

Number of Case.	Age.	Cause and Date of.	Number of Strictures.	Locality of Stricture.	Size of Stricture.	Norm. Calibre of Urethra.	Condition at Date of Operation.	Complication.	Number of Operations.	Accidents after Operation.	Results.	Re-examination.	Remarks.
65	44	Gon. 16 years previously.	4	Meatus. 2 in. 4 in. 5 in.	15 21 15 15	32	Gleet. Urinates every one-half hour.	.....	1	1 chill. Slight hæmorrhage.	Cure	1 year after operation. No recontraction.	Deep Strict. No divided by Maisson's nerve's urethrotome.
66	25	Gon. 2½ years previously.	2	Meatus. 1 in. 2½ in.	28 25 25	30	Gleet. Frequent and painful urination. Dribbling. Pain in hypogastrum, pubes, & legs. Involuntary movements of limbs. Pain at neck of bladder. Desire to urinate after evacuation of bowels, for one hour or more.	.....	2	Painful erections	All troubles except public pain disappeared in one week. Return of prostatic irritation. No return of Strictures or gleet.	.....	.....
67	30	7 years and also 9 mos. previously.	1	Meatus. 25 to 3½ in.	34	25	Gleet. Uneasy sensation about genitals.	.....	2	.....	Improvement after each operation, final cure after 3 months.	6 months after first operation recontraction of Stricture at ½ inch to 28 f. Has painful erections. 2d operation cur.	.....

68	31	Masturbation.	2	Meatus. 3½ in. 29	12 32 29	32	Imperfect erection. Nocturnal seminal emissions.	.....	1	.....	2½ weeks after operation has perfect erections. Cure.	1 yr. and 8 mos. after no recontraction.	.....
69		Gon. 3 mos. previously.	2	Meatus. 16 1½ in. 28	16 34 28	34	Retention of urine. Gleet. Vesical tenesmus. No. 7 only passes in bladder.	Enlarged prostate.	1	.....	Cure .....	.....	.....
70	31	Gon. 9 years previously.	4	Meatus. 1½ in. 2½ in. 4½ in.	30 34 24 24 18	34	Gleet. Small and divided stream. Dribbling. Frequent and painful micturition.	.....	3	Slight incurvation of penis. Chills.	Cure complete .....	.....	.....
71	24	Gon. 6 years and also 8 months previously.	1	Meatus. 2½ in. 34	25 36 34	36	Transparent discharge.	.....	3	.....	Cure	5 months after operation. No recontraction.	Meat. divided at 1st operation. About 2 yrs. after 1st operation returned for division of deep Stricture.
72	26	Gon. 6 years previously and several times since.	4	Meatus. 18 1½ 2 3½ in.	18 36 18 36	36	Gleet. Reflex pains over pubes and perineum.	.....	1	.....	Cure .....	.....	.....
73	16	No cause given.	1	Meatus. 22 34	22 34	34	Frequent and painful urination.	2	No improvement

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74	26	No cause given.	1	Meatus.	22	32	Great difficulty of starting the act of urination. Frequent micturition.		1		Perfect cure.	4 months after operation no recontraction.	
75	44	Gon. 6 years previously.	2	Meatus.	30	35	Frequent and painful urination. Small stream. Pain in perineum, rectum and supra pubic region. Feeling of fullness in pelvis.		1		Never heard from.		Length of urethra ten inches.
76	27	Gon. one year previously.	1	Meatus.	29	34	Gleet. Dribbling after urination. Painful "tickling" sensation at glans penis.		1		Cure.	4 months after operation no recontraction.	
77	37	Gon. 15 years previously.	1	Meatus.	28	34	Gleet. Frequent micturition.		1		Cure.	5 months after operation no recontraction.	

78	60	Gon. about 6 months previously.	4	Meatus. Membranous portion 3 bands	28	34	Micturition prolonged.	Perineal abscess. Rectal fistula.	2	Hæmorrhage.	Cure.		The combined operation was performed.
79	38	Masturbation Excessive venereal indulgence.	2	Meatus. 2½ in.	27	32	Imperfect erections. Premature emissions.		1		Lost sight of.		
80	32	Ulcers in urethra 3 years previously.	1	1½ in. to Meatus.	24	32	Gleet.	Syphilis.	2	Hæmorrhage.	Cure.		
81	24	Gon. 5 years previously, and several times since.	1	Meatus.	31	36	Gleet 2 years. Vesical tenesmus.	Prostatic enlargement.	1		Much improved.	4 months after operation. No recontraction.	
82	29	Gon. 12 years previously, and several times since.	3	Meatus. 3 in. 3½ in.	30	38	Burning sensation in deep urethra. Gleet.	Prostatic enlargement.	3		Discharge disappeared. Much improved generally.		
83	23	Gon. 6 mos. previously.	4	Meatus. 3½ in. 3 bands	30	34	Gleet. Pain in glans penis, back and testicles. Frequent and painful micturition.	Cystitis.	1		Cure after 3 months.	One year after operation continues well.	
84	25	Masturbation.	1	Meatus.	23	34	Dribbling after urination. Frequent seminal discharges. Impure erection. Premature emission. Despondency.	Long prepuce.	1		Much improved.		Circumcision was also performed.

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85	35	Masturbation.	4	Meatus, 2½ in. 3 in. 4 in.	22 31 25 31	32	Frequent seminal emissions. Tremulous sensation in lower extremities. Imperfect erections. Dribbling. Persistent pain in hypogastric region aggravated by seminal emissions.		1	Cure				
86	25	Gon. 10 mos. previously.	1	Meatus, 23	32		Gleet		1	Cure				
87	26	Gon. 4 and 2 years previously.	1	½ in. from ¾ in. to 3 in. Several bands.	28 31	32	Dribbles. Pain in back and lower extremities.		2	Slight curvature of penis, disappeared in 1 month.	Cure			
88	50	Gon.	2	Meatus. Close Stricture at membranous urethra.	30		Dribbling. Frequent micturition. Gleet.	Perineal abscess.	1		Cure	13 months after operation continues well.	Deep contraction divided by external guide. No	

89	48	Gon. 20 and 18 years previously.	2	½ in. 4½ in.	18 30		Frequent micturition. Sense of obstruction at end of penis. Dribbling.		2		Cure			The anterior contraction only was divided.
90	30	Gon. 3 and 2 years previously.	4	Meatus. 1½ in. 2½ in. 3 in.	29 27 29		Gleet. Discharge appeared 1½ year previously apparently without cause.		1		Improved. Recontraction found 3 months after operation.	3 months after recontraction.		
91	60	Gon.	4	Meatus. 2 in. 2½ in. 3½ in.	32 32 32		Gleet. Irritability of bladder.	Slight enlargement of prostate. Cystitis.	1		Cure perfect.	One year after operation. No recontraction.		
92	31	Gon. 2 years previously.	5	Meatus. 1½ in. 2 in. 2½ in. 3½ in.	25 32 30 26		Gleet. Sense of obstruction in urethra. Seminal weakness. Imperfect erections. Premature discharge. Hyperaesthesia of testicles. Atrophy of one testicle.		1	Slight curvature of penis.	Cure	One year after perfectly well.		
93		Gon. 3 years also 3 mos. previously.	2	Meatus. 3 in.	28 26		Gleet. Pain in right hypogastric region and groin.		1		Pain disappeared after operation.			
94	35	Gon. 12 years previously.	5	Meatus. from 1 to 2 in. 3 to 4 3 bands.	25 34 28		Gleet. Frequent attacks of retention requiring aspiration. Frequent micturition. Bladder habitually distended to umbilicus. Cannot retain urine when standing.		2		Cure of gleet. Relief for 10 mos. perfect. Voluntary micturition every 4 hrs. Large stream immediately after operation and continued 10 mos. after recontraction to 34 at Meatus and at 4 in. Return of frequent and difficult urination. No retention, 2d operation with immediate relief.			Had been treated for deep Stricture by other surgeons. Two weeks later patient writes that troubles again threaten. Not since heard from.

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95	39	Gon. 18 and 10 years also one month previously.	1	Meatus.	25	34	Gleet (profuse). Prostatic tenderness. Irritability of neck of bladder. Straining and pain after urination.	Enlargement of right lobe of prostate	1	Diphtheritic deposit on wound.	Much improved.	2 months after operation no recontraction.	
96	40	Traumatic injury 17 yrs. and Gon. 4 yrs. previously and since.	1	Meatus.	14	32	Gleet. Sense of weight in perineum.		1		Much improved.		
97	28	Gon. 11 and 7 years previously.	3	Meatus. 2 in. 3 in.	17	32	Gleet. Burning sensation in urethra after micturition. Frequent dribbling. Frequent seminal emissions. Imperfect erections. Severe pain in lumbar region. Pain in testicles and groin. Great depression of spirits with suicidal tendency.	Redundant prepuce.	1		Much improved.		Circumcision was also performed.

98	35	Gon. 16 years previously and several times since.	4	Meatus. 1 1/2 in. 3 1/4 in. 4 1/2 in.	15	36	Gleet. Divided stream.		2	Slight hæmorrhage.	Recontraction. 2d operation 2 months later. Final cure.		Marriage two months after 2d operation.
99			2	Meatus. 3 in.	30	32			1		Cure	1 yr. and 5 mos. after operation no recontraction.	
100	50	Masturbation Gon. 32 years previously.	2	Meatus to 1 in.	25	35	Gleet. Gripping pain above pubes after sexual intercourse.		1		Cure	6 months after operation no recontraction.	
101	101	Gon. 3 yrs. & 2 1/2 yrs. previously.	1	Meatus to 3/4 in.	34		Gleet for 2 1/2 yrs. Severe pain at 1/2 in. from Meatus, and dribbling.		1		Relief in five days. Lost sight of.		
102	29	Gon. 2 1/2 years ago.	1	Meatus to 1/2 in.	32		Gleet for two years.		1		Cure		
103	18	Masturbation.	1	Meatus to 1 in.	32		Urination hesitating. Dribbles. Urethra very sensitive.	"Petit Mal," convulsion every day, or once a week. Unable to read.	3		Immediate cure of urinary trouble. No attack of Petit Mal for 2 mos. Recontraction; operation. 3 mos. after reports only slight "faintings."		
104	21	Masturbation.	3	Meatus. 3 in. 3 1/2 in.	26	34	Frequent seminal emissions. Dribbling.	Calculus.	1		Cure		Dolbeau's operation. Calculus weighed 1 1/2 drachms.
105		Gon.	3				Retentions. In bed for yr. Frequent and difficult urination. Dilated for perineal Strict.		1	Urethral fever on 4 day after operation on passing sound into bladder.	Cure		Gleet gave vaginitis to wife 4 days after marriage.
106	28	Gon. several times.	4	Meatus. 2 1/4 in. 1 1/2 in. more or less for 1 3/4 inches	15	32	Gleet		1		Cure		

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107	4	Gon. 16 years ago, several times since.	1	Meatus.	23	37	Frequent urination every hour. Constant pain over pubes increased by holding urine.	Constriction of penis by prepuce.	4		Final complete relief. No apparent disposition to re-contract.	
108	21	Gon. 4 years previously.	4	Meatus.	28	34	Gleet, Frequent and painful urination and irritation at neck of bladder.	.....	1	Severe hæmorrhage.	Immediate relief to frequent urination and irritation.	.....
109	26	Gon.	1	Meatus.	23	35	Gleet for two years.	.....	1	.....	Much improved.	.....	Had been treated for sub-pubic Stricture by other surgeons.
110	19	Masturbation Gon. severe.	4	Meatus.	20	35	Gleet. Frequent and painful urination.	Constant pain in rectum and sacrum.	1	Urethral fever.	Relief to pain, but gleet continues. Still under treatment.	.....	Strictures were divided by the examination which was the only operation. Profuse bleeding followed. Sounded to 34 f. only were used.
111	35	Gon. 6 years previously.	3	From 2 to 3 in.	34	34	Occasional gleet. Frequent urination (every 2 hrs. in warm weather and every hr. in cold) Intense pain over pubes at neck of bladder and end of penis.	.....	1	See Remarks.	Immediate relief to pain, etc.	.....

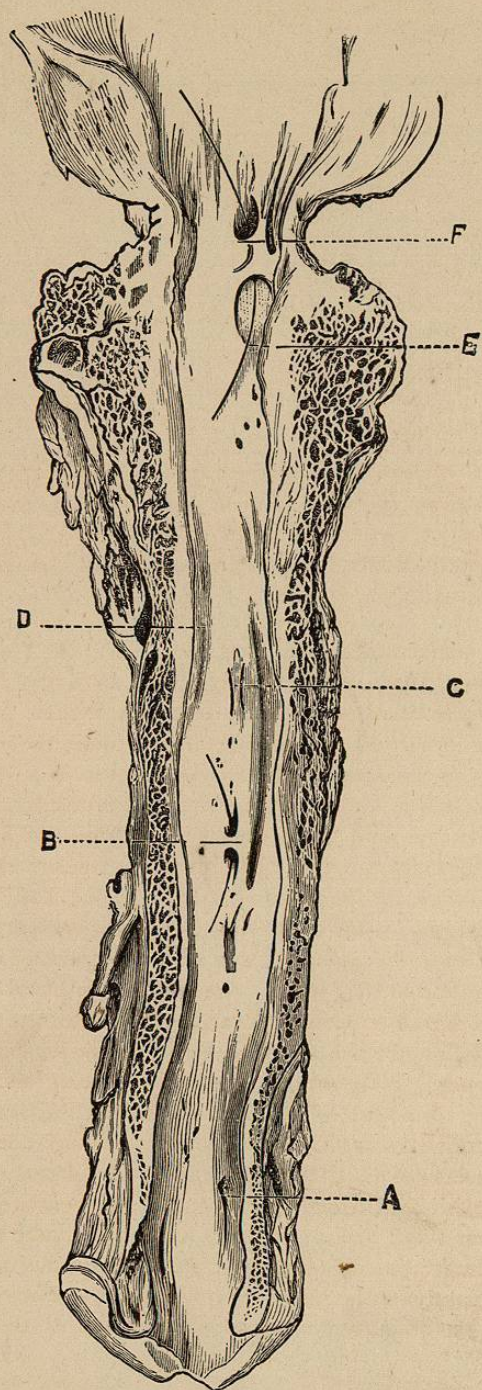
112	33	Masturbation Excessive venery.	5	Meatus.	28	32	Involuntary and premature emissions.	.....	1	Hæmorrhage.	Urethritis following neglect and exposure at night.	.....
113	31	Congenital.	2	Meatus.	30	39	Frequent and painful urination every 15 or 20 minutes.	.....	1	.....	Immediate relief. Cure.	.....
114	36	Gon. 20 and 18 years previously. "Abortive" injections.	6	Meatus.	18	34	Gleet for 18 years.	Redundant prepuce with phimosis.	1	.....	Cure. One month after operation writes that he is perfectly well.	.....	Operation of circumcision and division of Meatus done first.
115	.....	.....	1	Meatus.	20	38	Intense pain in urethra and at neck of bladder.	.....	2	.....	Immediate relief for four mo. Recontraction. 2d operation with complete relief.	.....
116	25	Masturbation.	1	1 in.	25	32	Frequent urination. Difficulty in starting urine. Dribbling very marked.	Pains at end of spine, in penis and peræcium and down legs.	1	.....	Much improved. Passed from observation.	.....
117	.....	Gon.	3	Meatus.	18	36	Gleet four months.	Frostate tender and swollen.	1	.....	Relief to prostate in 6 days. No record further.	.....
118	.....	See No. 71.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
119	20	Gon.	3	Meatus.	18	34	Gleet five months.	Prepuce long and narrow.	1	.....	Cure	.....
120	58	Gon. 38 years previously.	1	Meatus.	28	32	Pain in penis and abdomen. Irritation at slightly enlarged neck of bladder. Dribbling.	Prostate enlarged and tender.	1	Constant and great improvement.	One month after no recontraction.	

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121	30	Gon. 15 years previously, and several times since.	3	Meatus, 2½ to 3 in.	24 to 28	40	Gleet.		1		Cure		12 days after operation had a free hæm'ge. Controlled by perineal four-niquet.
122	25	Gon. several times.	3	Meat. & 2 in. for ½ in.	24	34	Gleet for one year.		1		Cessation of gleet. Still under observation.		
123	Gon. 6 years before and several times since.	2	Meatus, 2 in. 2½ in.	20	32	32	Frequent seminal emissions with great prostration. Dibbling.		1		Great improvement in three weeks.		Still under treatment.
124	Gon.	3	1 in. 2 in. 3 in.	32	32				1		Cure	One year after no recontraction.	
125	Gon. 15 and 4 years previously.	2	Meatus, 3½ in. & ¼ in.	28	36		Gleet for 4 yrs. Pain in back. Gnawing sensations in hips & testes.		1		Lost sight of.		
126	Gon. 15 years previously.	2	Meatus, 3 in. 3½ in.	30	38	38	Several attacks of cystitis following use of sounds. Incontinence when sound neglected. Dysuria.		1		Immediate cure of dysuria (five days).		Had been treated for Stricture "neck of bladder" by other surgeons.

127	20	Gon.	3	Meatus, 2 in. 2½ in.	24	34	Gleet for 1 yr. Dysuria frequent retentions following introduction of instruments. Stream sometimes small and again large. Daily retention for months without use of instruments.		1		Cured. No retention since 2d operation.		Had been treated for Stricture near the bladder by other surgeons. Meat. operated on 1st with relief to daily retention. Cure after 2d operation on Strictures at 2 and 2½ days later.
128	26	Gon.	2	Meatus, 4 in. 3 in.	29	36	Gleet for 11 months.		1		Still under observation.		
129	22	Masturbation.	2	Meatus, 25 in. 3½ in.	35	35	Frequent seminal emissions. Alkaline urine with abundant phosphates.		1		Much improved. Still under observation.		Had been treated for Stricture at 6½ in. by dilatation for past year.
130	40	Gon. 15 years ago.	6	Whole canal	34	34	Gleet. Frequent urination. Pain at end of urination. Small stream.		2	Urethral fever lasting 48 hours.	Cure after 2d operation.		Perineal sect. had been done but fistula refused to heal until after division of anterior Stricture. Sound was passed into bladder at time of operation. Sound was passed into bladder at time of operation.
131	35	Gon.	3	Meatus, 3 in. 5 in.	34	34	Gleet for six months. Frequent urination for two months.		1	Urethral fever lasting 36 hours.	Cure		
132	37	Gon. several times.	3	Meatus, 3 in. 3½ in.	34	34	Gleet. Frequent urination. Pain. Dysuria for 5 years.		1		Cure		

The following cases were operated on at Charity Hospital, and reported by Dr. Meyer, House Surgeon.

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133	20	Gon.	1	Meatus.	30	Gleet for three months.			1		Cure		
134	38	Gon.	2	Meatus. 3 1/4 in.	32	Gleet five months. Frequent urination. Pain, etc., for two months.			1		Cure		
135	43	Gon.	1	To mem- branous portion.	38	Gleet for twelve years.	Chronic cystitis for 5 years. Chordee.		1		Cure of all except chronic chordee, which, however, was much im- proved by the op- eration.		
136	27	Gon.	2	Meatus. 4 in.	34	Gleet			1		Cure		



Radical cure of stricture demonstrated by appearances in a case of severe urethral stricture three years after operation by internal urethrotomy—Otis's method. Dr. Eldridge's case—see appendix, page 353, *et seq.*

APPENDIX.

I.—*A Case of Severe Urethral Stricture radically Cured by Internal Urethrotomy by Otis's Method.* By STUART ELDRIDGE, M.D., Surgeon of General Hospital of Yokohama, Japan; late Lecturer on Anatomy, Medical Department of Georgetown University, Washington, D. C.

W. L., a native of England, was admitted to the General Hospital of Yokohama, Japan, December 31, 1874, suffering from syphilitic rheumatism, urethral stricture, and urinary fistulæ. February 14, 1875, I joined the staff of the hospital, and found the man an inmate. The history of the case, so far as the stricture was concerned, was as follows: L. had suffered from stricture, the result of a severe clap, for some eight or nine years, during which time he had led a very dissipated life, and had repeated attacks of gonorrhœa. In the latter part of 1870, or the beginning of 1871, he had been operated upon by external perineal urethrotomy with temporary relief, but had almost entirely neglected the after-treatment of his case, only occasionally and at long intervals passing a very small catheter when retention occurred or seemed imminent. The fistulæ at present existing had followed upon an abscess *in perinæo* in the early part of 1874—the perineal opening of the abscess being shortly after followed by the formation of a second fistula near the root of the penis. The constitutional condition of the patient was such that I attempted no active measures until May, 1875, when the status of the patient was as follows: The urine was passed by the meatus in an intermittent and very small stream of perhaps one millimetre in diameter, by far the larger quantity flowing from two fistulous openings—one, the larger, nearly on the perineal raphe, midway between the scrotum and anus; the other, one centimetre to the left of the peno-scrotal

junction. Both fistulæ seemed to diverge from a common sinus, though I was unable to pass an instrument into the urethra through either. To external manipulation the whole urethra was excessively knotted and indurated, the thickening and hardening being greatest in the proximal half of the penile portion. Examination of the urethra by bulb-sounds revealed a hard and insensitive stricture seven centimetres from the meatus, the contraction being seemingly about three centimetres in length, although, as with the most careful manipulation it would admit nothing larger than a bougie of four and one-half millimetres circumference, the determination of its proximal limit was uncertain. A false passage was detected, beginning a little more than two centimetres within the meatus, upon the right side of the urethral roof, and penetrating to a depth of five centimetres, this having probably resulted from rough or drunken attempts at catheterization, and the entanglement of the instrument in the fossa navicularis. The whole urethra anterior to the stricture was rough and nodular, while that portion of the mucous membrane nearest to the face of the contraction was distinctly sacculated at several points. May 18, 1875, after preparation by full doses of quinine for forty-eight hours, the patient was etherized, Dr. E. Massais assisting; the meatus, of which the calibre was fifteen millimetres circumference, was freely incised, and with great difficulty Holt's instrument, guarded by a Maisonneuve's conductor, was passed through the stricture, until firmly arrested about the bulbo-membranous junction. The instrument was then expanded to the utmost, although, from the fact that its point could not enter the bladder, the separation of that portion of the limbs which was engaged in the stricture was necessarily imperfect. Upon the withdrawal of the dilator, its conductor was found to have curled up in the urethra posterior to the just expanded stricture, and examination detected a second stricture, of about the same calibre as the first, about thirteen centimetres from the meatus, or in the lower bulbous portion. The Holt was then, with but little difficulty, passed into the bladder, and expanded, but only by the use of considerable force, to twenty-four millimetres circumference. A conical steel bougie, twenty and one-half millimetres circumference, was then passed with ease through the whole length of the urethra. As I had been unable to feel the sudden yielding caused by rupture, and as almost no hæmorrhage followed upon this double operation, I was inclined to think that

dilatation, not divulsion, had taken place, and had I been provided with a satisfactory instrument, I should have performed internal urethrotomy at once. No unpleasant symptoms followed the operation, and at the expiration of a week I was able to pass a bougie of sixteen millimetres circumference without difficulty, though recontraction to the extent of at least four millimetres of circumference had evidently occurred. The sixteen millimetre bougie was passed six times at intervals of a week, when, the fistulæ having healed, the patient was furnished with a bougie, No. 10, English, and, with most careful instructions as to the future use of the instrument, discharged from hospital.

September 6, 1875, L. was readmitted, suffering as before from syphilitic rheumatism, but plus an evidently cirrhotic liver, and with both casts and albumen in his urine. On inquiry it was found that he had been drinking freely, had suffered from an acute gonorrhœa during the month of August, had entirely neglected the use of the bougie, and that the stricture or strictures had recontracted until the urine at times passed only guttatim, and the fistulæ in the perinæum had partly reopened. Shortly after admission retention occurred, and after unavailing efforts to pass a catheter, made by my colleague, Dr. Massais, I aspirated above pubes, and a few hours later succeeded in passing a filiform flexible catheter. As about this time the urine began to pass freely by the fistula, catheterization was but a few times performed. Little attention was given to the stricture until the following December, when, suffering from excoriation and neuralgic pain, the patient begged for a second operation; to which with some reluctance I consented, and determined to perform internal urethrotomy, believing, as I do, that, under the circumstances of the case, this operation is little, if at all, more dangerous than repeated and probably useless attempts at gradual dilatation. The danger of any operation in his condition was fully explained to the patient, but he persisted in demanding relief. Twenty minims per diem of tr. ferri chloridi were administered for a week, and during the forty-eight hours preceding the operation one hundred grains of quinine were given. December 20, 1875, Dr. A. Goertz, of Yokohama, assisting, ether was administered, and an examination made showing that the anterior stricture had contracted to a circumference of seven and one-half millimetres, while the bulbar stricture would admit but a filiform whalebone guide. Holt's dilator having