



PROSTATISM WITHOUT ENLARGEMENT OF THE PROSTATE

ITS DIAGNOSIS AND TREATMENT

BY

CHARLES H. CHETWOOD, M.D.

OF NEW YORK

Attending Surgeon to Bellevue Hospital; Professor of Genito-Urinary Surgery
of the New York Polyclinic Medical School and Hospital

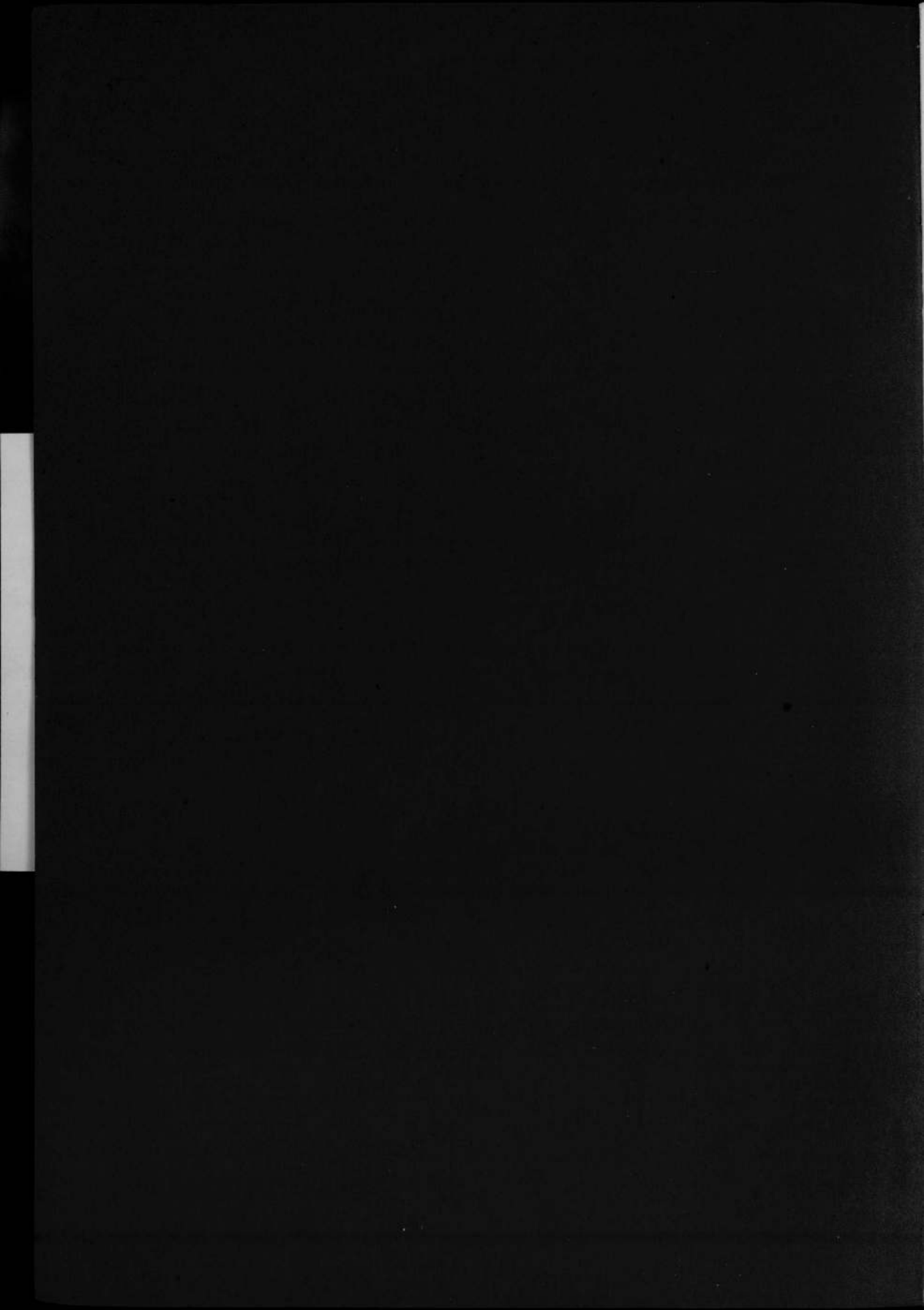


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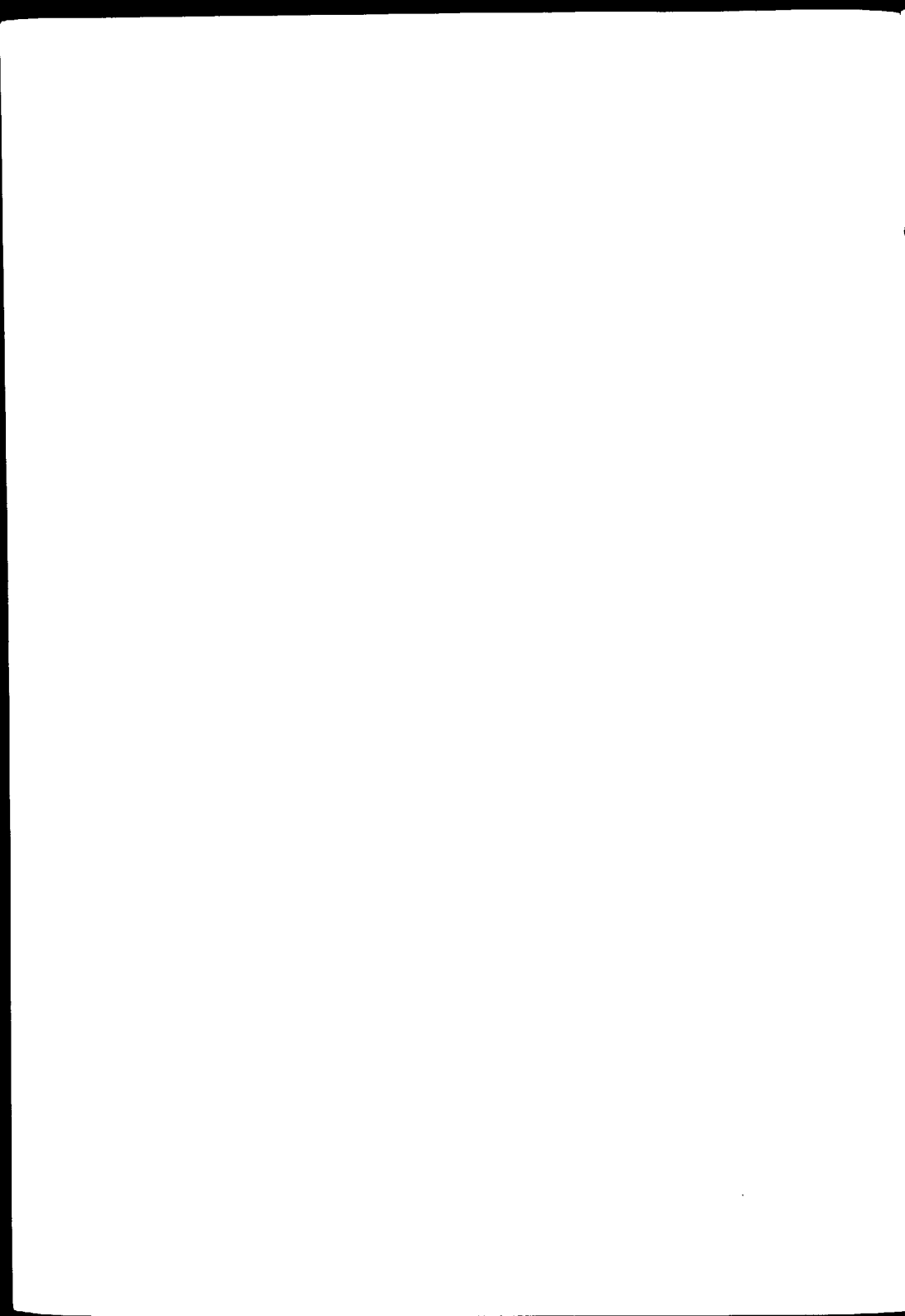
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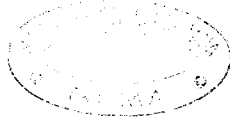
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PROSTATISM is commonly understood to signify a train of symptoms accompanying that blight of declining years,—senile hypertrophy of the prostate. That this same train of symptoms is encountered independent of prostatic enlargement there can be no question; and it is for the purpose of calling attention to the condition most notable in producing prostatism without enlargement of the prostate that this brief communication is presented.

The particular train of symptoms embraced in the above title consists of urgency and frequency of urination, pain during and after the act, and partial or complete retention of urine. When met in an individual past the age of fifty, this collection of symptoms—if there be no marked increase of urinary frequency or vesical hæmaturia during the muscular activity of the day to indicate the presence of neoplastic growth or stone in the bladder—is more likely to suggest to the mind of the ordinary medical observer prostatic hypertrophy than the malady I am about to describe.

This morbid condition, which is so common a cause in the production of the symptoms of prostatism, is best expressed under the title of "Contracture of the Neck of the Bladder." It has been described by earlier authors under different names, resulting in an imperfect understanding of the nature of the malady.

In a communication delivered before the American Association of Genito-Urinary Surgeons, May 2, 1901, I have en-

¹ Read before the Medical Society of the State of New York, February 1, 1905.

deavored to collect the multiplicity of titles variously applied to this condition under the one employed for a long time by my honored colleague, Dr. Keyes.

Contracture of the neck of the bladder is, in substance, a fibroid stenosis of the vesical orifice. It is not a hyperplasia of the muscular elements of the sphincter or of the adenomatous tissue; it is not a simple spasm or a mucous fold, but a fibrous infiltration inflammatory in character.

Its cause may be found in previous chronic inflammation of long standing in front of or behind the sphincter vesicæ. Such inflammation may or may not be gonorrhœal in type. As its existence depends upon an inflammation either of high intensity or of protracted duration, it is more frequently of gonorrhœal origin.

It may occur in the young as well as in the aged, and is found alone during the mature stage of prostatic hypertrophy; or it may coexist with this latter condition, when it is often the real cause of the associated symptoms. In other words, we may have an enlarged prostate of such dimensions as to leave no doubt of the existence of such a growth; and yet there may be no symptoms accompanying the enlargement, unless there is a coexistent contracture of the neck of the bladder, or unless the prostate itself is directly obstructive to the vesical outlet. Sir Henry Thompson recognized this fact, and in an article written in 1883 refers to obstruction of the bladder outlet, which occurs with and without coexistent prostatic hypertrophy.

That there is confusion in the minds of many operators and writers, even at the present day, between contracture of the neck of the bladder and prostatic hypertrophy is evidenced by a glance at the current literature of this and foreign countries, which is sufficient to justify an attempt to assist at clearing up the situation by calling attention to the diagnostic features and clinical cases bearing upon this question.

M. Lemeau, in a communication to the *Annales des Org. Urin.*, November 15, 1904, calls attention to what he terms an interesting case of error in diagnosis.

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The patient was an extremely feeble old man, affected with acute retention of urine. Rectal examination revealed an enormous tumor, and a diagnosis of neoplasm was made. Upon opening the bladder suprapubically, it was revealed that the tumor was due to vesical distention with urine, there being entire absence of any tumor or prostatic enlargement. Obliteration of the urinary orifice was almost complete by what the author described as "simple spasm;" but it was undoubtedly an example of the condition now under consideration. The patient succumbed to that secondary state so often produced after prolonged prostatism,—namely, pyelonephritis.

Another case was reported in the same issue by MM. Reynes and Montfort. A patient seventy-eight years old was sent to the hospital with a diagnosis of prostatic hypertrophy. Upon rectal examination, no notable enlargement of the prostate gland could be distinguished. There existed, however, the usual symptoms of prostatism,—dysuria, incomplete retention of urine, etc.,—requiring the patient to rely entirely upon the catheter for six months previous. A suprapubic opening was made; no hypertrophy of the gland was found, but, as expressed by the writer, a sclerosis of the vesical outlet.

In another issue of the same publication, Dr. Moran, of Brest, contributes a note on a case of prostatism without a prostate. The history of the patient was the subject of this communication, and the progress, symptoms, and results of two operative interferences composed a detailed report. The patient was sixty-five years of age, and for one year previously had complained of all the symptoms common to prostatism. In early years he had suffered from urethritis, and the symptoms had become much aggravated several weeks previous to his examination. A No. 20 Charrière sound was introduced through the urethra without difficulty, meeting a slight resistance on reaching the vesical sphincter. On rectal examination, slight enlargement of the prostate was revealed. There was residual urine to the amount of 300 grammes. The diagnosis of hypertrophy of the prostate—probably of the middle lobe—was made. Operation was suggested, but refused. The patient did not improve under bladder lavage, and was finally induced to submit to surgical interference, which consisted in a Bottini-Freudenberg galvanocaustic operation. By this time the retention had become complete, vol-

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untary urination being impossible. As only partial improvement was thus obtained, exploration through a suprapubic incision was determined upon a month later, when, encircling the neck of the bladder, was found a fibrous ring which had not been completely severed by the Bottini operation. It was then incised through the suprapubic opening by means of a thermocautery.

The result of this second operation was excellent. The urine became clear and free of inflammatory elements, and the residual urine diminished from 300 to from ten to thirty grammes.

The author summarizes this observation—which was a most interesting one—as a case, relatively rare, of prostatism without the prostate, due to a sclerotic formation of the vesical neck, sufficient to obstruct the outflow and interfere with the efforts of the bladder to evacuate itself; and, after section of the obstruction, a return of the bladder to complete functional activity.

Many other cases of similar character might be mentioned in support of the statement that contracture of the neck of the bladder is a more frequent cause for the symptoms designated than is generally recognized; that it is often confounded with hypertrophy of the prostate, and that its existence should always be considered in a differential diagnosis.

As may be seen from the accompanying cut (Fig. 1), taken from a cast of the natural subject, the normal vesical orifice is of sufficient dimensions to freely admit the entrance of the finger; whereas, when it is the seat of contracture, it may be so stenosed as to just barely admit the finger-tip, or to be almost completely occluded.

The second illustration (Fig. 2) is taken from a post-mortem subject, and is a fair example of this obstructive condition. Its recognition during life is not difficult. When existing independent of prostatic hypertrophy, rectal touch will reveal a normal gland; and measurement of the urethral length, one within the normal limits, namely, seven and three-quarters to eight and one-quarter inches. The catheter may yield little or no residual urine when the bladder's compen-

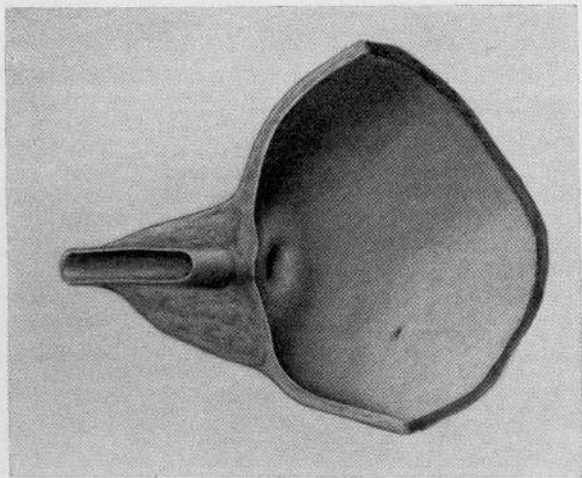


FIG. 1.—Section showing normal vesical orifice and prostate.

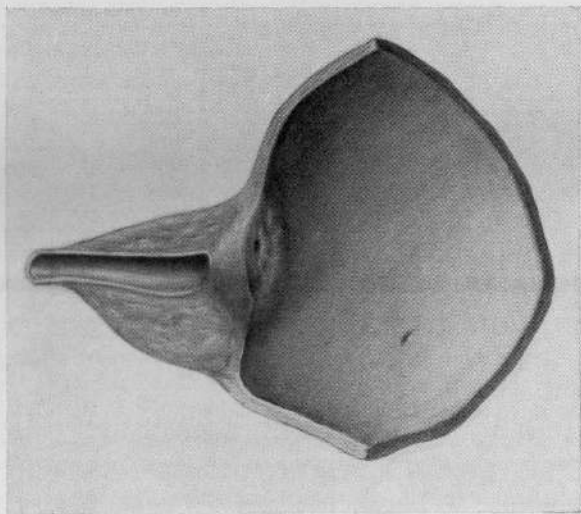
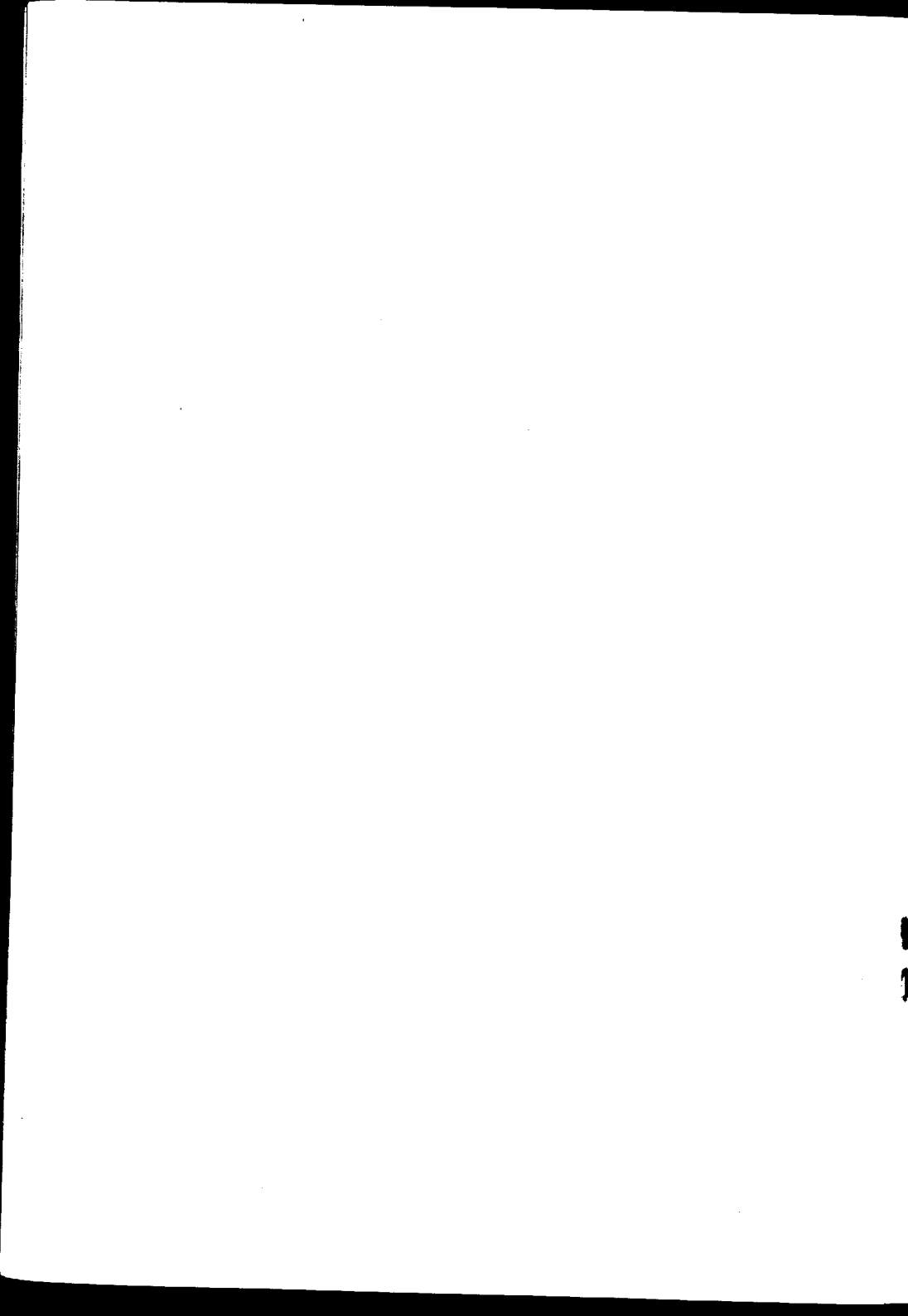


FIG. 2.—Section showing contracture of neck of bladder. Normal prostate.



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satory power is sufficient to overcome the obstruction (Cases 8, 10, 16, 23, and 26). Later on, however, when this compensatory power fails, or when the obstruction is valve-like or complete, residual urine will exist, from one ounce (incomplete retention) up to the full capacity of the bladder (complete retention); and, when this point is reached, we will often meet with that symptom so common in old prostatics,—pseudo-incontinence of urine or urinary overflow. Before infection occurs the urine may be limpid and clear, but after cystitis supervenes all the symptoms peculiar to it will be in evidence.

Generally speaking, it may be stated that contracture of the neck of the bladder is the causative factor of complete or incomplete retention of urine in a patient presenting a normal urethral length and a prostate normal to rectal touch, in the absence of tubercles or other central lesion.

A Thompson searcher introduced through the urethra may enter without difficulty, or may meet obstruction at the vesical sphincter. The absence of prostatic intravesicular growth to account for the symptoms of obstruction will be noted; whereas the orificial contraction will be recognized by turning the beak of the instrument towards the *bas fond*, making gentle traction while rotating it from side to side. A full-sized steel sound may enter the vesical orifice without marked difficulty, as this is the most distensible part of the canal, and moderate contracture may not be detected by the passage of a sound.

Finally, this diagnosis may be conclusively confirmed when, through a suprapubic incision, with one finger in the bladder and another in the rectum, total absence of prostatic obstruction is found to account for the existing retention of urine; or, when a perineal incision is made, and the finger—when passed through the membranous urethra and the prostatic urethra—reaches the neck of the bladder and meets an impassable orifice so tight as to just admit the end of the finger or completely to obstruct its entrance.

Beyond doubt, many cases of prostatic hypertrophy which have been operated upon with a view to removal of the hyper-

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trophied gland without recognizing the existence of contracture of the vesical orifice result in failure to relieve the symptoms dependent upon the obstruction.

In the third cut (Fig. 3) is pictured a case of prostatic hypertrophy, in which, however, the obstruction at the vesical outlet is due not so much to the enlargement of the gland as to the constricted or contracted orifice. Failure to recognize this fact during operation would undoubtedly interfere with a successful result. The same condition may coexist with stone in the bladder, and failure to detect and remedy it will also result in a continuation of the symptoms, as the following case illustrates.

The patient, sixty-two years old, suffered from complete retention of urine in January, 1890, and had been dependent upon the catheter for several years. The bladder was suprapubically entered and two stones the size of horse-chestnuts removed from the *bas fond*, and an encysted third stone in the region of the ureter, there being no intravesical enlargement of the prostate. The operation was completed by the removal of the stones. The patient made a good recovery; but the complete retention was in no way affected by the operation, and he continued the use of the catheter for twelve years longer, when he consulted my colleague, Dr. Keyes, Jr., who recognized the presence of contracture of the neck of the bladder, and submitted him to the operation of perineal-galvano-prostatectomy. At this time his prostate was again found to be perfectly normal, the entire obstruction being due to the stricture or contracture at the bladder neck.

The patient was out of bed on the seventh and left the hospital on the eleventh day. Voluntary urination returned, and he was able to empty the bladder to within one ounce.

The presence of contracture of the neck of the bladder being determined, the most effective means for its relief is of next importance. To be of sufficient utility, simple incision of the obstructing ring is likely to be attended with very severe hæmorrhage; and it must be overdone to insure against the return of the condition in the process of healing.

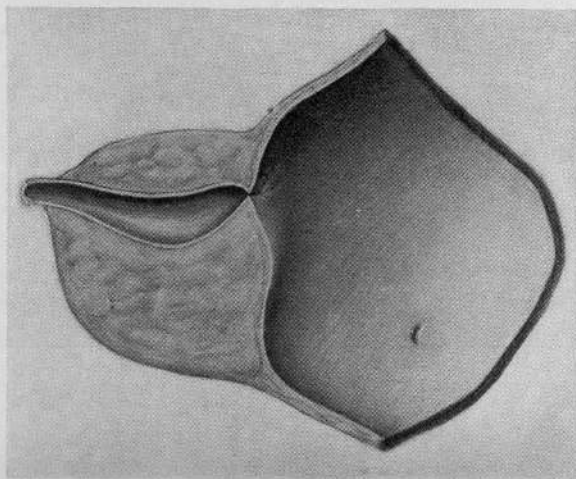


FIG. 3.—Contracture of neck of bladder, with enlargement of prostate.



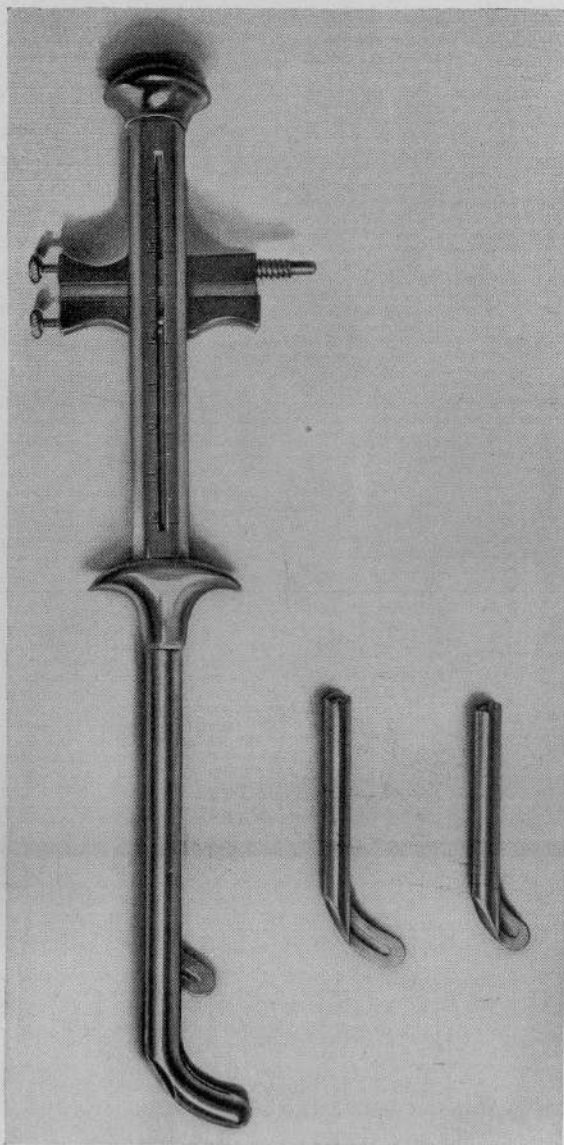


FIG. 4.—Chetwood galvanocautery prostatic incisor for use through a perineal opening.

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The method adopted in all of the cases tabulated in this report is the writer's technique of galvano-prostatotomy through a perineal opening.

The galvanocautery incision is safe, bloodless, and effective. The instrument which I have had designed for this purpose (Fig. 4) is used through a simple perineal incision. The perineal opening is a means of exploration as well as of drainage,—a surgical advantage which needs no comment here.

The experience derived from these thirty-six cases would seem to justify the conclusions that contracture of the neck of the bladder is a common cause for vesical obstruction; that its relief is safe and sure by means of a galvano-prostatotomy through a perineal opening; and, finally, that it is often an explanation for what has been termed "Prostatism without enlargement of the prostate."

109 EAST THIRTY-FOURTH STREET.

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TABULATED REPORT OF THIRTY-SIX OPERATED CASES.

No.	Date.	Age.	Previous urethritis.	Urination; day.	Urination; night.	Residuum.	Other symptoms or complications.	Duration.	Previous condition.	General condition.	Urethral length.	Prostate.	Kidney implications.	Operation.	Urination; day.	Urination; night.	Residuum.	Last report.	Result.	POSTOPERATIVE CONDITIONS.	
																				Urination; day.	Urination; night.
1	Aug. 7, 1900	73	Yes	Incontinence	Incontinence	1 oz.	Suprapubic fistula	Several years	Chronic cystitis	Good	Normal	Not enlarged	No	Sept. 1900	Q. 2 to 3 h.	None	None	Feb. 10, 1902	Improved; bladder empties; urinary frequency, and incontinence less.		
2	Sept. 20, 1900	71	No	Catheter	Catheter	C. R.* Stone	Stone	8 mos.	Chronic cystitis	Good	Normal	Not enlarged	Yes	July 28, 1901	Q. 3 to 5 h.	Q. 3 to 5 h.	3 oz.	14 mos. aft. operation	Improved; voluntary urination returned.		
3	Oct., 1900	45	Yes	Q. 1 h.	6 times	1/2 oz.	Drizzling	Many years	Chronic urethritis	Fair	Normal	Not enlarged	Yes	Nov. 20, 1900	Q. 4 to 5 h.	Once	None	Jan., 1905	Cured; no residuum; dribbling less; kidney normal.		
4	Dec. 15, 1900	33	Yes	Q. 1/2 h.	Q. 1/2 h.	1/2 oz.	Hæmaturia; tuberculous cystitis	Several years	Chronic tuberculous cystitis	Poor	Normal	Nodular	Yes	Dec. 18, 1900	Q. 1/2 to 3/4 h.	Q. 1/2 to 3/4 h.	None	June, 1905	Unimproved; tuberculous condition progresses slowly		
5	Dec. 17, 1900	69	...	Q. 20 min.	Q. 20 min.	1 oz.	Hæmaturia; increase pain; fibrosis; tuberculous cystitis	Several years	Chronic cystitis	Fair	Normal	Not enlarged	No	March, 1901	Q. 2 to 3 h.	2 to 3 times	None	March, 1903	Much improved; no pain and less frequency.		
6	Jan. 1, 1901	45	Yes	Q. 1 h.	Q. 1 h.	2 oz.	Hæmaturia; intense pain; diabetes	4 years	Chronic urethritis	Poor	Normal	Not enlarged	No	Jan. 10, 1901	Q. 3 to 4 h.	Once	None	2 years aft. operation	Improved; pain relieved; bladder empties.		
7	Jan. 8, 1901	33	Yes	Q. 1 h.	7 times	2 1/2 oz.	Prostatic abscess	6 years	Chronic prostatic urethritis	Good	Normal	Acute supuration	No	Jan. 14, 1901	Q. 3 to 4 h.	Q. 3 to 4 h.	None	1 mo. aft. operation	Cured; normal bladder drainage.		
8	Jan. 10, 1901	31	...	Q. 1/2 to 1/2 h.	Q. 1/2 to 1/2 h.	.....	Great dysuria; hæmaturia	Several years	Acute and chronic cystitis	General	Normal	Not enlarged	No	Jan. 12, 1901	Q. 1/2 to 1 h.	Q. 1 h.	None	2 mos. aft. operation	Improved as to urination and much less pain.		
9	Jan. 21, 1901	29	Yes	Q. 1 to 2 h.	3 to 5 times	2 oz.	Great dysuria	Several years	Chronic prostatic urethritis	Good	Normal	Not enlarged	No	Jan. 22, 1901	Q. 3 to 5 h.	Once or not at all	None	2 mos. aft. operation	Cured; normal bladder drainage.		
10	Jan. 25, 1901	39	Yes	Q. 2 to 3 h.	2 to 3 times	None	Acute relapses of cystitis	15 years	Acute and chronic cystitis	Good	Normal	Not enlarged	No	Jan. 29, 1901	Q. 3 h.	Once or twice	None	Dec. 4, 1902	Improved; urination freer and less painful.		
11	Jan. 31, 1901	46	No	Q. 1 h.	Q. 1 h.	10 oz.	Great dysuria	10 years	Chronic incomplete retention	Good	Normal	Not enlarged	No	Feb. 5, 1901	Q. 3 to 5 h.	Not at all	None	2 years aft. operation	Cured; no residuum or pain.		

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12	Feb. 14, 1901	39	Q. $\frac{1}{4}$ to 5 to 8 times	1 $\frac{1}{2}$ oz.	Dysuria	Several years	Chronic cystitis	Good	Normal	Not enlarged	No	Feb. 15, 1901	Q. 4 to 6 h.	Q. 4 to 6 h.	None	Oct. 14, 1902	Cured; bladder drainage complete; no pain.
13	Oct. 1901	65	Q. $\frac{1}{2}$ h. to 12 times	4 oz.	General tuberculous calculosis	5 or 6 years	Chronic cystitis	Poor	Normal	Not enlarged	No	Oct. 26, 1901	Q. 2 h. 3 h.	Q. 2 to 3 h.	None	Oct. 14, 1902	Improved as to pain and urination, but perineal fistula persists.
14	Oct. 1901	45	Yes Q. 2 to 3 h.	2 oz.		Several years	Chronic prostatitis	Good	Normal	Inflamed	No	Oct. 1901	Q. 6 h.	Q. 6 h.	None	Oct. 14, 1902	Cured; normal urination and bladder drainage.
15	Nov. 16, 1901	27	Yes Q. 1 h.	$\frac{1}{2}$ oz.	Constant pain	18 mos.	Chronic cystitis	Good	Normal	Somewhat swollen	No	Dec. 3, 1901	Improved	Improved	None	Oct. 14, 1902	Improved as to urination and pain.
16	Dec. 1, 1901	41	Yes Q. 2 to 3 h.	None	Perineal pain	2 years	Chronic prostatitis and cystitis	Good	Normal	Enlarged	No	Jan. 28, 1902	Normal	Normal	None	Oct. 14, 1902	Cystitis cured; improved as to urination; no pain.
17	Apr. 26, 1902	57	Yes Q. 1 to 1 $\frac{1}{2}$ h.	Al. most C. R.	Toxæmia	Several years	Chronic cystitis	Bad	Normal	Not enlarged	Yes	Apr. 27, 1902	Q. 3 to 5 h.	Q. 3 to 5 h.	5 ds.	Nov. 25, 1904	Cured as to bladder; kidney condition continues.
18	May 30, 1902	65		C. R.	Hæmaturia	3 years	Chronic cystitis	Good	Normal	Enlarged	No	June 3, 1902	Q. 4 to 6 h.	Q. 4 to 6 h.	None	Oct. 14, 1902	Cured; bladder empties; urination normal.
19	Oct. 22, 1902	72	Q. 3 h.	3 oz.		5 years	Chronic cystitis	Good	Normal	Enlarged	No	Oct. 28, 1902	Q. 6 h.	Q. 6 h.	None	Oct. 14, 1902	Cured; bladder drainage satisfactory.
20	Nov. 1902	74	Yes	C. R.	Perineurthral abscess	12 to 15 years	Chronic cystitis; stone	Fairly good	Normal	Not enlarged	Yes	Nov. 11, 1902	Q. 4 to 6 h.	Q. 4 to 6 h.	1 oz.	Oct. 14, 1902	Cured as to bladder condition; kidney implication persists.
21	Nov. 1902	72		C. R.	Stone	3 years	Chronic cystitis	Good	Normal	Not enlarged	No	Nov. 1902			C. R.	Oct. 14, 1902	Unimproved as to bladder function; pain relieved.
22	Dec. 1902	51	Yes Acute cystitis	2 oz.	Dysuria; tenesmus	3 mos.	Prostatic abscess	Good	Normal	Slightly enlarged	No	Dec. 1902	Normal	Normal	None	Oct. 14, 1902	Cured.
23	Jan. 10, 1903	35	Yes Q. 3 to 4 h.	None	Intense epipubic pain	Several years	Chronic urethritis	Good	Normal	Not enlarged	No	Jan. 20, 1903	Normal	Normal	None	Oct. 14, 1902	Cured; pain relieved; urination normal.
24	Jan. 30, 1903	40	Yes	C. R.	Hæmaturia	3 years	Chronic urethritis; structure	Good	Normal	Not enlarged	No	Jan. 30, 1903	Normal	Normal	None	Oct. 14, 1902	Cured; bladder drainage complete.
25	Feb. 10, 1903	64	Q. $\frac{1}{2}$ to 3 to 6 times	$\frac{1}{2}$ oz.	Severe priapism	Several years	Chronic cystitis	Good	Normal	Enlarged	Yes	Dec. 7, 1904	Q. 2 to 4 h.	Q. 2 to 4 h.	None	Oct. 14, 1902	Cured.

* Complete retention.

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No.	Date.	Age.	Previous urethritis.	Urination: day.	Urination: night.	Residuum.	Other symptoms or complications.	Duration.	Previous condition.	General condition.	Urethral length.	Prostate.	Kidney Implications.	Operation.	POSTOPERATIVE CONDITIONS.				Result.
															Urination: day.	Urination: night.	Residuum.	Last report.	
26	July 23, 1903	66	.....	Q. 1 to 3 h.	2 to 3 times	None	Precipitation of urination	7 years	Chronic cystitis	Good	Normal	Not enlarged	No	July, 1903	Q. 4 h.	Once	None	1 year after operation	Cured; subjective symptoms relieved.
27	Aug. 15, 1903	45	Yes	Q. 1 h.	2 times	4 oz.	.....	2 years	Chronic cystitis	Good	Normal	Normal	No	Aug. 21, 1903	Normal	Normal	None	1 year after operation	Cured; bladder drainage satisfactory.
28	Nov. 25, 1903	57	.....	Q. 1 h.	6 to 7 times	4 to 5 oz.	Dysuria	18 mos.	Chronic cystitis	Fair	Normal	Not enlarged	Yes	Dec. 12, 1903	Q. 4 h.	Q. 6 h.	None	1 year after operation	Cured as to bladder; kidney implications continue.
29	Jan. 30, 1904	39	Yes	Q. 3 to 4 h.	3 to 5 times	4 oz.	Dysuria	Several years	Relapsing urethritis and prostatic abscess	Good	Normal	Not enlarged	No	June 29, 1904	Normal	Not at all	None	Dec., 1905	Cured; urination normal; no pain.
30	Feb. 15, 1904	65	No	Q. 1 h.	Q. 1 h.	4 oz.	Stone	Several years	Stone and prostatic abscess	Fair	Normal	Somewhat enlarged	Yes	Apr. 25, 1904	Q. 2 to 4 h.	Q. 2 to 4 h.	None	1 year after operation	Cured; bladder drainage normal.
31	McH. 11, 1904	43	Yes	Q. 1 to 1 1/2 h.	Q. 1 to 1 1/2 h.	9 1/2 oz.	.....	Several years	Chronic cystitis	Good	Normal	Not enlarged	No	McH. 12, 1904	Normal	Not at all	None	Feb., 1905	Cured; bladder drainage satisfactory.
32	Apr. 13, 1904	59	Yes	Q. 10 m. to 1 h.	Q. 10 m. to 1 h.	5 to 8 oz.	Intense dysuria; morphinism	Several years	Chronic cystitis	Bad	Normal	Not enlarged	No	Apr. 23, 1904	.....	.....	.....	.....	Patient dies 21 days after operation from gradually increasing renal insufficiency.
33	Apr. 25, 1904	60	Yes	Q. 2 to 4 h.	Once	5 oz.	Ataxia	8 year	Chronic cystitis	Good	8 1/2 ins.	Slightly enlarged	No	July 1, 1904	Q. 6 h.	Once	None	6 mos. after operation	Improved as to bladder drainage.
34	May 2, 1904	46	Yes	Q. 30 m.	Incontinence	4 oz.	.....	Several years	Chronic cystitis	Good	Normal	Not enlarged	No	May 13, 1904	Q. 1 1/2 h.	Some incontinence	None	June 4, 1904	Improved; urination less frequent and less dribbling.
35	Nov., 1904	66	Yes	Same as 11	Same as 11	Almost C. R.	Difficult urination and great dysuria	Several years	Chronic urethritis and cystitis	Poor	Normal	Not enlarged	Yes	Nov. 1904	Q. 6 h.	Q. 6 h.	None	6 wks. after operation	Cured; voluntary urination returned.
36	Jan. 9, 1905	66	Yes	.....	.....	C. R.	.....	.....	Stricture; chronic cystitis	Good	Normal	Slightly enlarged	No	Jan. 9, 1905	Q. 4 h.	Q. 4 h.	2 ozs.	4 wks. after operation	Cured; voluntary urination returned.

* Complete retention.





