The Palliative and Operative Treatment

of

The Enlarged Prostate.

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It is now well recognized that enlargement of the prostate produces appreciable symptoms only in a minority of cases. Also that while the majority of patients who have prostatic enlargement are men well advanced in years, yet it is not necessarily a senile disease. Where the enlargement is of such character as to produce mechanical obstruction to urination, there is usually present partial or complete retention, and more or less cystitis, and the urine is, as a rule, ammoniacal, and contains mucus and pus in varying quantity. It has long been known that the systematic use of the catheter will afford great relief in a large per cent. of these cases. It is equally well known that there is a class of cases in which the use of the catheter is inadequate to afford the desired relief. The means of palliative treatment by regular use of the catheter are quite well understood, and the writer only desires to briefly refer to a few points that seem of sufficient importance to be kept prominently in mind where it has been decided necessary to condemn a patient to so-called "catheter life."

Improvement in the construction of catheters makes it possible to dispense with the time-honored metal instrument in the majority of cases. In the selection of catheters it will generally be found that the soft rubber or silk Mercier will answer every purpose. The use of metal instruments is not only more difficult than the use of soft rubber and silk instruments, but it is also more dangerous, and there are but few cases where it is not bad practice to use anything but a soft instrument. Exceptional cases, however, occur where the metal instrument seems to be necessary.

In the relief of the acute retention, resulting from prostatic enlargement, it is never wise to leave the bladder entirely empty. The bladder walls have become accustomed to the mechanical support produced by the constant presence of more or less urine in the bladder, and if this customary support is suddenly removed, venous congestion of the relaxed bladder walls will result.

A violent cystitis is apt to follow, which may extend up the ureters to the kidneys and a nephritis follow. If the urine is alkaline and purulent, it may all be removed at once, and about one-third or one-half its quantity of a saturated solution of boracic acid be immediately injected into the bladder. If the urine is acid, part of it may be left in the bladder. The quantity left in the bladder may be gradually diminished by removing more each time, and in a week or two it will be probably safe to remove all of it.

It is generally necessary, where there is much pus and mucus, to employ a solvent wash. The writer has found nothing better for this purpose than a half saturated solution of boricate of soda. It is, however, desirable to always follow the use of this alkaline wash with the saturated or half saturated solution of boracic acid, or a solution of boroglyceride.

The frequency with which the catheter and bladder washes must be used is generally suggested by the severity of the symptoms. Where a patient is able to partially empty the bladder voluntarily, and the cystitis has subsided, the simple use of the
catheter, morning and evening, for the removal of residual urine will generally suffice. Reginald Harrison states that there are occasionally cases where it is unsafe to ever remove all the fluid from the bladder.

**OPERATIVE TREATMENT.**

The radical treatment of enlarged prostate contemplates the removal of obstructing growths. The cases here presented illustrate some of the forms of prostatic enlargement.

The following clinical notes are based upon the observations furnished by these cases. They are presented with the belief that bladder surgery, particularly in the past few years, establishes these principles:

*First.* That a large per cent. of cases of prostatic cystitis which are not susceptible of relief by the well known methods of palliative treatment, can be more or less permanently relieved by surgical interference.

*Second.* That perineal and supra-pubic incision are the two methods best calculated to accomplish the results sought.

*Third.* That neither one of these operations is suitable to all cases, and that both may sometimes be required.

*Fourth.* That the object of a radical operation should be the removal of the mechanical obstruction to urination, and drainage and rest of the bladder.

Statistics thus far show that restoration of bladder function has followed in over two-thirds of the reported cases of removal of mechanical obstructions, caused by prostatic growths, and furnish occasion for careful study of all cases of prostatic enlargement accompanied by the usual symptoms, with a view to determining what cases are amenable to surgical relief, and what are the best means of solving the mechanical problems involved.

It is scarcely necessary to refer to the fact that at the time many prostatics apply for treatment the mechanical obstruction is by no means the most serious lesion involved. Resultant renal disease, loss of muscular power and thickening and diminution in size of the bladder, may render more or less futile both palliative and radical efforts at relief. Temporary drainage and rest are obviously the chief advantages to be gained where degeneration of its walls has destroyed the bladder's contractile power, and in such cases removal of mechanical obstruc-

**tions is of benefit chiefly in facilitating the use of the catheter and removing causes of bladder irritation. Case V, in the following list, illustrates this fact. After removal of an anterior horse-shoe hypertrophy at the vesical orifice, and a demonstration both by digital examination at the time of operation and inspection of the inside of the bladder with the cystoscope passed through the perineal wound three weeks after operation, it was shown that there was no intra-vesical obstruction remaining, yet voluntary urination was not restored. The work of Belfield, McGill and others may, however, fairly be claimed to have demonstrated the possibility of more or less complete restoration of bladder function in a large per cent. of cases formerly condemned to the catheter, and to have proven the fallacy of previously entertained views as to the pathology in a majority of these cases.

So far as the writer is aware no effort has as yet been made to enucleate a lateral lobe through a median perineal incision. The perineal opening has been utilized chiefly for the division of prostatic bars and collars, and the removal of pedunculated middle lobes and nodular hypertrophies about the vesical orifice. In Case XIII of the following series, in a patient aged sixty-nine, the writer was able, by dividing the mucous membrane covering the enlarged right lobe and dissecating it off with the finger, to remove the gland by piecemeal through a median perineal opening. During a third operation for stone upon Case IX, one week after operating on Case XIII, the writer removed both right and left lobes in a similar manner. The index finger of the right hand was the only instrument used after the opening was made. Counter-pressure was made with the two first fingers of the left hand passed up the rectum, and pressed upon the upper end of the enlargement. The specimens are here presented.

Tobin, of Dublin, has recently reported the successful removal, in a patient aged sixty, of a middle and one lateral lobe with a wire snare through a supra-pubic opening, the snare being introduced through the urethra. This method seems difficult of application, and to possess no compensatory advantage, except a lessened amount of hemorrhage. McGill's method of enucleation of lateral hypertrophies through a supra-pubic opening appears to obviate, by a simpler and presumably a safer way, the
performance of Dittel's ingenious "lateral prostatectomy."

Wyeth has recently reported twenty-three supra-pubic cystotomies, all of which were successful. Three of these were for the removal of prostatic obstructions, and one of these three cases was complicated with stone. In another, where enlargement of the middle and both lateral lobes existed, permanent drainage is reported as having been "necessarily established." The successful result of Wyeth's entire series of supra-pubic cystotomies is certainly encouraging, and would be phenomenal if all or a considerable number of them had been for prostatic obstruction. His technique presents nothing different from what is already too well known to warrant repetition here.

McGill's statement seems to warrant some doubt when he says that "prostatic enlargements which give rise to symptoms are intra-vesical and not rectal." Undoubtedly this is very generally the case, but it is certainly also true that in cases with hypertrophied tissue projecting into the prostatic canal, this tissue may not only be the cause of urethral and vesical irritation, but also interfere seriously with the introduction of instruments. This was well shown in Case IV of the following series. It also seems quite reasonable that the great size the rectal tumor sometimes attains may be the cause of irritation of the bladder and prostatic urethra in the absence of distinct intra-vesical growths, particularly where there is co-existing constipation of the bowels. The amount of residual urine, and bladder and urethral pain occasionally produced by a mass of hardened feces in the rectum, in the absence of prostatic or other disease, is indicative of the possibilities of a constantly present rectal tumor, such as is often found where there is general prostatic enlargement. Clinical evidence, however, indicates that the intra-vesical growths are present in almost all cases operated upon, and that such growths, usually by their modification of the contour of the distended bladder and mechanical interference with perfecting emptying of the same, are the chief cause of the symptoms which we usually meet.

Digital or ocular examination, one or both, are of course necessary to the determination of the condition of the inside of the bladder, whatever method of operation is determined upon.

If it be possible to determine beforehand which operation, perineal or supra-pubic, will afford an opportunity to examine the inside of the bladder, we have gone far toward securing the data necessary to the selection of the form of operation best suited to individual cases. In determining beforehand we have no means of securing positive evidence, but there is already accumulated sufficient experience to afford valuable indications in the selection of the operation probably best suited to the individual cases.

First. It appears in the very valuable collection of one hundred and thirty-three cases by Belfield,* of operations upon the enlarged prostate, that the perineal operation is somewhat safer than the supra-pubic.

Second. Inability to reach and explore the bladder by a perineal opening is said to exist in about thirty per cent. of all cases.†

Third. Where it is possible to reach and explore the bladder by perineal incision, it is not generally possible to do so with the same thoroughness as by a supra-pubic incision.

Fourth. Where there is an elongated prostatic urethra, it is generally associated with a rectal tumor of large size, and the increased length of the prostatic urethra, and the consequent increased perineal distance, is approximately indicated by this fact, and by measuring the distance with a catheter from the meatus to the point where urine is obtained. A large rectal tumor was accompanied by an elongated prostatic urethra in all the following cases.

It is well to bear in mind the fact that the amount of obstruction to urination produced by an enlarged prostate bears no relation to the size of the enlargement of the gland felt by rectal examination. An enlarged middle lobe may produce complete retention, and no appreciable enlargement be shown by rectal examination.

With a greater degree of safety by the perineal method, it seems generally desirable to give it the preference in cases where there is not a large rectal tumor and great elongation of the prostatic urethra, with the expectation of being able, by over-stretching the prostatic canal, to make digital exploration of the bladder and to remove or divide obstructing growths with scissors, knife or cautery. In five of this list of cases—Nos. 1, 3, 6, 10 and 12—there was

*See American Journal of the Medical Sciences, November, 1890.
†McGill, Watson.
not a large rectal mass, and it was possible to explore the bladder with the finger, and to inspect it and the prostatic canal quite well through the large tube which was used. In one of the remaining seven cases the perineal operation was preferred, because the bladder could be made to hold but two ounces. In two, a supra-pubic and perineal opening was made. In one of these two a perineal opening first made failed to afford access to the obstructing intra-vesical growths, and the upper opening was consequently made. In the other a supra-pubic opening was made and intra-vesical growths removed, but inaccessible urethral obstruction being felt, an opening was made below. In the remaining cases the high operation would have been preferable, but a perineal opening was made either because the condition of the patient imperatively required the least possible surgical injury, or for other reasons stated. Perineal opening afforded sufficient access to secure division of so-called prostatic bar and collar-shaped growths and moderate sized projecting masses, either by the scissors, knife or cautery, in the five cases above referred to. It is generally necessary to remove the projecting divided ends in these cases to secure perfect patency of the vesical orifice. The writer has not met with any distinct pedunculated middle lobe growths in the cases operated upon, but found one several years ago in a post-mortem upon a patient where no operation had been made. A perineal opening would have afforded good opportunity for its removal. It has in those, where this method seemed applicable, afforded easy access to other forms of hypertrophy, such as prostatic rings, bars, almond and other shaped growths at the vesical orifice, and ridge and nodular formed tissue in the prostatic canal. In four cases marked diminution in the size of the rectal tumor has followed puncturing the lateral lobes with a small curved galvano-cautery point. The latter was used through Ferguson's rectal tube by reflected light from a head mirror. The punctures were made to the depth of one-half to three-quarters of an inch, and from two to six in number. Definite location of the desired point of insertion of the cautery can be obtained by digital and ocular examination. A small, straight tenaculum passed along the finger secures the objective point, and the tube then passed into the wound over the tenaculum, the secured mass can be more fully exposed by being drawn into the mouth of the tube. In the cases thus treated no ill effect has been observed. Prolonged drainage was used, and the small resultant slough occasioned no inconvenience. How much of the diminution in size of the rectal mass was due to the removal of congestion by rest secured by drainage, it is difficult to estimate. The tube usually employed at the time of operation was three-quarters of an inch in diameter and four inches in length.

The use of the cautery in this manner would seem to be restricted to small salient growths, and to a limited extent in the reduction of general enlargement of the lateral lobes by puncture. It is quite as feasible as its somewhat similar use in the removal of nasal growths. It is more easily and definitely manipulated than the knife or scissors in removing small growths about the vesical orifice through a perineal opening. More experience in its use may extend the limits of its application, but it does not appear suited to growths of large size. In these cases it has fortunately occurred that no growths of considerable size were met with at the vesical orifice, and probably it would have proven inadequate to their removal had they been found. It is manifestly not equal to other methods at the disposal of the surgeon in operating through a supra-pubic opening. The violent inflammation sometimes attending its use is free in the removal of nasal hypertrophies would appear to suggest its limitations in prostatic surgery.

The tube used (or a smaller one) can be reintroduced and the cautery used at intervals of four or five days, if it seems difficult or inadvisable to complete its use at one sitting. Subsequent application of the cautery can be made under cocaine anesthesia. In addition to the use of the cautery and drainage-tube, the perineal opening affords an easier and better method of using the cystoscope than when the latter is introduced at the meatus. So long as the opening remains large enough for its introduction, it affords fair opportunity to note the condition of the inside of the bladder.

The method employed in the following cases to secure final closure of the wound after drainage by the perineal opening, has made it possible to use a tube almost indefinitely. Prolonged drainage was used in
several of them, and in numerous instances following perineal operations for other causes. It has been maintained without reference to the possible formation of a permanent fistula, and this objectionable sequel has not occurred in a single instance. In a patient suffering from a tubercular pyelitis and an accompanying cystitis a fistula persisted for some weeks, but finally closed. In this case the perineum had formerly been honeycombed by fistulous tracts following perineal abscesses. No fistula were present at the time of the operation, but the amount of cicatricial tissue following their former existence, made it probable one might remain after the prolonged use of a tube. In Case I of this table a catheter was used for eighty-one days, and in Case IX for ninety-two days.

Closure of the opening is secured by thoroughly curetting the granulating channel and removal of all cicatricial tissue at its external orifice. Cocaine anesthesia is sufficient. Stitches are inserted if the orifice is large. A dry absorbent dressing is applied, and the urine drawn by catheter for three or four days. The use of a steel sound in the urethra facilitates the operation, and makes it easy to locate the urethral end of the tract. In addition to small curettes, a dental burr of large size insures perfect denudation. In the use of drainage through a perineal tube it seems desirable that it should be continued until the urine is free from evidence of cystitis and until bladder pain and soreness have disappeared.

A brief summary indicates that when death followed perineal incision the danger would not have been lessened had the suprapubic opening been employed. One died from immediate shock, and one from uremia ten days after operation. In Case VII, where combined incision was used, death was from shock. The presence of stone in this case did not seem to be an influence in the result. Rectal distention with a six-ounce bag was attended by pronounced arterial depression and respiratory disturbance.

In two other cases, where the writer did supra-pubic cystotomy for causes other than enlarged prostate, the use of the rectal bag had to be discontinued, as in Case VII, because of the shock it produced. In Case V, the fatal termination, five and a half weeks after the operation from renal disease, can not fairly be attributed to the operation.

Residual urine was present in varying quantities in the cases operated upon. Its amount was greater where there was a large rectal tumor present. It was not found after recovery in but two instances, viz., Cases VIII and IX, and then in small quantity. However, all were not subsequently examined to determine the amount of residual urine present after recovery. In Case IX relief seems chiefly due to the removal of stone, but the enlarged prostate had undoubtedly favored the stone's formation.

The average age of the patients was sixty-five years and ten months, and but three were under sixty-five years. This average includes the cases operated upon since this paper was read. (See table.)

**TABULATED LIST OF CASES.**

**Case I.** Mr. W. K., age sixty-five years. (Referred by Dr. Wesley Allen, of West Newton.) Bladder symptoms for two years; wholly dependent on catheter for past two months. Catheter used every hour or every two hours. Very slight enlargement shown by rectal examination. Prostatic bar divided by perineal incision December 31, 1889. Drainage used eighty-one days because of recurrence of pain on temporary removal of tube. Recovery, with restoration of bladder function. Now over two years since operation and no return of any symptoms. Urinates naturally once in three to five hours in day time, and does not have to empty the bladder at night.

**Case II.** Mr. L., aged eighty. Cystitis of several years' standing, now violent in character. Rectal tumor quite large. The patient's general condition bad. Perineal operation January 15, 1890, at Indianapolis City Hospital. Bar divided. Bladder difficult to reach. Death on third day. Never fully rallied. (Port-mortem showed much such a specimen as Plate No. I in Operative Treatment of the Enlarged Prostate, by Watson.)

**Case III.** Mr. ———, aged seventy. Severe cystitis from gonorrhea of six months' standing, accompanied by prostatic obstruction. Bladder would hold but a small quantity of urine, a part of which was expelled every ten to twenty minutes. Rectal tumor small. Perineal operation; prostatic collar divided April 29, 1891. Drainage fifty days through perineal tube. Recovery. Bladder now empties itself completely, but patient has to urinate every two or three hours.
Case IV.  Mr. J. S., aged seventy-four.  (Referred by Drs. McFadden and Kennedy, of Shelbyville.) Complete retention.  Catheterization now impossible.  Rectal tumor of large size.  Perineal opening made May 14, 1890, and drainage until May 26, 1890, when a supra-pubic operation was done, owing to extreme length of prostatic urethra and inability to complete operation by perineal opening.  Pear-shaped hypertrophy found on examination through supra-pubic opening.  V-shaped piece removed with scissors.  Ridge-like and nodular hypertrophies felt through the perineal opening in prostatic urethra, obstructing access to the bladder, were removed by galvano-cautery through a small cylindrical rectal speculum; cautery punctures also made into lateral lobes.  Prostatic urethra of large size, seemingly dilated by intra-urethral growths.  Recovery, with complete restoration of bladder function.  Now over two years since operation.  No return of symptoms.

Case V.  Mr. J. B., aged sixty-eight.  Wholly dependent upon catheter for ten months preceding operation.  Cystitis well marked.  Rectal tumor of large size.  Operation by perineal incision July 12, 1890—(patient preferred perineal operation).  An anterior horseshoe hypertrophy about the size of a small almond, was found at the vesical orifice, and removed by the use of a hook-shaped galvano-cautery knife through a cylindrical rectal speculum.  The aperture through the tube used was three-fourths of an inch in diameter.  Recovery, but without restoration of bladder function.  By digital examination at the time of operation, and by inspection with the cystoscope three weeks later, it was shown that all intra-vesical obstructions had been removed.  Patient improved for about one month after operation, when symptoms of uremic poisoning intervened, and he died one week later, having been semi-comatose for two or three days preceding death.

Case VI.  Mr. T. N., aged fifty-eight.  Cystitis had existed for one year previous to operation.  Urination was very difficult and painful.  Rectal tumor of medium size.  There was in this case co-existing stricture of the membranous urethra, of small caliber, necessitating perineal section.  Operation May 28, 1890, by perineal incision.  A prostatic collar, with small opening at the vesical orifice, was divided, and the retracted ends nipped off with scissors.  Recovery, with perfect restoration of bladder function.  At this date—two years after operation—there has been no return of symptoms.

Case VII.  Mr. A. B., age seventy years.  (Referred by Dr. Norton, of Bartholomew county.) Cystitis severe.  Patient has been wholly dependent upon catheter for several months.  Rectal tumor of large size.  Exploration of bladder with sound revealed a stone.  Operation November 28, 1890, at Dr. Banker's private hospital, Columbus, Ind., by combined supra-pubic and perineal incision.  On examination through the supra-pubic opening, a conical-shaped mass was found projecting into the bladder.  V-shaped section removed with scissors, also a soft stone removed, size of a small walnut.  Inaccessible urethral obstruction being felt, a perineal opening was also made.  The mucous membrane of the bladder was found greatly thickened and rough.  Use of rectal bag was accompanied by arterial depression and respiratory disturbance.  Death thirty-six hours later.  Patient never fully rallied.

Case VIII.  Mr. A. A., aged sixty-nine.  Cystitis for two years.  Urination now almost impossible.  Use of catheter very difficult.  Rectal tumor of large size.  Operation January 21, 1891, by perineal incision.  Prostatic collar divided and retracted ends burned off with the galvano-cautery.  Several cautery punctures were made into the hypertrophied lateral lobes through the prostatic urethra.  Recovery, with almost complete restoration of bladder function.  The supra-pubic operation was advised in this case, but declined by patient.  The perineal distance was great, and it was with difficulty that the finger could be passed into the bladder.

Case IX.  Mr. J. S., aged seventy-one.  (Referred by Drs. Hobbs and Holloway, of Knightstown.) Five years' previous dependence upon the catheter.  Its use now necessary every hour.  Cystitis severe.  Rectal tumor of small size.  Bladder capacity about two ounces.  Large, soft stone present.  Operation March 20, 1890, for stone only, by perineal incision.  After removal of stone by crushing through the perineal opening, an anterior horseshoe hypertrophy could be felt at the vesical orifice; but no attempt was made at its removal, because of the length of time already consumed in removing the stone and the patient's failing condition.  The hypertrophy was purposely caught in the jaws of the lithotrite and
crushed. It was impossible to pass the finger into the bladder, owing to the great perineal distance. Operation upon the prostate was deferred indefinitely. Patient subsequently declined to have it done owing to improvement following operation for stone. Thirteen months later, the stone having re-formed, another operation was done for its removal by perineal incision, and at the same sitting finding the perineal distance greatly diminished, and being able to pass the finger into the bladder, there was removed with the galvano-cautery as much of the growth at the vesical orifice as could be reached. More of this growth was subsequently burned off through a tube, and punctures made into the lateral lobes. Drainage used ninety-two days after last operation. Restoration of bladder function followed the first operation, but more or less cystitis remained. After second operation same result followed. Removal of the stone is to be largely credited for relief obtained. The supra-pubic operation would have been desirable in this case, but for the extreme smallness of the bladder. In this case the right and left lobes were removed incidental to a third operation for stone, one week after Case XIII was operated upon. The patient did well for some time, but died of a pyelonephritis five months after last operation. Removal of lateral lobes by median perineal incision seems to involve danger of marring the integrity of the prostatic urethra and producing traumatic stricture.

Case X. Mr. T. D., aged forty-eight. Slight cystitis and irritation of the membranous and prostatic urethra had existed for three or four years. There was a complication of deep urethral stricture of medium caliber. Rectal tumor small. Prostatic collar and stricture divided January 3, 1891, by perineal incision. Recovery, with great improvement. Has some bladder irritation, but no residual urine.

Case XI. Mr. L. C. S., age seventy-one. (Referred by Dr. Hurt, of Elizaville, Ind.) Cystitis for one year. Quite severe for past three months. Patient's general condition very bad. Rectal tumor large. Operation by perineal incision June 16, 1891. A half almond-shaped hypertrophy was removed from the vesical orifice by the scissors. Perineal distance long, but finger could be passed into the bladder by a little effort. The patient died ten days later of uremia. Supra-pubic operation would have been better in this case, but owing to the patient's objections and my belief that the perineal was somewhat safer, the latter was done.

Case XII. Mr. B., age forty-eight years. (Referred by Dr. S. H. Moore, of this city.) Bladder symptoms for two years. Two or three recent attacks of retention. Rectal tumor of small size. There were co-existing strictures of the deep urethra, and a small encysted stone at the vesical orifice. Operation by perineal incision Sept. 12, 1891. Strictures and prostatic collar divided and stone removed. Patient entirely well.

Case XIII. Mr. F., age seventy. (Referred by Dr. Wycliffe Smith, of Delphi, Ind.) Wholly dependent upon catheter for past six months. Operated upon October 13, 1891, by median perineal incision. Rectal tumor of considerable size. A superficial incision was made with a knife, dividing the mucous membrane covering the right lateral lobe, and the prostatic tissue removed piece by piece by enucleation with the finger. Left lobe not so large as right, and no attempt made at its removal. An immediate and marked diminution in size of the rectal tumor was observed. Restoration of bladder function followed the removal of the drainage tube six weeks after operation. This is the first case, so far as the writer is aware, where a lateral lobe has been removed through a median perineal incision. This patient did well for a time, but urination ultimately became difficult. Another opening was accordingly made eight months after the first, and the prostatic urethra dilated and a small growth removed from the left side of the vesical orifice. Patient died some ten days later. First operation had caused sufficient injury to prostatic urethra to cause a traumatic stricture.

Case XIV. Mr. T. P., aged sixty-nine. Wholly dependent upon catheter for several months past. Rectal tumor not large. A small nodular growth on the right side of the vesical orifice was revealed by a cystoscopic examination prior to the operation. Operated upon at the City Hospital, March 14, 1892. A perineal incision was made and the growth broken up with the finger, counter pressure being applied through the rectum. Tube removed in two weeks and complete restoration of bladder function followed.

Cases XV, XVI and XVII were operated upon since the reading of this paper.

Case XV. Mr. R., age sixty-five years.
(Referred by Dr. W. H. Thomas, of this city.) Rectal tumor not large. Occasional bladder symptoms for the past two or three years. Has had a recent prostatic retention. Pain in urination severe. Catheterization difficult. Median perineal incision made on August 7, 1892. Catheter inserted and drainage used ten days, when a growth at the right side of the vesical orifice was freely burned with the galvanic cautery. Tube removed a few days later. Wound closed kindly, and patient empties bladder easily and entirely at this time. Says he wants to live twenty-five years longer for the pleasure he now has in urinating.

Case XVI. Mr. G. M. (colored), aged sixty-three years. Bladder symptoms for the past three or four years. Stream small, and urination frequent and painful. Catheterization very difficult. Catheter passes ten inches from meatus before urine is obtained, but a distinct growth is felt hanging in the prostatic urethra on introducing an explorer seven and a half inches; hence a perineal operation was selected, with a view of doing a supra-pubic operation subsequently if necessary. Rectal tumor of small size. Operation August 23, 1892, by median perineal method. On introducing the finger in the perineal opening a growth was felt hanging in the prostatic urethra, attached to a very narrow base on the right side. It was removed with the finger, and found to be one inch and a half in length, and one inch in diameter. Finger could be passed into the bladder only by using great pressure, with the assistance of counter pressure above the pubes. A subsequent supra-pubic opening may be necessary to lower the vesical orifice. This is the only case in which any trouble has been encountered from bleeding. None of any consequence occurred at the time of operation, but on the sixth day very profuse hemorrhage occurred, and was quite threatening for forty-eight hours. Drainage tube still in use.

Case XVII. Mr. L. M., aged seventy. (Referred by Dr. J. W. Merry, of Mt. Ayr, Ind.) Bladder irritation for two or three years past. Wholly dependent upon catheter for the past two months. Rectal tumor small. Operation by median perineal incision September 13, 1892, and growth about the size of an olive was found on left side of the vesical orifice, and removed by enucleation. Patient doing well. Tube still in use.