while wine and other stimulants are carefully withheld. At the end of forty-eight hours I have generally removed the catheter. But if the patient has not then begun to feel it uneasy, another day's delay, on the whole, seems advisable, since the escape of urine through the wound may thus be prevented, more frequently than in those cases where the instrument has remained only the shorter period.

A curious train of nervous symptoms occasionally present themselves, to the great consternation of all who have not previously witnessed them, or are unaware of their nature. They occur most frequently soon after the catheter is withdrawn, and appear to depend upon the urine resuming its natural course, but have also been observed at an earlier period. They have never, so far as I know, lasted more than thirty hours, and seldom continue above the half of this time. They consist of rigors, bilious vomiting, coldness of the extremities, suppression of urine, and delirium. They require no treatment, and do not seem to admit of being alleviated or curtailed by opiates, stimulants, or other means of remedy, requiring merely a little time for their disappearance, so that the only cordial of any service is a confident assurance on the part of the surgeon that there is no ground whatever for the slightest alarm or uneasiness. If the urine flows entirely through its proper channel, recovery may be considered complete in the course of a very few days, since the patient then makes his water in a full stream without pain or inconvenience, and with ordinary frequency,

having nothing to remind him of the operation except the superficial part of the wound, which soon contracts and cicatrises. When the urine escapes by the wound after the catheter is withdrawn, it generally continues to do so from one or two to eight or ten days, and then, diminishing to a few drops, speedily resumes its proper course. A full-sized bougie should be introduced once a week for three or four weeks, and then at more distant intervals, according to circumstances.

From the cases to which the attention of the Society is about to be directed, it will, I trust, appear: First, that stricture of the urethra occasionally presents itself in forms which resist the hitherto established means of treatment. Secondly, that strictures of the urethra, though deemed impermeable by surgeons of experience and reputation, may, through time and care, admit the introduction of instruments. Thirdly, that a free division of the thickened and contracted part of the canal, by external incision upon a grooved director, may afford complete and permanent relief in the most distressing and obstinate conditions of the disease. Each of the cases may not contribute evidence on all of these points, but the testimony of the whole will, I hope, be considered satisfactory.

CASE I.—About twelve years ago I was requested by the late Dr. Hay, of Edinburgh, to take charge of a gentleman suffering severely from stricture. It had existed upwards of twenty years, and, during the greater part of this period, admitted of such palliation from the use of bougies, as not to interfere materially with the patient's comfort, but latterly it had become aggravated to an extreme degree, so as to present symptoms of the most distressing character. Day and night the calls to make water were almost incessant; and in the intervals of his laborious and long-continued efforts to empty the bladder, the patient was constantly annoyed by an involuntary discharge of urine, with what discomfort may be more easily imagined than described. The stricture, which was anterior to the bulb, had contracted so as no

longer to permit the introduction of instruments. The tall and robust frame of the patient was emaciated to a shadow of what it had been, and he had become so sensitive that the slightest change of weather, especially in regard to humidity, greatly aggravated his complaint.

In these circumstances, I commenced my treatment by attempting to pass a bougie of the smallest size, and having soon succeeded in doing so, anticipated a satisfactory progress of the case. But, upon arriving at No. 5, I found the stricture obstinately resist any further dilatation, while the patient assured me that the degree already attained had afforded him no relief whatever. I then tried confinement to bed, and the retention of catheters in the bladder, with gradual increase of their size, until one of the largest capacity was introduced. During this process the patient felt so comfortable, and evacuated his water with so much more ease than he had long been accustomed to do, as fully to justify a belief that there would be no more trouble in future; but the very day after the instrument was withdrawn, the symptoms were renewed without any diminution. Soon after this, Mr. Liston happening to visit his friends in Edinburgh, I asked him to see this patient, and endeavour to suggest some more effectual means of treatment. He advised internal incision by the lanceted catheter, and I accordingly executed this procedure with such freedom that a full-sized bougie was passed immediately afterwards, without the slightest obstruction. As no benefit resulted beyond a partial relief of only one or two days' duration, I repeated the process still more freely, by using two catheters which cut on different sides, so as thus to make a double incision, but with no material difference in the effect it produced.

The patient, who had cheerfully submitted to this long course of abortive efforts to afford relief, now more anxiously than ever desired me to do something effectual, earnestly declaring, that next to recovery he would prefer an escape from his sufferings by death. I then told him, that in several cases of obstinate stricture in the anterior part of the canal I had overcome the difficulty by dividing the con-

tracted part through an external incision on a grooved director. He eagerly caught at this proposal, which I carried into effect in the manner that has already been described, and from that time to this, now more than ten years, the patient has enjoyed the most perfect health, local as well as general.¹

CASE II.—In 1844 Dr. Wickham, of Penrith, came to Edinburgh with a case of stricture, which had proved peculiarly obstinate and distressing. Although the patient was under 50, it had existed for twenty-seven years, and during the whole of this long period had never derived more than an imperfect degree of palliation from the use of bougies, notwithstanding their repeated and varied employment. Latterly, the symptoms having become much more severe, the assistance of a practitioner, deemed very skilful in the treatment of such cases had been required; but the patient returned home after two months' assiduous attempts to pass instruments, without ever having one introduced, and presented a new feature of alarming character in a tumour of the perineum, so prominent, circumscribed, and of such stony hardness, as to suggest serious apprehensions of carcinomatous degeneration.

Upon examination, I found that a full-sized instrument could be passed without pain or bleeding, down to the left side of the anus, fully an inch and a half beyond the probable or rather possible seat of stricture, which did not surprise me when I learned that the bougie had been used by pressing its point steadily upon the seat of resistance, so as to produce what has been called a "tunnelling" effect. Regarding the perineal tumour as the result of local irritation, I did not hesitate to make a free incision through its whole length. It was of almost cartilaginous firmness, but contained a few drops of matter in the centre, and it speedily disappeared after a free drain had been established. I then turned my attention to the urethra, and knowing that the mouth of the

¹ Case 1 has been described in the author's special treatise upon the subject of this paper.

tunnel must be anterior to the stricture, searched for the contracted orifice of the canal at a little distance before the bulb, where it was soon found, so as to permit the passage of a small catheter fairly into the bladder. At the end of six weeks the patient returned home, as I hoped effectually relieved by dilatation, but in the course of a few months he returned with the symptoms of stricture no less urgent than before.

I then introduced a grooved director through the contracted part, and freely divided it by external incision. In a few days the patient felt quite well, being, for the first time since the commencement of his disease, completely relieved from the uneasiness attending it, and greatly delighted with the facility no less than the efficiency of his treatment by the knife, instead of the tedious and abortive experience which he had had of the bougie. More than eight years have since elapsed, and, in reply to an inquiry which I lately addressed to Dr. Wickham, he says:—

“Agreeably to your request I have seen Mr. — to-day, and, so far as regards the stricture, I would say he is quite well. It is more than a year since any instrument has been passed into the bladder. On the last occasion I passed No. 13, with great ease.”

CASE III.—Mr. —, æt. 30, came from Ireland in December, 1849, to place himself under my care, on account of a stricture in the urethra. He had first become aware of its existence ten years before, from suffering retention of urine and requiring the catheter, which was introduced by a surgeon in Drogheda. From that time he had continued to labour under the symptoms of stricture, and sought assistance from a great variety of sources, but without ever having another instrument passed through the contracted part of the canal. In England and America attempts without end had been made unsuccessfully to accomplish this object; and upon one occasion, for nearly two months, Mr. Liston tried every other day in vain to introduce a bougie. At length the patient, despairing of relief, resolved

to endure the complaint, without any further attempt to remedy it, and continued to do so until the symptoms assumed that intolerable form in which the discomfort of incontinence is added to the difficulty of evacuation. He then committed himself to my charge.

In little more than a week I was able to pass a director through the stricture, which I divided by external incision upon the guide thus afforded. Recovery was delayed, by a little of the urine getting into the scrotal integuments, but was completed by the end of six weeks, and the patient then returned home, in the enjoyment of perfect health. On the 20th August, 1850, he wrote to me in the following terms :

“I promised to let you know how I was getting on, when I left Edinburgh, and as it is now a long time since I wrote to you, I have a good opportunity of knowing how matters stand. I am delighted to say, that there has never been the slightest obstruction or difficulty in making water, or in passing the bougie, which I do myself about once a month.” In the following year, 1851, I wrote to inquire if the relief still continued, and received for reply:—“On my return last Saturday from England, I found your kind note, inquiring after my health. In answer, I am delighted to be able to tell you, that I have never felt the slightest return of my old malady. I sometimes pass the bougie, but it is only to satisfy myself, as I think now it is no use doing so. My health was never so good, and I can undergo more fatigue (which I do) than I ever could in my whole life.”

This case affords encouragement to treat strictures deemed impermeable as accessible to the introduction of instruments, through their careful and persevering employment. It also illustrates the change in contractile disposition which results from dividing the parts concerned by external incision.

CASE IV.—Lord —, æt. 35, married, and of correct habits in his mode of life, applied to me in the month of October last. He had suffered long from a stricture anterior to the bulb, and during the last five years had been under the treatment successively of three eminent surgeons in London,

who had employed dilatation by bougies, with the effect of affording partial but neither complete nor permanent relief, micturition being always more or less uneasy, and a corresponding degree of constitutional disturbance preventing the patient from ever having the enjoyment of perfect health. At length it was remarked, that whenever he made water a considerable swelling took place behind the stricture, and that after the expulsive efforts of the bladder ceased, a quantity of urine could be made to flow by pressure upon this part. As such a state of matters seemed to threaten the danger of extravasation it excited much alarm, and was deemed to require an aperture by incision. Instead of submitting to this proposal, the patient thought proper to request my assistance, and, regarding the dilatation of the urethra as an effect of the stricture, I resolved to strike at the root of the evil, by dividing the latter while I opened the former.

Chloroform having been administered, I introduced a small grooved director, and made an incision, as usual, in the middle line of the perineum, then pushed the knife through the dilated part of the canal into the groove, and carried it forwards so as to divide the stricture completely. A No. 8 silver catheter was next passed with perfect facility, and retained in the bladder for forty-eight hours. During the first thirty hours no uneasiness was experienced; but at the end of this time the train of nervous symptoms, to which I have adverted as no unfrequent occurrence, commenced, and continued for about the same period, so as to alarm the patient and his friends, although they did not occasion me the slightest anxiety. The urine did not escape at all through the wound, but, to the patient's great contentment, flowed copiously from the extremity of the urethra in a full stream, very different from that to which he had been so long accustomed. Convalescence was soon completed, without any interruption worthy of notice, and the recovery has been in every respect complete. I passed a full-sized bougie on two occasions within the first three weeks, and twice since then, with the interval of as many months, with the most perfect facility. Every trace of the disease has disappeared,

and the patient's general health is so much improved as to attract the notice of his friends.

From this case it appears that dilatation is not always sufficient for the remedy of stricture. The patient being a nobleman of the highest connections in London, and having the assistance of three surgeons, the most distinguished for skill and experience in the treatment of urethral disease, it must be supposed that the bougie was employed with every circumstance calculated to promote its efficiency. Yet we see that the disease, so far from being cured by these usual means, was very imperfectly palliated, and not prevented from producing effects of the most alarming kind. We also in this case see that a painless operation, followed by a few days' confinement, not only arrested the mischief in progress, but completely accomplished what a long trial of the ordinary treatment, in hands pre-eminently skilful, had failed to effect.

CASE v.—Captain —, R. N., applied to me in January, 1851, on account of a stricture of which he gave the following history in writing:—"It was in the year 1829, when serving as a midshipman on board H. M. S. —, in the Mediterranean, that I first observed symptoms of stricture, produced by gonorrhœa. Bougies were then introduced, and in a short time the complaint seemed to be overcome, and continued so up to 1833, when I was in the East Indies, on board H. M. S. —, and suffered very much on boat-service, hunting pirates, &c., which exposed me to wet, and rapidly increased the complaint. I sought relief on board the ship but found none, as the medical men could not pass an instrument, and by their attempts generally induced complete stoppage of urine, when bleeding and the warm bath were the only means of any service. This state of matters continued for two years, until the ship was paid off, no instrument having been passed. Having got a little better from living quietly on shore, I sailed in May, 1836, as — Lieutenant of H. M. S. — for the Arctic regions, and up to the end of that year suffered little, except the incon-

venience of making water almost by drops. But the ice then suddenly broke up, exposing the ship to great danger, and obliging officers as well as men to expose themselves for considerable lengths of time to very low temperatures, even 80° below the freezing point, and upon some occasions to quit the ship. This had the effect of again sealing me up, and the old remedy (bleeding) was employed, as no one could pass an instrument. I suffered much until the end of the voyage in November, 1837, and then went into Chatham hospital, under the charge of Sir John Richardson, where I remained for six weeks with little or no relief, as nothing larger than No. 4 could be passed, and that produced very severe rigors at every attempt. Having learnt to use the bougie myself, I succeeded in keeping the passage open, until again, in the East Indies, in 1838, on board H. M. S. —, it became so bad as to oblige me to return to England. In 1839 I sailed as — Lieutenant of H. M. S. — for the South Pole; during this voyage, which lasted until September, 1843, I suffered very much, and was obliged to quit the expedition a few months before to come home. I could neither make nor retain my water, which was constantly dropping away, so as to keep my clothes wet, while the temperature was from 20° to 30° below the freezing point. On my return to England, I went under Mr. —, who succeeded in passing bougies up to No. 6, but no farther. He then used a catheter with a lancet-blade, but with little benefit, as in a month afterwards the passage was as much contracted as ever. I suffered severely from rigors during the time I was under Mr. —'s care. Since then I have been three years upon the coast of Africa, and suffered so much from the disease, that upon two occasions lately I felt it necessary to decline the offer of service, knowing that had I accepted I should certainly have broken down."

Upon examination I found a slight contraction about three inches from the orifice, and a very tight stricture anterior to the bulb. Bougies were passed as usual up to No. 4, but then farther dilatation was resisted, and as the

patient had experienced no relief from the degree accomplished, I did not hesitate to divide the contracted part by external incision. For two days after the operation the patient felt perfectly well; but in the evening after the catheter was taken out, he became suddenly so ill, that I was sent for; I found him cold, nearly pulseless, and vomiting bilious fluid, in short, with every appearance of approaching dissolution. In the absence of other experience, these symptoms would doubtless have alarmed me; but knowing their true nature, I gave the confident assurance that all would be right in the course of a few hours. Accordingly, upon calling next forenoon, I found that the patient had breakfasted as usual, that his books were again in requisition, and that he was reading with a cheerful countenance. He made an excellent recovery, and at the end of a few weeks having received a letter from the Admiralty, offering him the command of an expedition to the Arctic Regions, at once accepted it. The stormy aspect of the political horizon delayed the necessary arrangements until too late for that season; but the patient's ready acceptance, after two refusals of a similar appointment, sufficiently shows the change in his feelings which had been produced by the operation. Wishing to know his present state, I wrote to him last month, and received for reply, that "he has not had a moment's uneasiness from the stricture."

CASE VI.—Mr. —, æt. 27, from his earliest recollection had experienced undue irritability of the urinary organs, and deficiency of freedom in the urinary evacuation. In 1843 he went to the East Indies, and there suffered several attacks of gonorrhœa, which were followed by symptoms of stricture. In 1848, having returned home, he was exposed to severe cold while travelling in Ireland, and had retention of urine, which was relieved by warm baths and medicines without the use of a catheter. Next year a fresh attack of gonorrhœa was followed by an aggravation of the symptoms of stricture, which led to a long trial of instruments and subsidiary measures without success. Being in the service

of government, he then entered Haslar Hospital at Portsmouth, where between three and four months, to use his own expression, "innumerable attempts" were made with all sorts of rigid and flexible instruments, assisted by strict confinement to bed, repeated leeching and medical means, but all in vain, as, no more in the hospital than out of it, could the smallest bougie or catheter be passed through the stricture, which was in the usual situation anterior to the bulb. The patient then came to Edinburgh and placed himself under my care in August, 1850. At the very first attempt I passed a metallic bougie fairly into the bladder, and by the end of three weeks could introduce No. 10 without the slightest difficulty. He then went home, with instructions to have the instrument passed regularly.

Twelve months afterwards this patient returned, complaining that the symptoms of stricture were as troublesome as ever, and stating, that as his services had been transferred to London, he was desirous of being rendered fit for duty without the risk of further interruption. I again passed some small bougies on two different occasions; but finding that although there was neither pain nor bleeding at the time, severe rigors were afterwards experienced, and that the symptoms derived no alleviation, I advised the operation by external incision, and accordingly performed it as usual. Nothing occurred to impede recovery, so that by the end of three weeks the patient returned to London, in every respect perfectly well, and indeed making water with a degree of freedom which he had never known. Wishing to learn the present state of this gentleman, I requested my friend, Mr. Henry Thompson, to ascertain it for me, and received for reply, that No. 11 catheter passed with ease into the bladder.

This case shows that a stricture may be deemed impermeable without really being so, and will also, I hope, appear a convincing illustration of the advantages that may be derived from dividing by external incision a contraction of the urethra which resists the effect of dilatation.

CASE VII.—Captain —— began to suffer from stricture in 1822, when in the cavalry dépôt at Maidstone, soon after entering the army. The military surgeon could not pass any instrument; he repaired to London and placed himself under the care of the late Mr. Earle, who, in the course of five or six months, after trying various plans, at length succeeded in dilating the canal to its full extent. The patient then went to the East Indies, and during the three years which he passed there, as well as after his return home, regularly introduced bougies. This, however, did not protect him from occasional attacks of retention, which required the catheter, and were observed to happen most frequently the day after he had passed the bougie. In 1838, finding that the disease was gaining ground, he applied to Mr. ——, and remained under his care for a month, but without deriving any permanent advantage, so that it was necessary again to request his assistance in the same year, when the stricture was cut by internal incision. He then went to the West Indies, and continued to pass bougies regularly. In 1844 he married; in 1848 the disease assumed its formidable condition of extreme irritability. The calls to make water were almost incessant, and produced efforts so ineffectual, that a small catheter was required to empty the bladder three or four times a day. Severe pains of the perineum and limbs prevented every sort of active exertion, while the state of suffering and oppression frequently required confinement to bed for weeks. The patient, at the end of two years passed in this miserable state, feeling thoroughly disabled for the enjoyments and duties of life, resolved to try the effect of my treatment. He accordingly came to Edinburgh in July, 1850, and as the case seemed very suitable for division of the stricture, I performed this operation without delay. The patient made a good recovery, and from that time forward has never had retention of urine, frequent calls to make water, pain or difficulty in doing so, or, in short, any of his former ailments. He enjoys the best of health, and is able to take the most active exertion. The bougie is still passed once a week by the patient, but more

as a precautionary measure than from any feeling of its being required.

This case shows that dilatation affords no security against the progress of a stricture, from its milder form to that of the most distressing character. It also affords an example of complete and permanent relief from dividing the stricture by external incision, under circumstances which rendered any of the other means of treatment hitherto proposed utterly hopeless, and indeed inadmissible. Nearly three years have now elapsed since the operation was performed, and I had lately the pleasure of receiving from the patient the satisfactory account of his condition which has just been stated.

CASE VIII.—In the month of July last, Mr. James Miller, practitioner in Edinburgh, asked me to see a very distressing and perplexing case. The patient, Mr. —, æt. 41, had begun to suffer from a stricture of the urethra thirteen years ago, but paid little attention to it until four years since, when about to be married. Mr. Miller then requested the assistance of Dr. Duncan, lately Senior Ordinary Surgeon of the Royal Infirmary, who soon succeeded in passing instruments, and at the end of little more than two months had fully dilated the canal. Twelve months after marriage the symptoms of stricture were again so troublesome, that the aid of Dr. Duncan was requested with the effect of again dilating the urethra, so as to admit bougies of the largest size. But upon this occasion, instead of relief, there was an aggravation of the complaint. In November, 1851, the state of matters became so bad, that from this time to May, 1852, the catheter was required twice a day for drawing off the water, the patient being confined not only to the house, but chiefly to bed; he then went to the country for some weeks, but returned without any improvement, and twelve months nearly having then elapsed since he had been laid aside from the active duties of life, and rendered unable to take any charge of his business, though having every inducement and disposition to do so, he became very desirous to obtain some effectual relief.

In these circumstances I found him, lying in bed with an emaciated aspect, and care-worn, anxious countenance, expressive of suffering and apprehension, complaining of constant pain and uneasiness about the perineum, aggravated at every attempt to make water, which passed by small quantities, in drops or in a slender stream. On examining the urethra, I found that a moderate-sized instrument, and even one of the full size, could be introduced, but not without encountering a little difficulty, and requiring some guidance at the seat of stricture, which was anterior to the bulb. According to the opinions hitherto entertained generally, so inconsiderable a degree of contraction would not have been deemed sufficient to account for symptoms so obstinate and severe. But having known complete and permanent relief afforded under similar circumstances, by external incision through the seat of stricture, I advised this mode of procedure, and carried it into effect with the most satisfactory result. The patient was at once entirely freed from all his uncomfortable feelings, quickly regained his health and strength, and ever since has been perfectly well. I have on three occasions, at distant intervals, passed a full-sized bougie, without the slightest catch or obstruction, and the patient finds it difficult to express his sense of obligation to the treatment by external incision, which so speedily transferred him from a bed of helpless and hopeless misery to the full enjoyment and usefulness of vigorous health.

This case illustrates the progressive disposition of stricture, and the inefficiency of dilatation either to prevent or to remedy the distressing symptoms which are occasionally presented by the disease. It also affords an example of the immediate, complete, and permanent relief which may be obtained under such circumstances from the external incision.

CASE IX.—Mr. —, æt. 23, applied to me in October last. He stated that from the earliest period within his recollection he had experienced difficulty in making water, and particularly noticed this infirmity upon first going to school, from

taking so much longer time than the other boys. At ten years of age he suffered from retention of urine, requiring the warm bath and confinement to bed. Next year he had a more severe attack, requiring the catheter, which one medical man failed and another succeeded in introducing. In every year subsequently, and generally about the autumnal season, he suffered from complete retention, while in the intervals he made water with great difficulty, in a very small stream. Indeed, from the age of fifteen, he said, that it had always been necessary for him to empty the bladder in the same position as when evacuating the bowels, and then only through laborious efforts, aided by pressure on the perineum at the seat of stricture, which was just below the scrotum. At length the suffering became so great and incessant, notwithstanding the use of small bougies, which indeed aggravated the symptoms, that he resolved to come from Canada to place himself under my care, and accordingly crossed the Atlantic for this purpose.

Feeling sure, from the history of this case, that effectual relief could be afforded only by complete division of the stricture, I administered chloroform, passed a small grooved director through the contracted part of the canal, and divided it freely by external incision. The patient was at once relieved from the distress he had so long experienced, and in the course of a few weeks might have returned to America, had he not feared a relapse. I saw him within the last fortnight, and although four months had elapsed since the introduction of any instrument, I passed No. 10 without the slightest difficulty, so that with ordinary care the recovery may now, I think, be deemed permanent.

From this case, and others which have fallen under my observation, I am inclined to suspect that the occurrence of stricture before the age of puberty, and independently of sexual disease, is not so very rare as might be concluded from the silence of surgical writers on the subject.

CASE X.—Lieutenant —, of H. M. — Regiment of Foot, in 1841 contracted a gonorrhœa, which was treated after a

somewhat peculiar fashion, by the introduction of large bougies, and the cold shower-bath, with the effect of stricture being induced, and manifesting its presence by the usual symptoms, within the following eighteen months. He then went to India, and, during six years which he passed there, was under the care of five different medical men, who tried catgut bougies long and assiduously, without being able to pass them, and also caustic with little better success. In the course of these ineffectual attempts to afford relief, his general health had become impaired, and in 1849 he was sent home, by the decision of a Medical Board. He arrived in England in March, 1850, and placed himself under the care of an eminent surgeon, who during the next eight months passed bougies twice a week, but, to use the patient's own words, "the stricture, like India-rubber, always went back to about the same size" (No. 3 or 4), and the scalding, from which he had never been free since 1841, continued. Next year his army surgeon passed instruments occasionally, without affording any benefit, and towards the conclusion of it, finding the state of matters worse than ever, inasmuch as incontinence began to be experienced, in addition to the difficulty of evacuation, he applied to Mr. —, of London, and remained under his care from December to the following April, 1852. In the first instance no instrument could be passed, but caustic having been employed every two or three days for a month, under chloroform, No. 3 catheter was introduced, and retained in the bladder, and then Nos. 5, 7, 9, 11, and 12, with an interval of two days between each. Violent irritation succeeded the introduction of the last instrument, and prevented any other from being used for a fortnight, when No. 6 was passed with difficulty, and after a month or six weeks' farther trial with bougies, No. 9 was the utmost extent that could be reached, while the symptoms remained unrelieved. The patient then rejoined his regiment, and had bougies introduced regularly without any benefit, up to the end of October, when the attacks of ague, from which he had long suffered occasionally, became nearly constant, so as to confine him entirely to

bed. In these circumstances, the surgeon wrote to ask me if I would undertake the treatment of the case, and as I readily agreed to do so, the patient came over from Ireland, and arrived in Edinburgh on the 22d of December.

I found him lying in bed, much exhausted by his sufferings on the passage, and still labouring under one of the aguish attacks from which he was seldom free; the urine was very turbid, and excessively loaded with mucus, which formed a large glairy mass at the bottom of the vessel containing it, and all the symptoms of stricture were present in an extreme degree. On the 24th, I divided the contraction by external incision, with some difficulty, from the excessive thickening and induration of the textures concerned, which resembled cartilage much more than the urethra in its ordinary state. After the operation there was no return of ague or the slightest tendency to rigor, and in the course of a few hours the urine became clear, and free from mucus. The catheter was removed at the end of two days, when a portion of the water escaped by the wound, but gradually diminished in quantity, and ceased entirely within a fortnight, when the patient might be considered, in every respect, as perfectly well. He had not been confined beyond three days to bed, and instead of finding the time pass slowly, at a distance from his friends and occupation, declared that he never felt weary in enjoying the delightful sensation of relief from the scalding and other sorts of uneasiness which had been experienced, without intermission, for the last twelve years. On the 12th of January, as his regiment had been ordered to embark for foreign service, he departed for Cork, and there finding that sufficient time remained for the purpose, proceeded to London, and thence returned to Cork, in the midst of frost and snow, without ever having a bougie passed; then he engaged in all the fatigue and turmoil of departure, and sailed in a different transport from that which conveyed the regimental surgeon. This was, indeed, a severe ordeal for the operation, and if, as I hope and trust, it has stood the trial, the result will be all the more satisfactory. But the case is important in another point of view, by showing

the inefficacy of dilatation and caustic in the hands of gentlemen who, from their position, must be supposed to have employed these means in the most perfect manner. It also shows the progressive nature of the symptoms, and the complete relief immediately afforded by division, in circumstances which, I believe, might have been justly deemed hopeless under any other mode of treatment.

CASE XI.—Captain —, æt. 45, retired from the army, had suffered long from stricture, and had been repeatedly under the care of a person practising in London. Time after time he was dismissed with an assurance of complete and permanent relief. Until becoming tired out, he consulted Mr. —, of the — Hospital, who having examined the urethra, gave it as his opinion that the use of instruments could be of no service, and after a month's trial of medical treatment, dismissed the patient, with advice to endure what could not be cured. From January to December of last year he endeavoured to comply with this suggestion, but feeling very uncomfortable, and still clinging to the hope of relief, he came from one of the southern counties of England and placed himself under my care.

I found that the stricture, which was in the usual situation anterior to the bulb, possessed the irritable disposition that occasions spasmodic contraction, and prevents any advantage being gained by dilatation. The patient could never make water with freedom, or be sure of making it at all, from attacks of retention, which admitted of relief only through the introduction of an elastic catheter of the smallest size. In these circumstances I did not hesitate to divide the stricture by free external incision, and in less than a fortnight had the satisfaction of seeing that no vestige of uneasiness remained. In a letter just received (14th April), he says, "that although upon two occasions some difficulty was experienced in passing the bougie, he has passed through the winter with the greatest comfort, moving about in perfect security, and living much in the open air in spite

of keen frosts and razor-edged gales from the east. No disturbance, no retention, no distressing 'ennui de pisser.' ”

CASE XII.—In 1849, Mr. —, æt. 60, applied to me on account of a stricture anterior to the bulb, from which he had suffered more than thirty years. During this long period Mr. Liston, and other practitioners, by the use of bougies, had palliated the symptoms, but never completely relieved them, and latterly they had become much more troublesome than ever. The urine was at all times passed with extreme difficulty in a small dribbling stream, or by drops, and the patient was so liable to retention, that he never felt secure without having a slender flexible catheter in his pocket. I tried dilatation, but could not carry it beyond No. 4, and finding that the patient derived no benefit from this degree of improvement, proposed to divide the stricture by external incision, to which he readily assented. On the following day, after the catheter was removed, the urine resumed its natural channel, and flowed so freely, that the patient felt at once completely free from all the annoyance and apprehension he had so long experienced. I desired him to call upon me occasionally to have a bougie passed, but this he neglected, and when he at length returned in the course of the following year, I found that the contraction was re-established, so as to present the same symptoms and resistance to dilatation as before the operation. I therefore proposed to repeat it, and in doing so took care to divide the urethra much more freely than on the former occasion. Since then, although more than two years have elapsed, there has been no return of the disease, and every third or fourth month I have passed a bougie of the full size without any difficulty.

This case shows the efficacy of division in subduing the resistance which is proof against dilatation, and also illustrates the advantage of making a free incision through the contracted part of the urethra, since had the second operation not been performed, it might, and no doubt would, have

been said, that in this instance the procedure had proved insufficient to afford permanent relief.

Unwilling to fatigue the attention of the Society, or occupy their time unnecessarily, I will add no more cases, trusting that the positions which I undertook to establish may appear sufficiently supported by those that have now been related. They are selected from private practice, as admitting of more easy and satisfactory reference than the subjects of hospital experience; and if circumstances had seemed to require it, could have been greatly increased. It will be observed that I have not now, any more than heretofore, presumed to throw blame on my brethren for the use made by them of the means hitherto devised for the remedy of stricture; the extent of my allegation being that these means are not always sufficient for the purpose, and that on some occasions dividing the contracted part by external incision may be added to them with advantage. It is quite possible that I may have attached undue importance to the operation in question; but I venture to hope, that whatever degree of confidence it may ultimately be destined to acquire, this Society will, at least, give me the credit of good intention in bringing it under their notice.