Prostatic suggestions / by Victor C. Pedersen.

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PROSTATIC SUGGESTIONS.*

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It is not many years since prostate glands were removed solely for enlargement and not with due regard for the effect exercised by the hypertrophy on the bladder, ureters, and kidneys, as being after all the chief indication for operation.

Fortunately now, however, surgeons are inclined to operate for the obstruction caused by the hypertrophy with consequent severe and progressing damage to the upper urinary tract beginning with the bladder, rather than for the hypertrophy itself.

It is in order to bring out the points on which the clinical decision for operation rests in good surgical conservatism that the following illustrative case reports with specimens are presented. The special dictum or principle which each case aims to demonstrate will be presented as a part of each such case report. It is hoped thereby to gain more definiteness than might otherwise be possible.

Case I. H. B. E., U. S., white, eighty-seven years old, widower, retired clergyman. Referred by Dr. Percival R. Bolton. The diagnosis was unusually extensive hypertrophy of the prostate complicated by overdistention, atony, and chronic inflammation of the bladder.

The family history is negative and the past personal history is that he has had the usual number of illnesses through life without damage to the kidneys. Has always enjoyed good health until retired for old age, excepting occasional illnesses of little moment.

His former sexual history states that he has been married twice, and has had four children of whom one survives.

Venereal history is in every way negative.

The present illness began about fifteen years ago when he first noticed frequency of urination at night. This required adoption of catheter life with which he had had eight or nine years' experience when first seen.

Physical examination: Reasonably healthy man of advanced years. Heart and lungs normal, age considered. Abdomen bulging from flatulence. External sexual organs normal. Prostate gland very large, rather hard, not tender. The urinary function was greatly disturbed by an exacerbation of cystitis, so much so that he had to urinate every twenty or thirty minutes, night and day, with consequent drain upon his strength. Examination of the bladder showed it up to the navel without tone and somewhat tender to percussion. Residual urine was drawn up to twelve ounces. Urethral length, nine and one half to nine and three quarter inches. Stone searcher revealed no calculus. Was not possible to cystoscope him.

Uranalysis revealed severe chronic cystitis with kidneys in reasonably good condition, there being comparatively few casts, and good percentage of urea.

The treatment given this patient was perineal drainage of the bladder, under cocaine, in order to relieve the cystitis.

After this had been accomplished he was permitted to go on with his catheter life, to which was added lavage of the bladder, at first daily and finally twice a week. In this manner life has been made more than tolerable for the patient, inasmuch as his bladder has had nearly seven years of this treatment, and he is so well off that he is obliged to use the catheter only once at night and every five hours during the day.

This patient might well have survived the operation of removal of the prostate gland inasmuch as his kidneys were in reasonable condition and his general past and present health good.

Since being under my care he has survived two serious illnesses which would have terminated the lives of most aged persons, which still further tends to show that his resistance to the operation would have been good. The condition of the bladder, however, was the contraindication for the removal of the gland. The muscle of the bladder had been overstretched and paralyzed by years of disease so that all recovery power was forever gone, and so that, therefore, a removal of the prostate gland would not have benefited his symptoms and might well, through paralysis of the bladder, have induced an incessant incontinence which would have been far worse than the existing conditions, relieved with the aid of the catheter.

This patient, then, was one in whom an operation, while scientifically inviting was, properly speaking, useless. In withholding therefore the inclination to operate, far better service was done the man than otherwise would have been the case.

That this patient will carry his cystitis to the grave is a foregone conclusion because the mucous membrane was long ago so profoundly damaged as to be beyond restitution. This is a well known fact everywhere in the body where mucous membranes abound. The limited recovery power of mucous membranes, after a certain degree of damage has occurred, is well known to specialists in diseases of the eye, ear, nose, and throat, digestive tract, and diseases of the sexual and urinary organs in both women and men.

Case II. J. P. F., U. S., white, sixty-three years of age, married, occupation, merchant.

The diagnosis was hypertrophy of the prostate gland with congestion and moderate cystitis.

The family history is father died of nephritis, otherwise negative.

His personal history is general health good, inclined to nervous indigestion with flatulence; very moderate alcoholic and slightly excessive tobacco habit.

Sexual history negative. At present his sexual powers are distinctly declining.

Former venereal history negative.

Present illness: Duration about three years. Chief complaint, frequency and urgency of urination, especially at night with, at times, inability to empty the bladder. On such occasions there are some vesical pain and irritation.

*Case reports presented to the Medical Progress Club, April 10, and to the West Side Clinical Society, April 13, 1911.

Physical examination: In general appearance robust, tense, nervous man. Heart and lungs normal, age considered. Prostate gland is distinctly enlarged, rather soft, and slightly tender. Stone searcher does not reveal stone or any very great intravesical protrusion. Urine is passed with a little straining, is turbid, and slightly purulent.

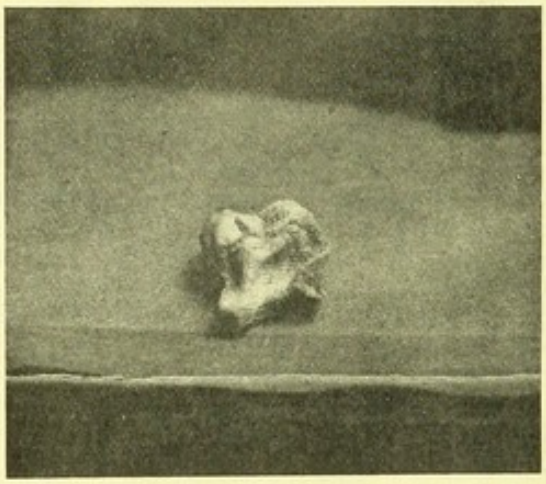

FIG. 1.—Half natural size. Shows the pedunculated middle lobe very distinctly and suggests emphatically how great an obstruction to the urinary outflow this rather small mass must have been. It made distinctly a beautiful picture with the cystoscope. The pedicle presents toward the reader. Impressions made by gauze wrapped tightly about the mass while hardening in the formalin are easily made out.

Repetition of the effort brings a little more urine. Residual urine, four drachms, likewise turbid and purulent.

Cystoscopy could not be done on this patient on account of congestion of the prostate and consequent encroachment on the calibre of the deep urethra. After the congestion and cystitis had disappeared cystoscopy was no longer indicated, hence not justified.

Uranalysis. Negative, excepting considerable albumin, much pus, and a few casts, great excess of indican and uric acid.

Under dietetic measures the albumin nearly totally disappeared, likewise the casts, except a few hyaline. The cystitis which was present rapidly disappeared, leaving the patient entirely comfortable, merely under dietetic and medicinal measures. At the same time the congestion of the prostate gland disappeared leaving behind a distinct hypertrophy but without residual urine.

Continuance of the same method of treatment for about fifteen months has kept this patient perfectly well so that he is disturbed at night only once as a rule, sometimes twice, to pass urine and then it is well toward morning. By day his urination is that of the ordinary individual who has a demanding business care.

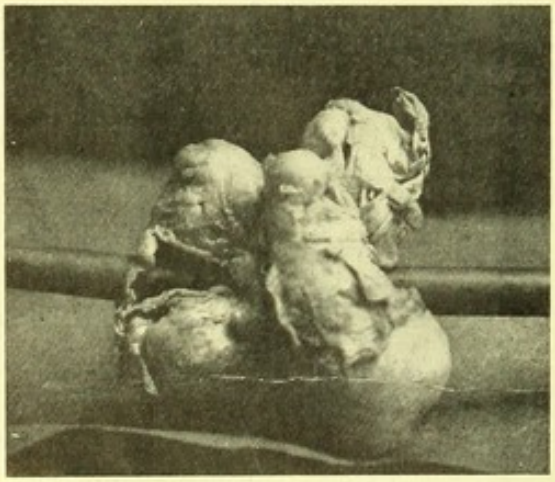

FIG. 2.—Nearly natural size. Shows the gland from above. The irregular lobulated right lobe is distinctly portrayed. The dissection of this with the finger was so difficult that at first it was thought that morcellation would be necessary. Fortunately, however, the gland came away as a complete specimen.

This patient might be operated on at any time but his condition is so nearly ideal and his willingness to follow directions so great that it seems far better judgment to wait until the prostate gland by somewhat further enlargement begins to show symptoms of disturbance and damage to the bladder which medicinal measures do not relieve. The turning point in the case will then have been reached and the operation will be immediately necessary in order to remove the cause of the condition before the bladder becomes too profoundly damaged to permit it to recover and to perform its function after the offending obstruction in the prostate gland is removed.

It is precisely at this point that so many general practitioners err, namely in not bringing the patient to operation at the earliest possible moment after a period of comparative comfort, when prostatic hypertrophy begins to show those symptoms from which he cannot recover without operation.

There are many persons, as this man, in whom an operation may be deferred for a year or two, with the greatest refinement of surgical conservatism. When, however, symptoms again arise, it is because the period of postponement is ended and the time for surgical intervention is at hand. If, at this moment, there is further delay, the patient passes more or less into the condition of Case IV. The operation succeeds in so far as it removes the prostate gland, but fails in so far as it is too late for the bladder to regain good function and to throw off inflammation. This leaves the patient comparatively without benefit and adds to the number of failures of the operation so far as restoration of the bladder to duty is concerned.

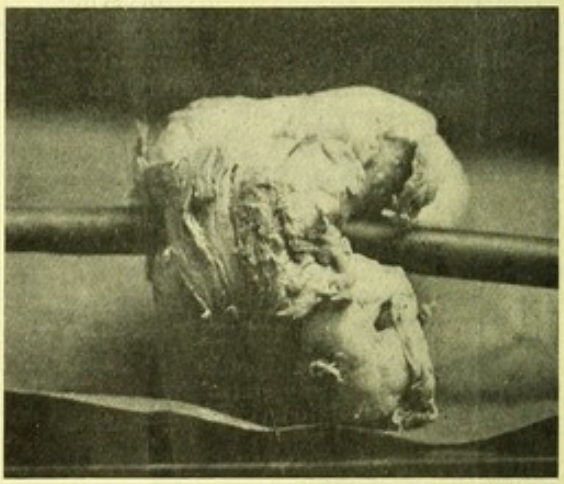

FIG. 3.—Nearly natural size. Indicates the gland from below showing an apparently uniform enlargement, particularly in the lateral lobes. The irregularities of the right lobe were not at all apparent before the operation. The catheter passed through the urethra in both figures was size 21 F.

The following report is similar to the preceding in the facts that the patient had severe symptoms without having had an intense cystitis, so that his bladder was still in good condition so far as absence of overdistention and atrophy of the mucous membrane. The severity of the symptoms, however, with their definite increase made it necessary

to operate forthwith, as his bladder would no longer resist the disadvantages under which it was working.

Case III. W. B., fifty-two years old, married, insurance broker. Referred through the courtesy of Dr. Jonathan G. Wells.

Diagnosis: Hypertrophy of the prostate gland, especially of the middle lobe (ball valve action).

Family history and former personal history, negative, Denies insistently any venereal disease or disorder excepting masturbation for a short time as a boy.

Present illness began four years ago when he noticed his urination was more frequent, less under voluntary control and somewhat disturbing at night. At that time he went to one of our leading urologists, who did not do a cystoscopy and treated him with irrigations of the bladder and massage, all without benefit of lasting character.

At the time of his first visit he reported his urination to be once every few hours by day and at least one or more times by night, occasionally many times. The stream had become double and forked, urgency great, control incomplete, and, at times, absent. There never had been obstruction. Considerable pain was present in the penis, bladder, rectum, and perinæum especially during and after urination and at times after defæcation.

The man suffered from no disturbance of the sexual function. He had, however, become extremely nervous with periods of irritability, depriving him of his sleep.

Physical examination: Normal except for nervousness. Heart, lungs, abdomen, and external genitals normal.

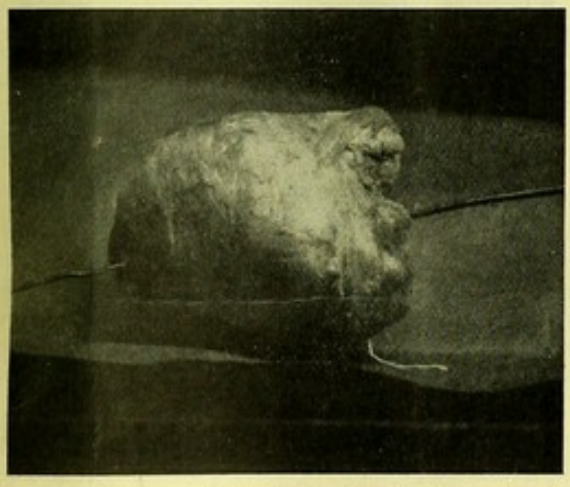

Fig. 4.—Nearly natural size. Shows the gland from below as a solid mass of hypertrophy with no distinction between right, left, and middle lobe.

Prostatic examination was painful and revealed a hard moderate general hypertrophy particularly that of the middle lobe. A stone searcher caught upon the middle lobe. Urination was with straining, slightly turbid, urine being passed about two ounces in amount. Effort to pass more urine failed. Residual urine drawn with a 16 F. coudé catheter was three and a half ounces.

Urethral examination showed length of nine inches and a calibre without pain of 16 F. Endoscopy revealed greatly congested prostatic urethra and a middle lobe over which it was not possible to see. Cystoscopy showed a large middle lobe with the ureters just visible beyond it. Numerous shallow trabeculations covered with apparently normal uninflamed mucous membrane were easily made out. Four small oxalate concretions were found on the floor of the bladder about the size of pin heads.

Uranalysis showed a decided trace of albumin, less than one tenth of one per cent., no sugar; normal urea; undistorted pus cells, many crystals of uric acid and calcium oxalate. Scattered hyaline casts.

Operation was suggested by me and accepted by the patient on the grounds that treatment by an expert with irrigations, massage, and medication, persisted in for a long time, had failed to give benefit and that his condition was steadily growing worse. There was, therefore, nothing to be gained and a great deal to be lost by allowing matters to remain unrelieved. Accordingly a suprapubic operation was undertaken with the kindly services of Dr. K. B. Page as consultant, W. B. Brouner as assistant, and Dr. Denton, as anæsthetist.

The bladder was readily opened and a middle lobe more or less pedunculated so as to act as a ball valve, was removed. The bladder was explored for stone negatively, a large drain was inserted, and the patient returned to bed. As there had been little or no cystitis the tube was removed on the second day; irrigations of the bladder through the wound were begun on the third day. All the immediate results were excellent. The final results will be most prosperous, because the cut off muscle of the bladder and the deep urethra were not invaded at all.

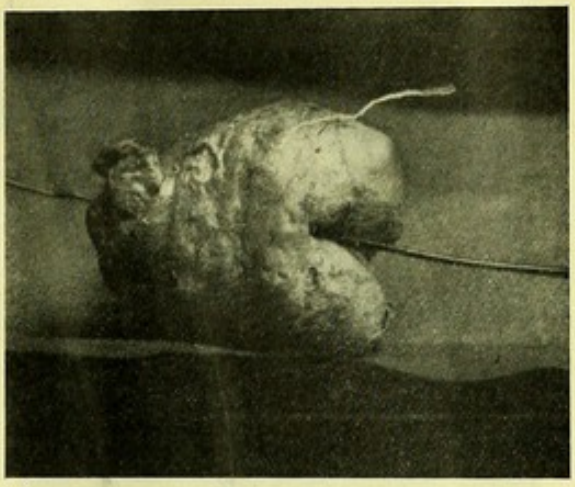

Fig. 5.—Also practically natural size.. Shows somewhat greater enlargement in the lateral lobes than in the middle lobes. The hardening of the specimen in the formalin made it impossible to pass a probe through the urethra without damaging the specimen. In this patient, however, the calibre of the urethra was very greatly obstructed in life.

The prostate gland as a whole was found to be practically normal. It was, therefore, not enucleated, on the ground that it was better to remove the obvious cause of the trouble and allow Nature to restore the balance of the prostate gland left in place.

Figure 1 illustrates the specimen from this case.

This case therefore represents a transitional step between Case II with a large prostate causing little or no trouble except when congested and without having had a cystitis and Case IV where a cured severe cystitis relapsed and remained incurable because

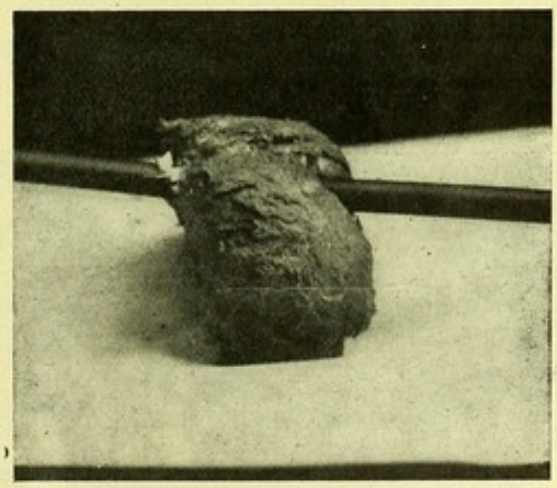

Fig. 6.—Somewhat distinctly smaller than in nature; from below. The enlarged right lobe presents with comparatively little enlargement of the middle lobe so that the left lobe is visible beyond. The formalin specimen required coaxing of an 18 F. catheter through the urethra, which tore a little fresh tissue shown in white on the left of the photograph, the specimen as a whole having been discolored somewhat.

no operation was undertaken. Case III would have followed the same course in time. Postponement of the operation would have been most ill advised. The reward which this patient will receive is a perfectly good bladder which, even a month or six weeks after

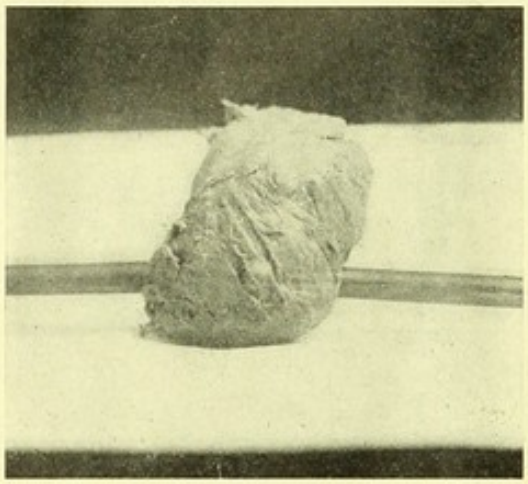

FIG. 7.—Shows the specimen from above, twisted on itself. The left lobe presents, showing the right lobe beyond. In the left lobe there is a small nodule rather distinctly indicated. The enlargement of this specimen was such as to make the gland as a whole lose much of its conical shape.

operation, should be giving no symptoms whatever. He will further gain in the continuation of his normal sexual functions, as his prostate gland remains practically unmolested.

While it is true that many men deprived of their prostate glands do not lose much of their sexual function, it is also true one cannot state in advance to a patient what will be for him the end result in this regard, namely, either loss or maintenance of these powers.

CASE IV. T. O'M., U. S., white; sixty-seven years old; widower; no occupation.

First seen in February, 1905, after he had refused operation at the New York Postgraduate Medical School and Hospital.

Diagnosis, hypertrophy of the prostate gland with subacute cystitis.

Former general history, negative as to hereditary taint and negative as to serious illness in his whole life. He had always enjoyed reasonably good health until the present disease began. In early life he had had a few attacks of gonorrhœa without complications of moment or any other important features. Syphilis denied.

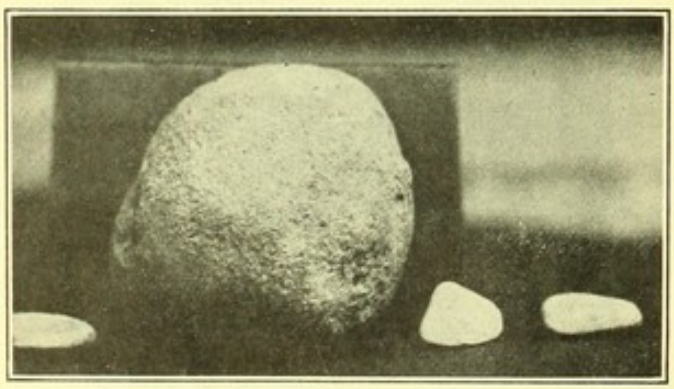

FIG. 8.—Four stones, natural size; the facets on the three smaller stones present distinctly. On upper surface of large stone is a facet which seems to correspond with that on the largest of the three stones. There are two other similar facets on the large stone, not shown in the figure.

His present illness began late in 1904 with symptoms of cystitis. When first seen he was getting up at night only twice. His sexual function had not been particularly disturbed or decreased and he showed little or no functional neuroses such as many of these patients manifest.

Physical examination: Rather thin, wiry, well preserved old man. Heart and lungs normal, considering his age. The prostate gland was moderately enlarged and fairly hard. Stone searcher revealed no stone, but considerable pocketing of the bladder behind the prostate gland. Urinary function, reasonably good without straining, but with a residual urine of nearly an ounce which voluntary effort would not decrease. Instruments passed easily.

February 22, 1905, cystoscopy was readily performed and revealed an enlarged prostate, a rather deep pouch behind it, and a distinctly inflamed somewhat trabeculated bladder. Operation was accordingly again recommended but refused.

The patient was thereupon put upon urinary antiseptics and frequent irrigations of boric acid to wash out the pus, followed by mild antiseptics to overcome the infection. This was done at first every day, then every other day, and finally once a week. At the same time he was put upon urinary antiseptics internally, urotropin in ascending doses, much as potassium iodide is given in syphilis. When the patient was taking forty-five grains a day his urine began to improve and cleared up entirely under sixty grains a day. The kidneys were watched in the interval for irritation. The original uranalysis showed no valid kidney disease beyond an occasional cast. Cystoscopic examination was again made March 19, 1905, and revealed great improvement in all the conditions.

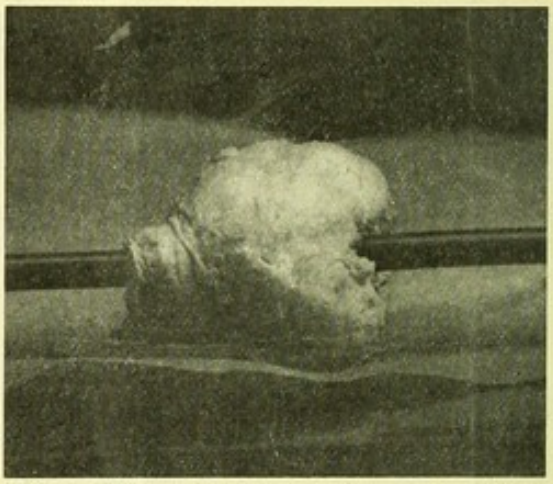

FIG. 9.—Smaller than natural size from below.

Here then was a patient who, under medicines and irrigations, was able to restore a visibly damaged bladder to the degree of throwing off a cystitis. The viscus was not overdistended and therefore possessed another element of recovery. The supreme moment in this case for an ideally successful outcome of the operation was when the urine had become clear and the bladder more or less restored. Unfortunately, however, the patient again absolutely refused surgical measures, under the theory that he was not going to live long any way, perhaps a few months, and had far better die in peace than as the outcome of interference. The failure, therefore, of the patient to get an ideal result was due to this decision. The subsequent history is interesting.

The foregoing notes on this particular patient were, for the most part, published before the Genitourinary Section of the New York Academy of Medicine after the man had remained in this more

than reasonably good condition for nearly two years. His wife then became sick; he neglected his irrigations once or twice a week and took his urinary antiseptics indifferently. He was, at this time, again taken sick himself, confined to bed. and again became the victim of cystitis, undoubtedly of autogenous origin. Although the same course of treatment was followed when he again reappeared at

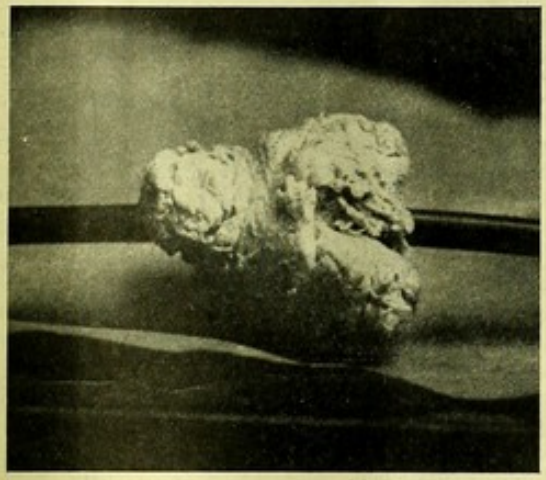

Fig. 10.—From above, shows reasonably uniform enlargement of the gland, somewhat greater on the right side and the observation of the conical form of the gland. In this case the calibre of the urethra is about 20 and reasonably easy to pass. The gland was difficult to enucleate along its upper surface, which is distinctly shown in Fig. 9, where the ragged portions are prettily portrayed.

my office, this cystitis has never been relieved so that now the man was almost a duplicate of Case I, excepting the one fact that he has not nearly so high a degree of overdistended bladder. Operation now, even though survived, would benefit the patient but little as he would still have his cystitis with its unending symptoms, to which might be added the dreadful inconvenience of incontinence.

The course of this case is instructive on the point of emphasizing again that the power of the bladder to recover from cystitis and other damage from the obstructing prostate gland, furnishes the sign for operation. If this sign is ignored the best opportunity for a good functional result is usually quickly lost.

This case, therefore, stands in marked contrast to the following:

Case V. F. S., French, white, sixty-six years old, married, banker. Referred by Dr. H. H. Houghton, of Bayside, L. I.

Diagnosis, hypertrophy of prostate gland with mild cystitis.

Family history, negative. Has personally had no serious constitutional or infectious disease. Always enjoyed excellent health. His former sexual history is normal and venereal history, negative excepting one attack of gonorrhœa about forty years ago lasting two months and without complications.

Many years ago a "quack" passed instruments which infected him with cystitis for some time from which, however, he finally fully recovered.

Present illness began nine years ago apparently with a congested prostate gland which soon recovered. During the past few months he has had typical symptoms of prostatic enlargement followed by moderate cystitis. Urination is with considerable straining which induced a relapse of rupture acquired in boyhood and previously cured with a truss. Prostatic discharge is occasional; sexual function greatly decreased; has no functional disorder, except nervousness due to night calls to empty the bladder.

Physical examination: Rather robust man weighing 140 pounds. Heart and lungs in very good condition; blood pressure, 165. Right testicle is enlarged and very tender. Prostate gland is hard and generally hypertrophied. A stone searcher hooks over a large intravesical mass. As the instrument passed with some hesitation cystoscopy was not done. Urination is strained and hesitating. Residual urine, six ounces, verified by filling the bladder with a solution of boric acid, permitting him to evacuate, and again withdrawing the residual fluid. Bladder capacity not much over eight ounces, of which he is able to pass about two. Length of urethra about nine and one half inches; calibre, 16 French, with ease. No stone detected with the searcher.

Urinary examination shows the kidney function to be good and the bladder in fair condition.

Operation was recommended on the grounds that his bladder had largely recovered under the care of his family physician from an acute cystitis and that his prostate gland was rather rapidly progressing in its obstruction to the functions of the bladder and that in order to permit the latter organ to maintain whatever it might have of recuperating powers, early removal of the prostate gland was indicated. Fortunately the operation was permitted and done at the Bayside Infirmary in one sitting. The suprapubic method was adopted on the ground that ordinarily the functional results in the neck of the bladder are very much better than in the perineal operation. The operation was done in one sitting on the ground that the bladder was in such good condition that the drainage gained by the two step operation was not required.

The operation was performed with the assistance of my associates, Dr. Kingman B. Page and Dr. Walter B. Brouner. The patient made an uneventful recovery. At the present time he gets up only once at night, about 5 a. m. if at all. By abstaining from fluids in the evening this is frequently avoided altogether.

Cystoscopy reveals a bladder restored to nearly normal condition. There are a few trabeculations, shallow and lined with mucous membrane of as good appearance as the rest of the bladder. The calibre of the man's urethra is now 28 F. without pressure.

This case, therefore, illustrates the clinical point that the time chosen for the operation was ripe and right. His prostate gland was troubling him more and more and could not be expected to recede under medicinal means. His bladder had had a very re-

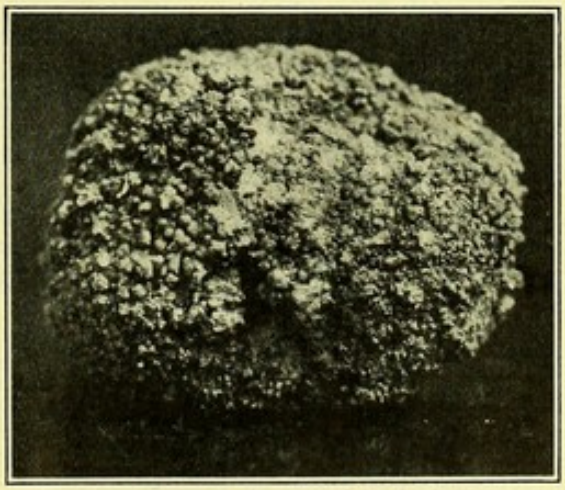

Fig. 11.—Slightly larger than natural size. The characteristics of these stones are too familiar to warrant description in a paper of this kind.

cent inflammation from which it had practically recovered. If the prostate gland were neglected the man might expect, sooner or later, to undergo the

experiences of Case IV, and thereafter find himself perhaps incurable.

Case VI. G. H. W., U. S., white, seventy-six years old, widowed, retired merchant. Referred by Doctor E. S. Morton, of Brooklyn, N. Y.

Diagnosis, hypertrophy of the prostate gland complicated with a chronic cystitis.

Family history, negative. The present illness began several years ago and has steadily increased in severity. Urination has increased in frequency so that nightly disturbances were so many as to depreciate the patient's strength. There was also a good deal of pain in the bladder from pressure most of the time. His nervous system was so much impaired that he was very irritable and uncomfortable.

Physical examination: A spare, reasonably healthy old gentleman, obviously very much worn out by the frequent calls to empty his bladder. Prostatic examination revealed a large irregular hard prostate gland with three and one half ounces of very foul residual urine. The urethra was nine and one half inches long, reduced in calibre to about 16 F. No stone could be detected. The calibre of the urethra forbade cystoscopy. The urine showed a great deal of damage to the bladder and moderate involvement of the kidneys.

In order to prepare the patient for considering operation it was decided to try at first the effect of medicinal and irrigation treatment. After about ten days of this, however, the patient was convinced of its futility and gladly, through the influence of Dr. Morton, decided to undergo operation. The intractibility of the cystitis under treatment previously by Dr. Morton and myself decided me to do the operation in two stages in order to drain the bladder and to permit it to recover from the inflammation. Accordingly a suprapubic cystotomy was performed, under cocaine, with the assistance of my colleagues, Dr. Kingman B. Page and Dr. Walter B. Brouner. This drainage immediately allowed the bladder to quiet down and the patient to have several nights of rest before the major operation was undertaken, which was performed six days later under nitrous oxide and ether anæsthesia, administered by Dr. Denton. The prostate gland came away with considerable ease and was found to be unusually regular in form as shown by the photographs in Figs. 4 and 5. A large suprapubic drain and gauze packing were inserted into the blader and gauze packing adjusted around it. The patient made an uneventful recovery; a little slower than usual owing to a chronic eczematous condition, from which he suffered.

When the wound had been reduced to a small sinus he broke out in a generalized eczema of severe type. The wound then ceased its progress. After the eczema had been fully controlled and the toxæmia relieved by Dr. James M. Winfield, the wound healed promptly and the patient regained his strength and courage.

The present condition of the man is that he is called up at night twice regularly, sometimes three times, and passes his urine by day every two or four hours. In this patient, however, damage of the inflammation to the mucous membrane of the bladder had proceeded too far to permit a complete recovery; in other words, the best time for giving the man, not only a good functional control of the bladder, which we did, but also a bladder free from inflammation, was passed. If the operation had been done possibly a year or two earlier than it was, this case would have duplicated the success in Case V.

The calibre of the urethra is now, with ease, 24 F. The deep urethra was so tortuous that up to the present time, cystoscopy has not been possible. As there is a reasonable chance of benefitting this patient, somewhat at least, by a continuation of the urinary antiseptics and irrigations this plan is at present being followed.

Case VII. S. McC., U. S., white, sixty-seven years old, single, retired physician. Diagnosis, hypertrophy of the prostate gland, complicated with severe cystitis. Former history, negative as to family and personal taint, excessive sexual habit, or venereal disease.

Present illness began several years ago with the usual symptoms of hesitation and inhibition. In February, 1909, after a wine dinner had a moderate retention. At that time he passed water every three or four hours by day, and four or five hours at night. He had a severe inflammation of the right testicle coming on without known cause. He also had the constant typical pain of enlarged prostate gland. Sexual functions were absent almost entirely. Although by no means comfortable his nervous system had not been materially damaged.

Physical examination: Age considered, the man was normal in appearance and nutrition. The prostate gland was hard, irregular, and general in its enlargement. The urine was foul and turbid, passed with straining. Residual urine, two ounces. Length of urethra nine inches, calibre 24 F. No stone detected. Middle lobe apparently large.

Cystoscopy was not employed, as the bladder was very irritable, and patient "begged off." The patient at first refused all consideration of operation and was put on expectant measures, namely, urinary antiseptics and irrigations. After two weeks' faithful treatment no progress had been made, in fact, his courage was waning owing to his sufferings and lack of benefit from drugs. Operation was then determined upon and two stages were recommended as best for his bladder. It was hoped in this case to secure a result equal to that in Case V. The causes of failure, however, are shown in the record later

Under chloroform and ether, administered by Dr. Gwathmey, a suprapubic drainage operation was done, with the assistance of Dr. K. B. Page and Dr. W. B. Brouner. As is usual, this relieved the patient from many of his inconveniences. After one week the prostate gland was removed somewhat easily, excepting for part of the left lobe, which was firmly adherent and became detached from the body of the gland. The usual large drain with gauze dressing was applied and the patient returned to bed.

Owing to the ragged wound in the floor of the bladder, consequent to the difficulty in the getting out of the gland, the gauze packing was carried down into the bladder and into the wound there, to stop the hæmorrhage, which was rather active. About five hours after the operation the hæmorrhage returned rather briskly and was controlled by repacking. After this the patient made a good recovery.

At the time of the operation the cavity of the bladder was inspected and palpated for stone, but none was found. When the wound had been reduced to a very small sinus, it refused to heal excepting for a brief closing of the mouth of the sinus for a few days, to be followed by fresh opening with a discharge of pus.

About eight weeks after the operation, while I was on vacation, the urethra suddenly changed in calibre from 23 F. to 9 F. This was assumed to be a rapidly forming stricture owing to the scar tissue in the prostatic region. This proved to be, however, not narrowing as much as tortuosity of the urethra, because after several weeks' gentle endeavor to dilate the stricture, I found on one occasion that by having the patient sit up instead of lie down, a 22 F. Beniqué curve instrument passed easily. This little trick of having the patient sit up when an instrument does not pass easily while he is lying down seems worth remembering.

During the period of this difficulty with the stricture, the patient began to pass fragments of calculous deposits, so that I prepared him for the possibility of a stone formation. Symptoms of stone supervened late in December, and the diagnosis was fully established early in January, 1911, about seven months after operation.

Operation for the stone was resorted to at the People's Hospital with the kindly assistance of my associates, Dr. Kingman B. Page and Dr. Walter B. Brouner. The four stones shown in photograph were recovered (Fig. 8). The tissue around the sinus was carefully cut away so as to permit infolding of the bladder wall. The bladder was closed with two layers of sutures placed as carefully as possible. The abdominal wall was brought together over the bladder wound except for two rubber tissue drains, to the ends of the bladder wound. The wound healed by primary intention except for the two sinuses left by the drains; these closed promptly.

The tortuosity of the urethra was explained by finding in the bladder floor, chiefly on the patient's left, a ridge. Against this an instrument impinged except when turned slightly to the right as, with manipulation, a perfectly straight instrument could be passed into the bladder. On the bladder side of this ridge was a pocket, perhaps as large as the first phalanx of the thumb. This pocket no

doubt was the origin of the large stone, while the small ones were recessed in other small pockets and were ground smooth by contact with the large stone. Since removal of the stone the patient's condition has been reasonably good. His bladder holds from four to five ounces and his frequency is twice at night and every two or four hours by day.

Here again is a case a little different from the others in the features that the patient had had warnings of his trouble for several years which had been more or less ignored until finally an intense exacerbation of a subacute cystitis appeared, which damaged his bladder so that restoration of its mucosa was impossible, although the muscle substance had not materially been changed. This is evidenced by more or less reasonable control which the patient possesses over urination, at the present time, and which is improving.

The condition of the bladder is revealed by the changes in the urine which permitted formation of the stone. In this case the irregularity of the bladder floor is a great misfortune combined with the tortuosity of the urethra, because the latter prevents irrigation of the bladder without considerable irritation, which in itself is not desirable.

This case illustrates the fact further that if the golden period for an operation is lost, namely, the time when the mucous membrane is restorable to health, the inflammation in the bladder through changes in the urine may induce stone formation, which, in turn, may well require further surgical aid, whereas, in ordinary circumstances, the patient may be promised freedom from further bladder trouble, provided the operation is done at this golden time.

Case VIII. L. S., German, white, sixty-five years old, married, musician. Referred by Dr. M. Axelrod.

Diagnosis, hypertrophy of the prostate gland with chronic cystitis and stone.

This patient speaks a dialect of German, making a good history impossible. The severe symptoms of his present illness began fully two years ago, at which time he was examined by a physician with so much suffering that he refused all instrumental investigation in the office, except digital examination of the prostate gland which was found to be large, regular, bulging, and pulsating. The frequency with which he urinated in the office combined with excruciating pain, made the diagnosis of stone in the bladder easy. He was accordingly admitted to the People's Hospital, where with the kindly services of Dr. Kingman B. Page, as consultant and Dr. Walter B. Brouner as assistant, a suprapubic operation was performed.

A stone, weighing, twelve hours after operation, 972 grains, was easily removed (see Fig. 11), and then the prostate gland was taken out. The floor of the bladder was so thickened with inflammation that this was a reasonably difficult undertaking, the mucous membrane being almost leathery over the prostate gland and distinctly hard to break through.

For the twenty-four hours prior to operation this patient urinated in the hospital nearly every twenty minutes, to the great disturbance of other patients on the private floor. A suprapubic drain tube was applied and packing adjusted. The patient made a quick recovery and is today very comfortable. He passes his water at night occasionally two or three times and by day from two to five hours. The calibre of his urethra is 20 F. He has a few drachms of residual urine, but his inflammation in the bladder cannot be remedied. Unfortunately the calibre of the urethra prevents cystoscopy.

While this patient has been considerably improved, the irritation of the stone upon his bladder for upward of two years for ever prevents anything in the line of recovery. It was probably the patient's fault two years previously that he did not then submit to operation for removal or crushing of the stone, to say nothing of attention to the prostate gland, as he then received proper advice.

Here again we have a patient who will carry this trouble for the rest of his days and he may, through changes in the urine and damage to the bladder, again develop a stone. It is hoped, however, that with persistent irrigation and sterilization of the urine, he will be relieved from this danger.

The prostate gland which I removed was not particularly large, but it was hard, fibrous, and obstructing. This small, fibrous prostate gland, with symptoms of obstruction, must have been present two or more years back, and should have attracted attention in such a way as to suggest immediate operation.

If the failure to secure operation is ascribable to the physician in charge who hurt the patient so much, the case is only another example where a general practitioner might not have understood the true meaning of the symptom complex, that is to say, he may not have fully grasped the fact that an operation should be undertaken not so much for the enlargement of the prostate gland as for the obstruction which it causes, with secondary symptoms of grave importance in the urine, bladder, ureters, and kidneys.

CONCLUSIONS.

There is a period in prostatic disease which is being more definitely recognized than previously which rests on the condition of the bladder mucous membrane due to the disease.

If the mucosa is in good condition and the prostate gland has begun to obstruct, the best time for operation is at hand. Delay until the mucosa is greatly injured will mean hazard and likelihood that the injury will be permanent and beyond repair.

When the mucosa of the bladder has begun to suffer, it is often because the obstruction by the prostate gland and the cystitis have reached a degree which soon leads to serious results upon the kidneys and ureters above.

The mere removal of an enlarged and obstructing prostate gland may be mechanically possible and performed without death, but if a bladder is left behind so badly damaged from chronic cystitis as to render functional restoration impossible and as to leave the symptoms proceeding from the bladder virtually unchanged, then the operation has failed of its ideal success.

If the prostate gland is merely enlarged, obstructs none or very little, and the bladder is in good condition, operation is not justifiable.

If the bladder is greatly changed from inflammation beyond recovery, and if the catheter may be successfully passed, in most cases office irrigation is preferable and more conservative than operation. Such a bladder is a contraindication to operation.

In closing I desire to express appreciation, gratitude, and thanks to my chief Dr. Kingman B. Page and to my colleague, Dr. Walter B. Brouner, of the Genitourinary Staff of the People's Hospital, for much advice, aid, and cooperation in many of the foregoing cases, and to Dr. C. H. Chetwood in the first case. Such professional friendship is a source of happiness and inspiration.

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