

Suprapubic prostatectomy / by G. Buckston Browne.

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(DO NOT ACKNOWLEDGE.)

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SUPRAPUBIC PROSTATECTOMY.

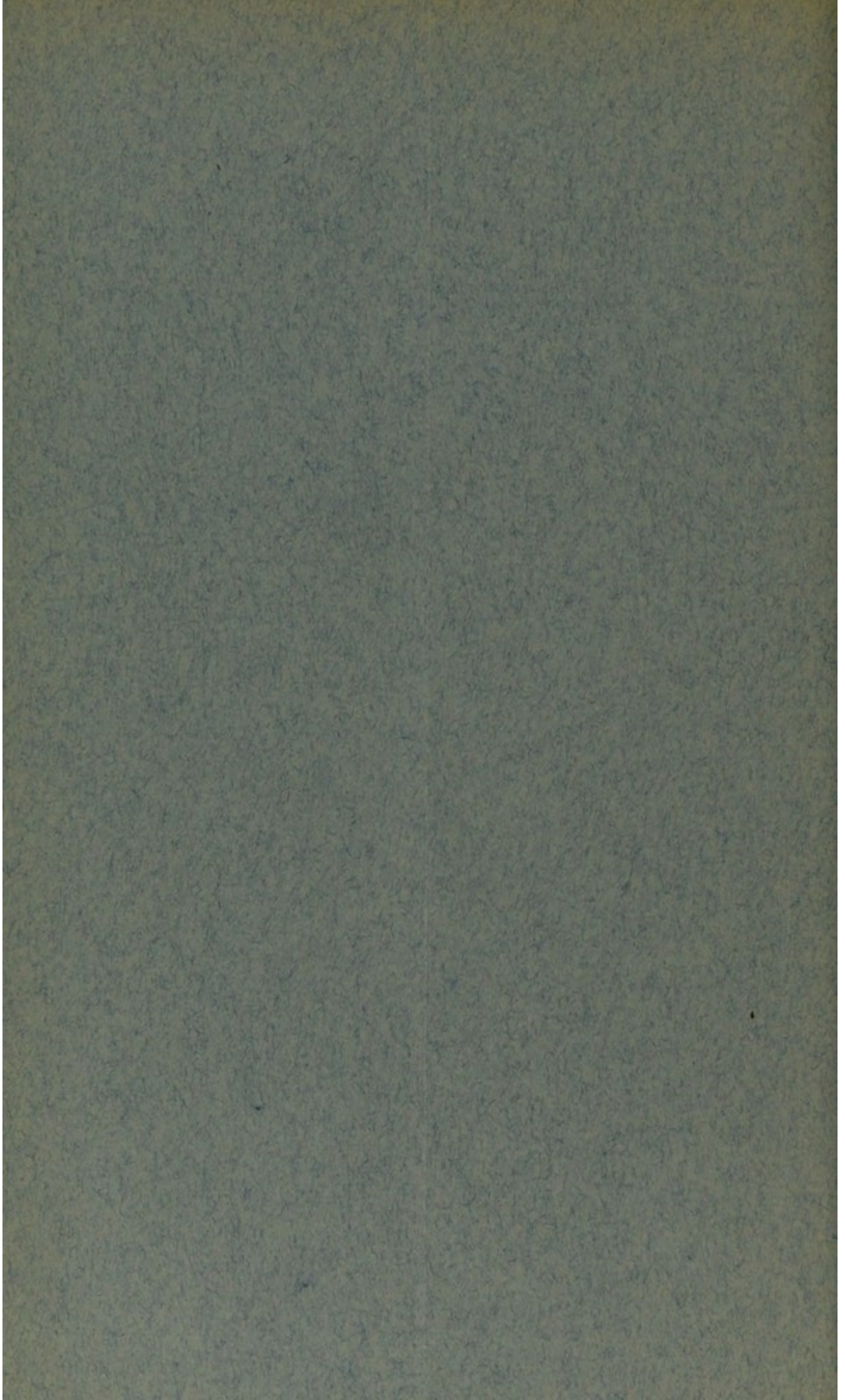
BY

G. BUCKSTON BROWNE.

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SUPRAPUBIC PROSTATECTOMY.¹

PROSTATECTOMY means the actual removal, by knife, scissors, or forceps, of part of the prostate. At the outset of an inquiry into the merits of this operation it is desirable to have a clear idea of the anatomy and function of the prostate. For surgical purposes it is well to recollect that the prostate is only arbitrarily divided into lobes, it is really one single organ. As Ellis says: "Three lobes are described in the prostate, namely, a middle and two lateral, though there is no fissure in the firm mass." With regard to its function, I believe it is a sexual organ, and nothing more. To my mind it is quite sufficient to remember that in the female the act of micturition is perfectly well performed without a prostate, in order to reject all theories that it performs any urinary function. In adult and advanced life, in a certain number of cases, that is to say, exceptionally, the organ enlarges or hypertrophies, and by so doing frequently, but not always, interferes with the act of micturition. This affection is met with in all sorts and conditions of men, and this has led to great difference of opinion regarding its causation, but it certainly does seem very frequently to follow sexual activity in middle and advanced life. I am more and more struck by the fact that prostatic hypertrophy often follows a second marriage, or a marriage contracted late in life. The results of youthful sexual excess are doubtless usually outlived. It is remarkable how rarely urethral stricture accompanies prostatic enlargement, and it may be presumed that men with urethral stricture have usually been sexually active in youth. When the prostate enlarges the hypertrophy may be (1) extravescical, or (2) intravesical, or (3) both extra- and intravesical. It is the intravesical growth which chiefly causes difficulty in micturition. This intravesical growth is often like an egg projecting into the bladder, with the vesical urethral orifice at the apex of the egg. In such cases the projection is usually equal to an eighth, or a quarter, or even half of an ordinary hen's egg. This ovoid projection may be deficient at any part of the urethral circumference. When wanting anteriorly and laterally, we have the so-called middle lobe enlargement with which all are so familiar, where from behind the urethral orifice there is a projecting prostatic mass acting like a bullet valve, and often causing the bladder to be entirely dependent upon the use of a catheter for the voidance of its urine. More rarely we have the ovoid projection, only wanting in front, and we have a prostatic growth continuously surrounding the

¹ Read before the Medical Society of London, March 6th 1893

vesical urethral orifice on both sides and behind, or the projection may be only on one side; in such cases it is nearly always continuously combined with a posterior enlargement. While so rarely as practically to be never met with, the intravesical growth is only found anterior to the urethral orifice. Intravesical prostatic outgrowths may be associated with considerable extravescical enlargement, and the latter may exist without the former, and cause the patient so afflicted to be partially or completely dependent upon his catheter.

In my opinion it is the intravesical growth alone which can be removed with reasonable safety, and with a fair prospect of recovery of the power of natural micturition. As therefore so much depends upon this form of hypertrophy, the answer to the question, Can we during life diagnose the existence of intravesical prostatic growth? is a very important one. Without digital examination after suprapubic cystotomy the presence of such growth can only be approximately diagnosed. In making this approximate diagnosis we must remember that we are dealing with a form of urinary disease where all unnecessary or excessive urethral interference is to be deprecated. It is precisely these cases which Sir Andrew Clark had in view when he so ably drew the attention of the profession to urinary fever following catheterism, or, as he called it, "catheter fever." This fever is unfortunately sometimes a fatal fever, and elsewhere I have attempted to prove that its severity is usually in direct proportion to the amount of urethral disturbance. The electric cystoscope, the use of which is never free from risk, is therefore particularly dangerous in the cases now referred to. In many its employment is impossible, or almost impossible, for there are cases in which the shape of the instrument is an absolute bar to its introduction, and in other cases the introduction is attended with so much difficulty that the very limited range of vision is obscured by blood. Several remarkably severe cases of cystitis, which I have met with in practice, after endoscopic examination, where the prostate has been enlarged, have created a strong feeling in my mind against the use of this instrument in these cases. Again, the use of instruments which may be classed as urethrometers has not commended itself to me. They are all very trying to the urethra, which in this complaint we particularly desire to preserve from injury, and even when used they really do not appear to throw light upon this important point, whether there is or is not intravesical prostatic hypertrophy. There are, however, two simple means of examination, not trying to the patient and within the range of every surgeon, which, combined, will throw considerable light upon the question, namely, digital rectal examination and the careful measuring of the length of the urethra by means of the simple passage of the catheter. Any undue length of urethra will be an argument in favour of intravesical hypertrophy, and particularly so if by the rectum the prostate is felt but little enlarged. If much extravescical growth is found, this must be allowed for in estimating the importance of the length of the urethra. If the urethra is 9 inches long or more, and if not much growth can be felt by the rectum, there is almost sure to be intravesical hypertrophy. Should it be deemed desirable to sound the patient for stone further evidence for or against the presence of intravesical growth will be obtained, for, if such growth exists, it will be found that the sound has to travel very much uphill into the bladder.

Practically the consequence of all the forms of prostatic hypertrophy is almost invariably more or less difficulty and imperfection in the act of micturition. In some cases the prostate is enlarged without really causing urinary trouble, but these cases are rare. It is, however, most important to bear in mind that, even where there is great urinary difficulty, due to prostatic enlargement, the difficulty may be only temporary, due to congestion, and may pass away entirely in the course of days, weeks, and even months. This fact has an important bearing upon the question of prostatectomy. The following case is instructive in this connection :

— aged 68; February, 1889. On a railway journey, owing to the presence of ladies, he did not leave the carriage. When arrived at his destination he could pass no water. Catheters were used unsuccessfully, and he was treated for suppression and not retention of urine. I saw him sixty-three hours after the last act of micturition, performed before starting on his journey. A catheter was passed and 3 pints of urine drawn off. The urethra was 10 inches long, and by the rectum the prostate felt enlarged. He recovered, but for three months all his urine was passed by catheter. Towards the end of April he began to pass water naturally, and in another month the retained urine—that is, water left behind in the bladder after a natural act of micturition—had come down to 2 ounces. In July the retained urine was only 1 ounce, and in February, 1890—a year after the retention—there was no retained urine. He is alive and well now, holds his urine from three to five hours, and does not use a catheter.

The explanation of the case is that the prostate was hypertrophied, but not sufficiently so to cause any real difficulty in micturition. The railway journey produced congestion of the already enlarged gland, and the confinement to the carriage without urinary relief caused over-distension of the bladder, producing temporary atony of its muscular coat. It would have been a surgical blunder to have subjected this patient to a suprapubic prostatectomy, from which operation he might easily have died. On the other hand, had he recovered from the operation, and recovered with full power of natural micturition, he would have been no better off, his life would have been risked, and prostatectomy would have obtained credit for what would have been brought about by far simpler methods. Such cases are by no means uncommon, and they are not unknown in the records of prostatectomy.

Unhappily, however, prostatic retention, whether partial or complete, generally comes prepared to stay, and we may next ask, What are the prospects of a man obliged to pass his urine entirely, or in part, by catheter? I would reply, that the prospect is a perfectly tolerable one, provided he becomes a master of the art. *Quoad* this particular complaint, there is no reason why he should not reach a good old age, and the chances are in favour of his not dying of his urinary complaint, but of some other disease or accident in the end. There is certainly nothing in his prospects to make him as it were lead a forlorn hope and rush into a grave and even dangerous operation such as prostatectomy, at the beginning of his catheter life. Instances are numerous all round us of elderly men, active in all the pursuits of ordinary life, and many of them exceptionally highly placed in the conduct of affairs, who are obliged to pass all their urine by catheter, and who lead comfortable, useful, and happy lives. This state of comfort depends in the first place upon there being only a moderate amount of intravesical prostatic growth, and happily this is the rule and not the exception, and secondly upon the amount of attention paid by the patient to his condition. I

shall not go into the details of this attention, but will only point out, that such care consists: (1) In the choice, and proper skilful use of the best kind of catheter for the individual case; (2) the sufficiently frequent use of such an instrument; and (3) the immediate renewal of all instruments when they become cracked, rough, or otherwise worn. Also in (4) the use of an antiseptic lubricant; and (5) in the proper washing out of the bladder, and application of medicaments to its mucous membrane in certain cases. All this may be spoken of as the proper toilet of the bladder. Taking everything into consideration, it is wonderful how tolerant the bladder usually is of neglect in many of the details of its toilet, but sometimes it is not tolerant, and neglect leads to such a state of vesical irritability, that is to say a state of chronic cystitis, that life soon becomes a burden, because of the constant and imperious calls for the use of the catheter. This painful condition may also occur from causes over which the patient has no control, and which he cannot avoid by the greatest cleanliness and niceness in his self-management. One of these causes I would particularly refer to, for it is a condition which has almost escaped notice, but which has an important bearing upon the subject of this paper, namely the growth into the bladder of the prostate to such an extent as to act as a foreign body causing constant desire to pass water, and adding terribly to the trials of an elderly man already obliged to pass all his urine by catheter. Such a case I record in the *Transactions of the Clinical Society*, vol. xxii, where I removed 4 ounces of purely intravesical prostate, giving the patient great relief. He is alive and well now, in his 92nd year, four years after the operation.

There are other cases where comfortable, or even tolerable, catheter life is impossible. In some very rare cases catheterism, I mean regular habitual autocatheterism, is practically impossible, owing to the extreme curve of the prostatic urethra forwards, the patient being supposed to be standing up, and, but not so unusually, there are cases where autocatheterism is so difficult that life under such conditions is not worth having. This difficulty may arise from the great curve of the prostatic urethra, the existence of false passages, and sometimes from the great ease with which the prostate will bleed if impinged upon and injured by the catheter, filling the catheter with blood clot, thus preventing the emptying of the bladder, and causing vesical spasm, as well as exhausting the patient by the constant loss of blood. Occasionally, also, we meet with patients whose hands are crippled by rheumatism, or by nervous affections, or who only possess one hand, or whose special occupations make autocatheterism difficult, or even almost impossible.

In all these cases where regular, habitual, autocatheterism is so frequent as to threaten to exhaust the patient, and where all palliative and other treatment has failed to bring relief, and in cases where from the patient's urethral condition or want of manipulative power, such catheterism is impracticable, the question has long been—What are we to do? Up to 1886 we could only offer such sufferers a tied-in catheter, or a perineal or a suprapubic vesical puncture or incision, followed by the permanent wearing of a tube through which the urine could drain away. Sir Henry Thompson in 1874 devised a special instrument for the suprapubic puncture, and I published² a description of an apparatus for these patients to wear

² BRITISH MEDICAL JOURNAL, August 4th, 1888.

after the suprapubic opening. This apparatus acts as an external receptacle for the urine, and patients can wear it and move about, fully dressed, with a fair amount of comfort. Many surgeons had before 1886, and have since, proposed the incision, and the excision of the intravesical prostatic obstruction, and also the burning of a groove in it by instruments introduced through the urethra, or by means of perineal incision, with the view of radically doing away with the obstruction, but no evidence has been brought forward which commends these operations to the surgical mind at large. The revival of suprapubic cystotomy, however, in the last decade suggested an attack upon the prostate from within the bladder from above, and independently of each other, Dr. Belfield, of Chicago, and the late and much regretted Mr. McGill, of Leeds, in 1886, became the pioneers in this important new surgical departure.

There is now no doubt amongst all surgeons that the obstructing prostate can be excised from above the pubes, but the surgical mind is not entirely satisfied that the operation, which is undoubtedly a severe one in itself, and necessarily performed upon those ill able to bear surgical interference, is justified because some doubt that even if the obstruction is entirely removed the bladder can regain its powers. Many surgeons believe that the prostatic hypertrophy is secondary to vesical changes, while others believe—and I do—that the prostatic enlargement is entirely primary. Sir Henry Thompson has expressed his doubts as regards the results of prostaticectomy in the following sentences, and I need not say how weighty his authority is, and how clear and logical his mind. He writes in his *Clinical Lectures*: “I am entitled to require that if it does happen, or has happened, to any surgeon to divide or remove any part of an enlarged prostate for a patient who had previously been compelled to pass all his urine by catheter—say, for a period of twelve months, and that after the division in question he was enabled to dispense with the instrument, or at any rate to pass, say, only half his urine by natural effort, the case ought to be seen and examined by others. I desire extremely to see such a result from any of the proceedings alluded to. I have long wished to see this sight, and have travelled considerable distances abroad and elsewhere expressly seeking it, but at present without success.”

In answer to Sir Henry Thompson I will briefly relate the following case; the patient is here to-night, and the facts are absolutely beyond dispute.

R. H., a gentleman, aged 70, tall and spare. He began to use a catheter in 1872, or twenty years ago. My first note of him is in April, 1886. All urine had then been drawn by catheter for four years. He now used his catheter seven times in twenty-four hours. The urine was clear and healthy. Catheterism was not easy; the instrument had to be well bent in order to go in. In 1887 he called on me complaining of bearing down of the rectum and much pain when he wanted his catheter. In May, 1890, he had bloody urine, and catheterism was necessary every hour and a-half to two hours. On sounding his bladder the sound had to pass very much uphill in order to reach the bladder. During June the bleeding was so profuse that I feared a vesical growth. He was next seen in June, 1891. There was now great suffering and much vesical spasm and constant bleedings. He continued in this state until January, 1892, when I saw him with Dr. Cunningham of West Hampstead. The catheter was necessary every half hour. There was considerable trouble from hæmorrhage and blocking of the catheter by clot. The urethra was $9\frac{1}{2}$ inches long. By the rectum the prostate felt only moderately enlarged. On sounding him a small vesical calculus was found. All his pain was before catheterism; he had none afterwards until the next call for the catheter. His life was quite unbearable and perfectly miserable.

On March 10th, 1892, Dr. Frederic Hewitt administered ether. I could easily with tube and aspirator make the stone rattle against the former, but could not possibly seize it with the lithotrite, owing to the deep post-prostatic pouch in which it lay. The bladder was then opened above the pubes, and an intravesical prostatic outgrowth found, as large as a tangerine orange, below and on both sides of the vesical urethral orifice. I removed the stone with a scoop; it resembled an orange pip and weighed 9 grains, and then proceeded to remove all the prostate which projected into the bladder with forceps. Everything was twisted off, nothing torn or cut away. The pieces removed weighed 1 ounce. The bleeding was very severe; it was partially arrested by hot water injections, applied through the urethra, by means of an enema syringe attached to the end of the penis. For forty-eight hours much blood came away with the urine. In three weeks some urine began to come by the penis. By the end of April the wound was closed, and all urine passed naturally by the penis except 3 ounces which he drew off by catheter night and morning. Then came an attack of influenza in June, and the suprapubic wound slightly opened for a time, and we had some trouble in bringing a small suprapubic leakage to an end. Early in August all was perfectly healed, and by the middle of September we found the bladder able to empty itself to the very last drop, proved on several occasions by passing a catheter after a natural act of micturition, and no catheter has been used since. Of his own accord he wrote, under date January 3rd, 1893, "It is fifteen weeks since I saw you, when you advised me to do without the catheter. I have not used it since. I can now go in the daytime on the average three hours, and at night from four to six hours; indeed the last two nights I went fully nine hours each night, and this has happened twice before during the last three weeks. I cannot express the relief I feel from the dreadful pain and hæmorrhage I had so long endured, now I have not even inconvenience. I can now go about with more comfort than at any time during the last ten or twelve years; indeed it is twenty years since I first had to use the catheter."

This case speaks for itself. The patient had used a catheter for twenty years, and for ten years had made no water except by catheter. He submitted to prostatectomy, and had full natural power of micturition restored to him, an unspeakable boon, but to obtain which he undoubtedly risked his life. Such a case proves beyond all question that the habitual use of the catheter does not necessarily permanently destroy the power of the bladder to empty itself, as has been asserted upon great authority, and also proves that prostatic enlargement is the cause, and not the result, of troubles in micturition. With regard to the dangers of prostatectomy, I am just as sure that in a fatal case of suprapubic lithotomy in my practice, the result would have been different had I left the projecting prostate alone, as I am that in several others the successful results were largely due to my non-interference with the prostate, although in several instances it offered itself temptingly for removal.

With reference to the details of the operation of suprapubic prostatectomy, I believe that the operation should always be extraperitoneal; all intraperitoneal operations must add largely to the risk, and all that is necessary can be done through an extraperitoneal incision. The bladder should always be opened upon a staff; if not—since the body of the prostate in these cases is frequently very large—it is very likely to be incised, instead of the bladder, when the surgeon thinks he is puncturing that organ with his knife, and mischief is done. The presence of a staff prevents such an accident. I believe in removing the projecting prostate with forceps and twisting it off in one piece if small, piecemeal if large. By twisting or torsion hæmorrhage is lessened. The intravesical growth should alone be attacked; no good will come of trying to remove the lateral lobes even in part. In clearing the vesical urethral orifice of all surrounding projecting prostate tissue much assistance will be obtained by the presence of a metal sound in the urethra. Hæmorrhage is usually very free, and will be all the more so if the prostate

has been attacked with knife or scissors, the use of both of which instruments I deprecate. Dr. Keyes, of New York, has had much experience of prostatectomy, and has suggested a lint tampon drawn into the prostatic urethra by a thread through the urethra, but I have found the bleeding sufficiently controlled by hot water irrigation, and all plugs must add to the patient's pain. My space is limited, and I make no special reference to perineal prostatectomy as compared with suprapubic, because the former operation is performed, practically and metaphorically, in the dark. The parts concerned are almost always beyond the reach of the finger, hæmorrhage is usually severe, and the risk of that most distressing condition, a perineal urinary fistula, resulting is very appreciable. I am also obliged to omit noticing the results obtained by the suprapubic route by Belfield, McGill, Mayo Robson, Jessop, Atkinson, Keyes, Southam, and Moullin; their works, however, speak for themselves.

In conclusion, I would express my present opinions as follows:

1. Suprapubic prostatectomy should never be undertaken at the outset of catheter life unless regular catheterism is impossible.

2. The operation should never be undertaken as long as the ordinary catheter life is a tolerable one.

3. If, from any of the causes I have detailed, catheter life becomes intolerable, suprapubic cystotomy should be resorted to. By means of this proceeding the bladder can be thoroughly explored, and any stone removed, which in these cases may easily have escaped detection by the more usual methods of examination. The intravesical growth, if it is found to exist, and of this existence we can never be sure until the finger is in the bladder, can be fully examined, and removed if the operator thinks right to do so. If he deems removal inadvisable, or if there is nothing which can be removed, he can leave the patient with a suprapubic tube, for permanent after-wear, with the certainty that he will have materially improved the condition of the patient.

4. Should the operator decide to remove the prostatic obstruction, there is a very good prospect, but not a certainty, of the power of natural micturition being restored to the patient.

