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Rabat – Morocco



Endoscopic urethral surgery

Any guaranties



The discussion I have prepared for today is on a difficult topic as it is not easy to provide definitive guidelines of treatment for urethral stricture using endoscopic procedures

In any case, I sincerely hope to provide you with useful information on the problems involved in the treatment of urethral stricture using endoscopic procedures



A survey of stricture management involving 424 urologists from the USA showed that 34% elected to continue endoscopic management despite predictable failure and 74% believed that the literature supports the use of urethroplasty only after repeated internal urethrotomy failure

Brandes SB et al. J Urol 2001; 165: 13



**The treatment of short bulbar urethral stricture with
primary open urethroplasty is less costly than endoscopic
treatment with internal urethrotomy**

Rourke KF and Jordan GH. J Urol 2005; 173: 1206



The most cost-effective strategy for the management of short, bulbar urethral strictures is to reserve urethroplasty for patients in whom a single endoscopic attempt fails.

For longer strictures for which the success rate of internal urethrotomy is expected to be less than 35% urethroplasty as primary therapy is cost-effective

Wright JL et al. Urology 2006; 67: 889



Repeated urethrotomy and dilation for the treatment of urethral stricture are neither clinically effective nor cost-effective

Greenwell TJ et al. J Urol 2004; 172: 275



INTERNAL URETHROTOMY IN THE MANAGEMENT OF ANTERIOR URETHRAL STRICTURES: LONG-TERM FOLLOWUP

V. PANSADORO and P. EMILIOZZI

Patients : 224

Followup: mean 98 months

Recurrence rate: 68%

JOURNAL OF UROLOGY 1996; 156: 73



Success rate based on stricture etiology

■ congenital	66%
■ infection	48%
■ instrumentation	42%
■ unknown	39%
■ trauma	16%

Success rate based on stricture length

■ stricture < 1 cm 71%

■ stricture > 1 cm 18%

Recurrence rate based on stricture site

■ penile urethra 84%

■ bulbar urethra 58%

Result following multiple urethrotomies

stricture site	N° procedures	N° pts	N° success
bulbar	2	11	2
	3	3	0
	4	2	0
penile	2	23	0
	3	6	0
	4	2	0

TREATMENT OF MALE URETHRAL STRICTURES: IS REPEATED DILATION OR INTERNAL URETHROTOMY USEFUL?

CF HEYNES, JW STEENKAMP, MLS DE KOCK AND P. WHITAKER

Patients : 163

Followup: mean 24 months

JOURNAL OF UROLOGY 1998; 160: 356

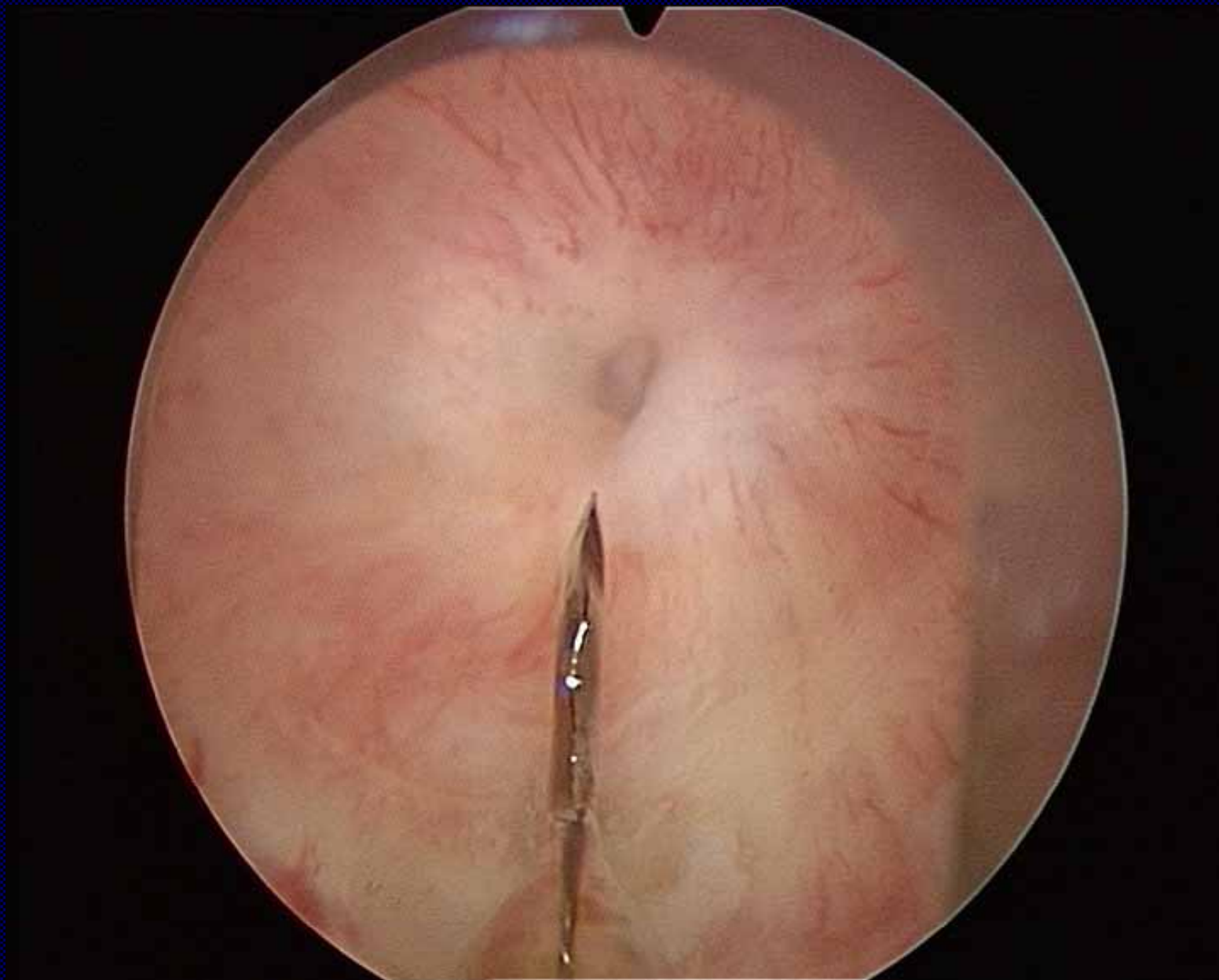
Stricture free rate

	after 24 months		after 48 months	
number of procedures	dilation	urethrotomy	dilation	urethrotomy
1	55%	60%	50%	60%
2	30%	50%	0%	40%
3	0%	0%		

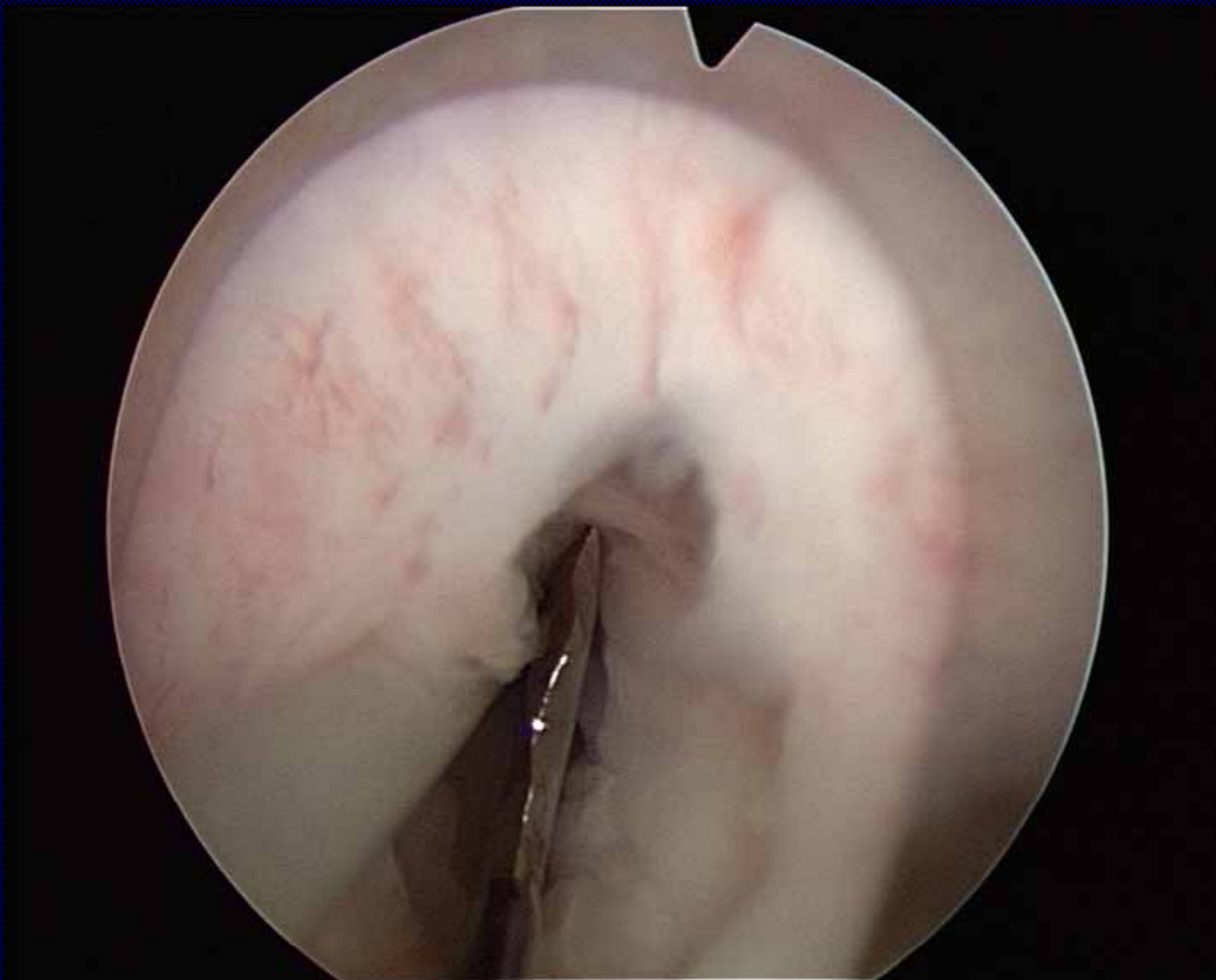
Current endoscopic procedures for the treatment of male urethral stricture



cold knife urethrotomy



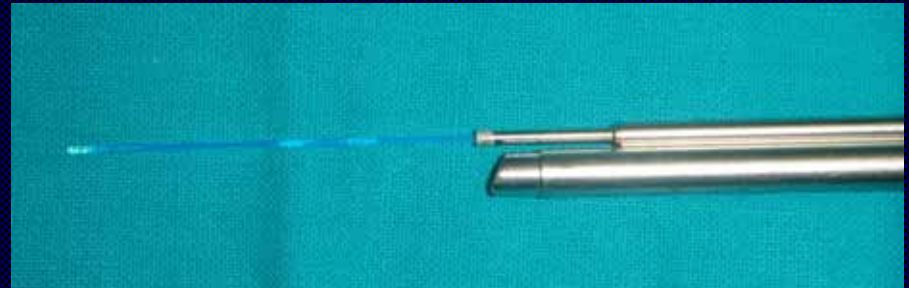
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Current endoscopic procedures for the treatment of male urethral stricture



holmium laser urethrotomy

The choice of an endoscopic procedure for the treatment of male urethral stricture is based on:

main features of the patient

- age
- obesity
- concomitant diseases
- psychological status



Poor candidate for open surgery

The choice of an endoscopic procedure for the treatment of male urethral stricture is based on:

main features of the stricture disease

- site
- etiology
- length
- associated condition



Poor candidate for endoscopic procedure

Site



■ penile urethra

NO

■ bulbar urethra

YES

cold knife

■ posterior urethra

YES

holmium laser

■ bladder neck

YES

holmium laser



Etiology

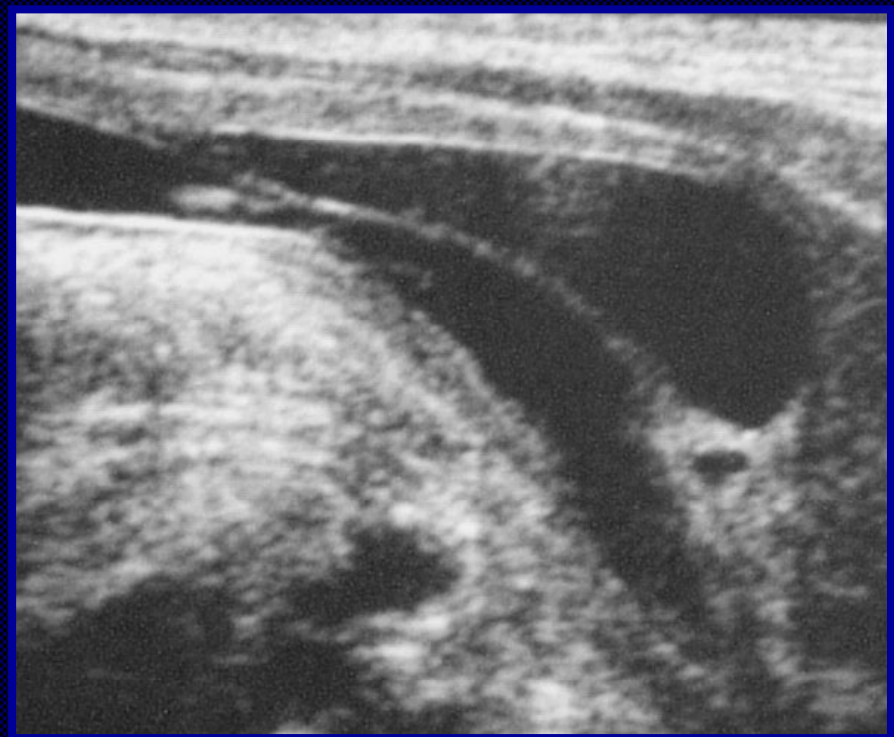
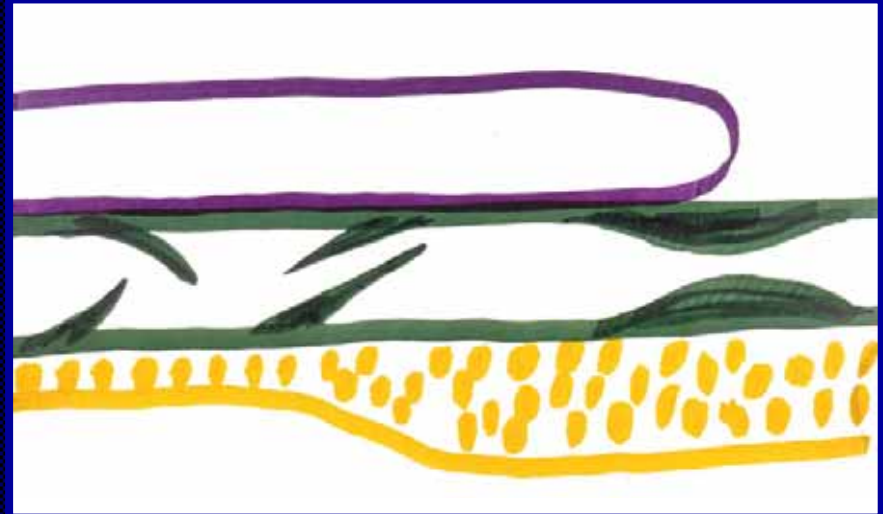
NO

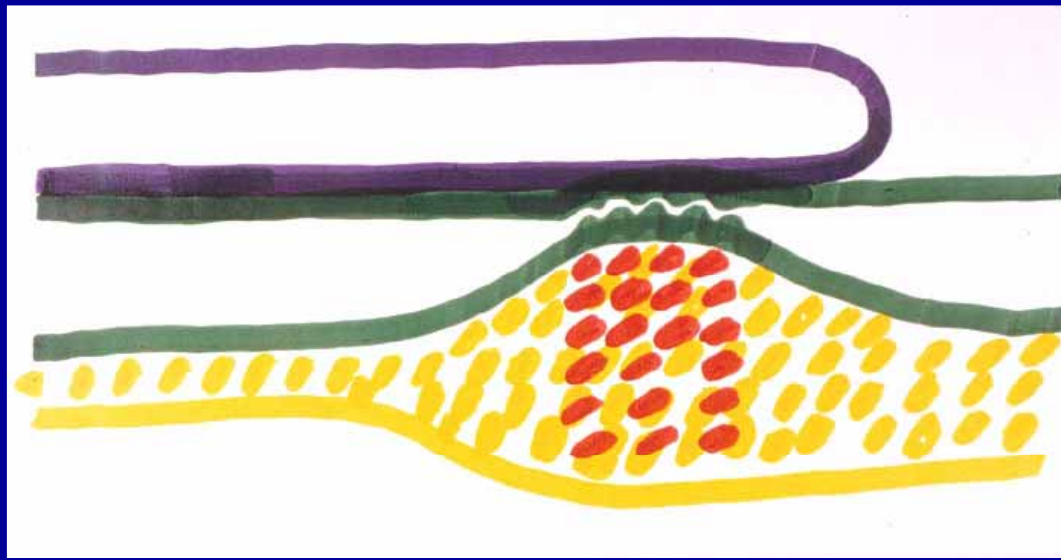
- failed hypospadias repair
- lichen sclerosus
- perineal trauma

YES

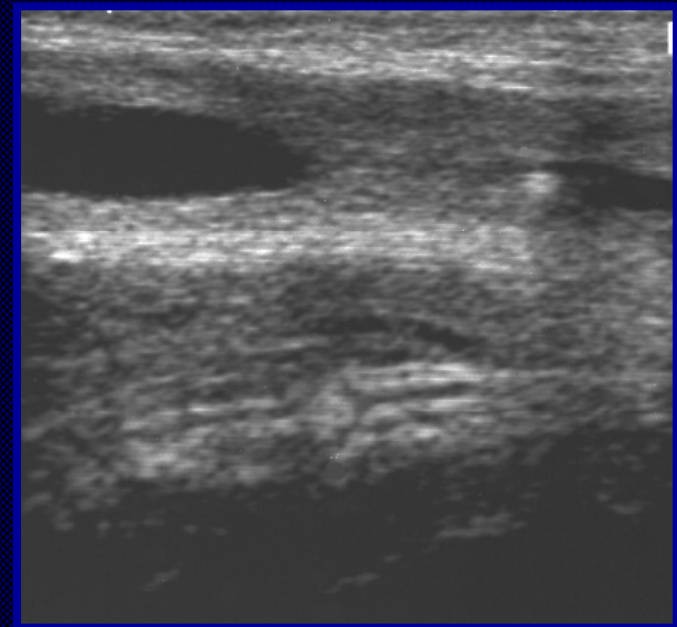
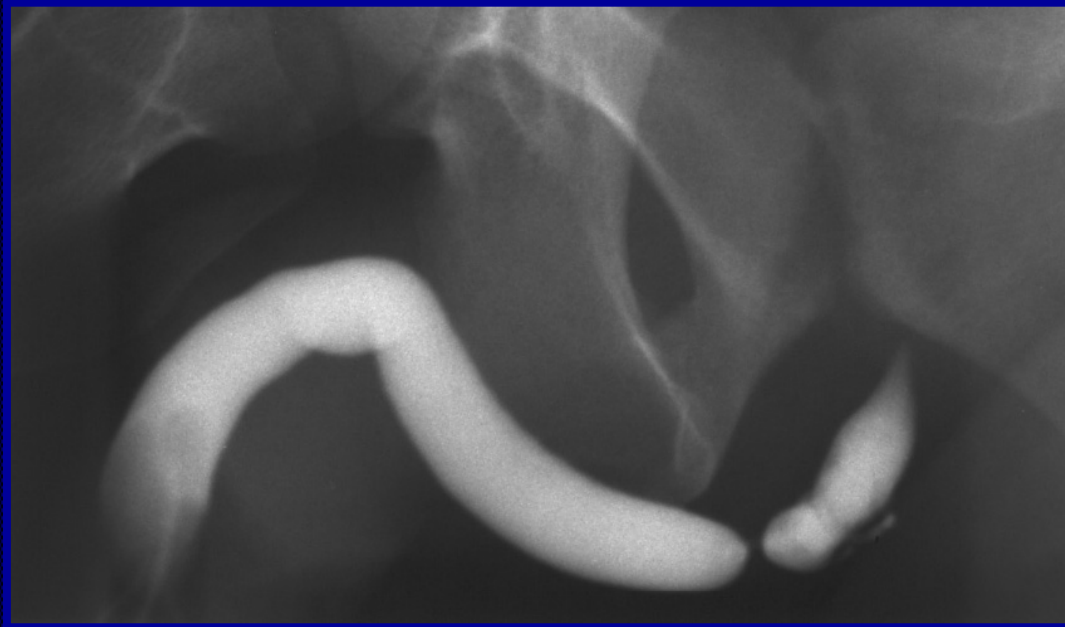
- congenital
- instrumentation
- infection
- unknown
- pelvic trauma
- following radical prostatectomy

Congenital mucosal urethral stricture or valve



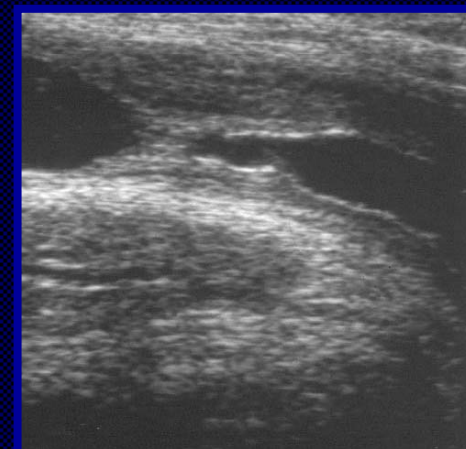
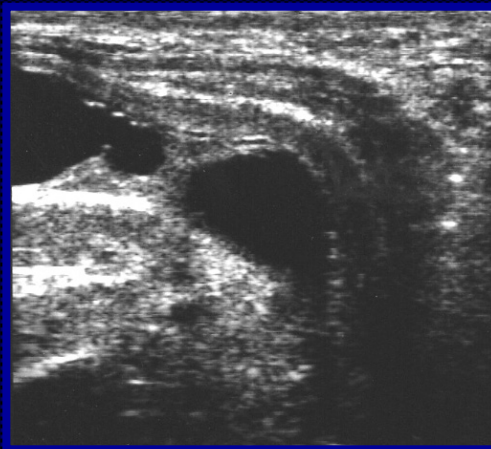
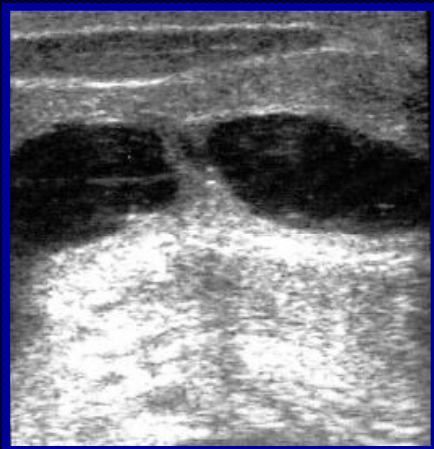


**Traumatic urethral
stricture**



Length

< 1 cm	YES
~ 1 cm	YES
from 1 to 2 cm	YES
~ 2 cm	SOMETIMES
> 3 cm	NO

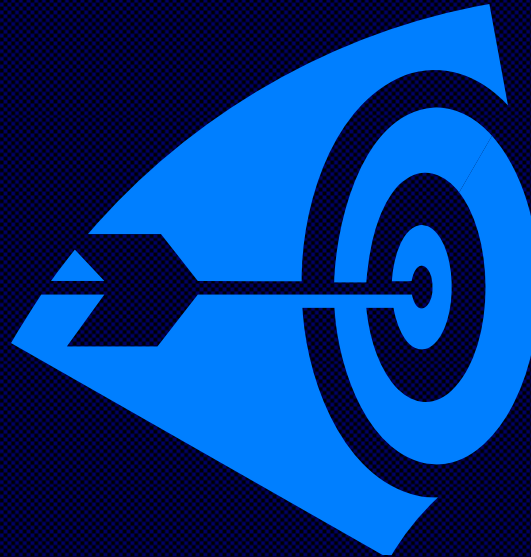


Associated conditions

- stent
- tumor
- stone
- diverticulum
- abscess
- fistula

NO

How many times can I repeat urethrotomy ?



**It depends on how long the patient has
been disease-free**

< 1 year

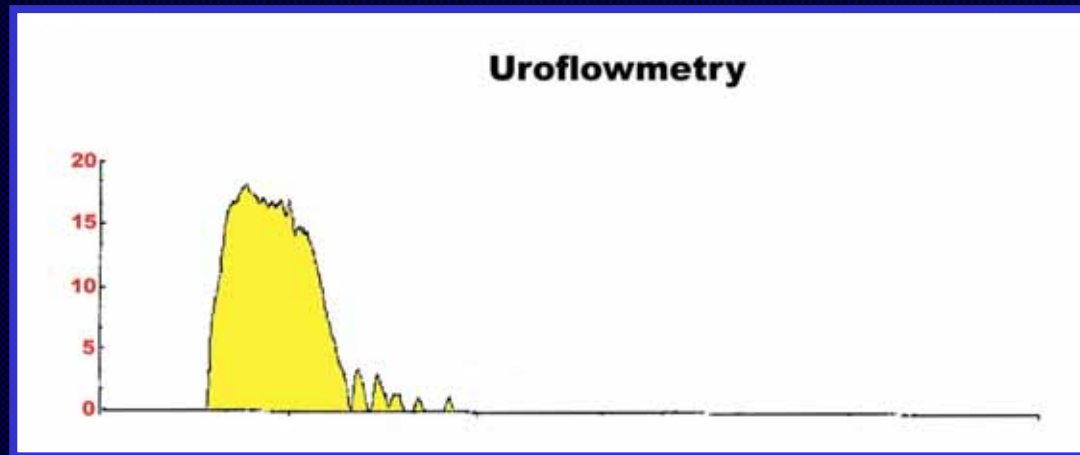


I can't

> 1 year



I can



Holmium laser characteristics for the treatment of bladder neck stricture

- Energy from 1.8 to 2 Joule
- Frequency from 15 to 30 Hz



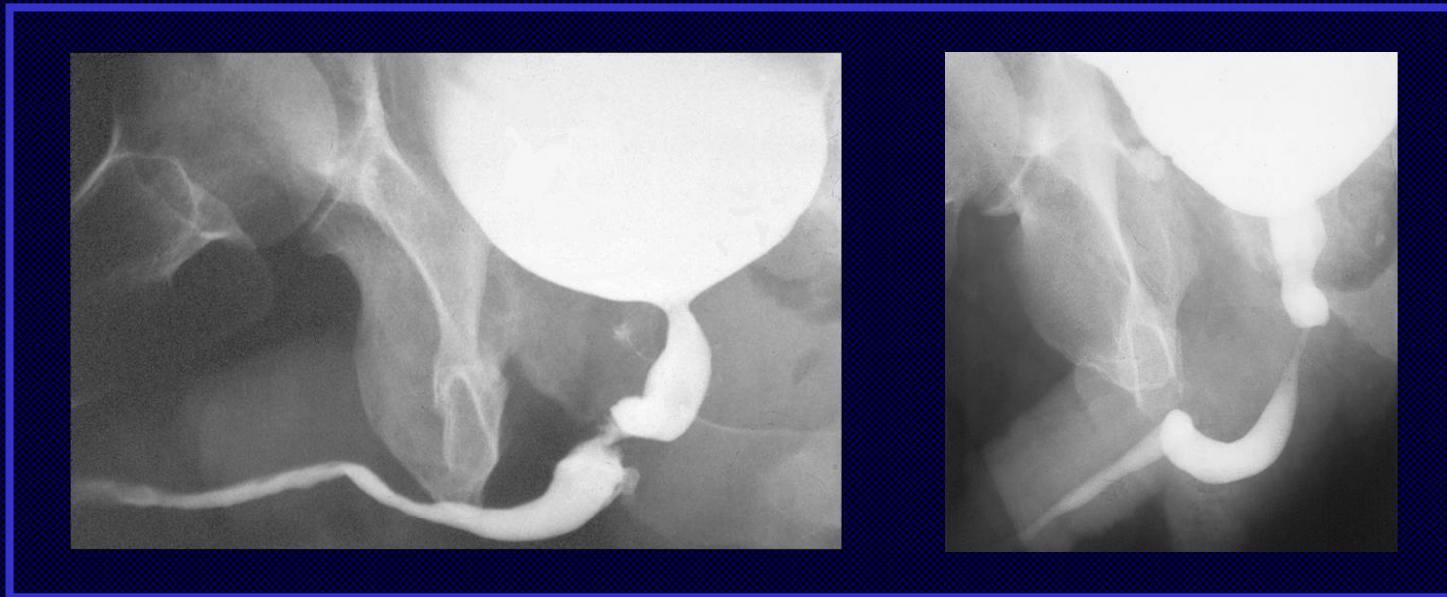
Holmium laser characteristics for the treatment of posterior urethral stricture

- Energy from 1 to 1.2 Joule
- Frequency 20 Hz

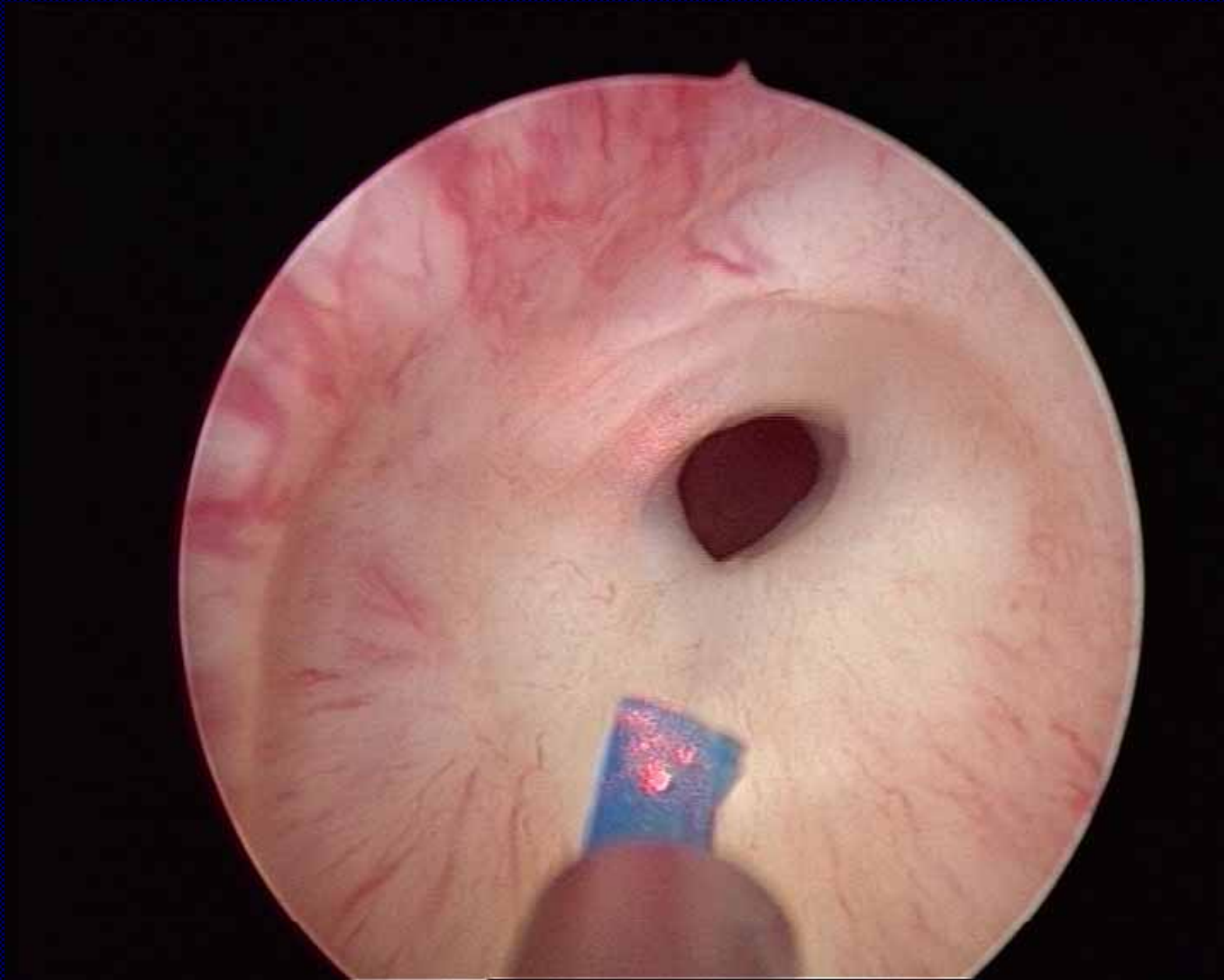


The use of holmium laser urethrotomy for the treatment of posterior urethral strictures

- following pelvic trauma

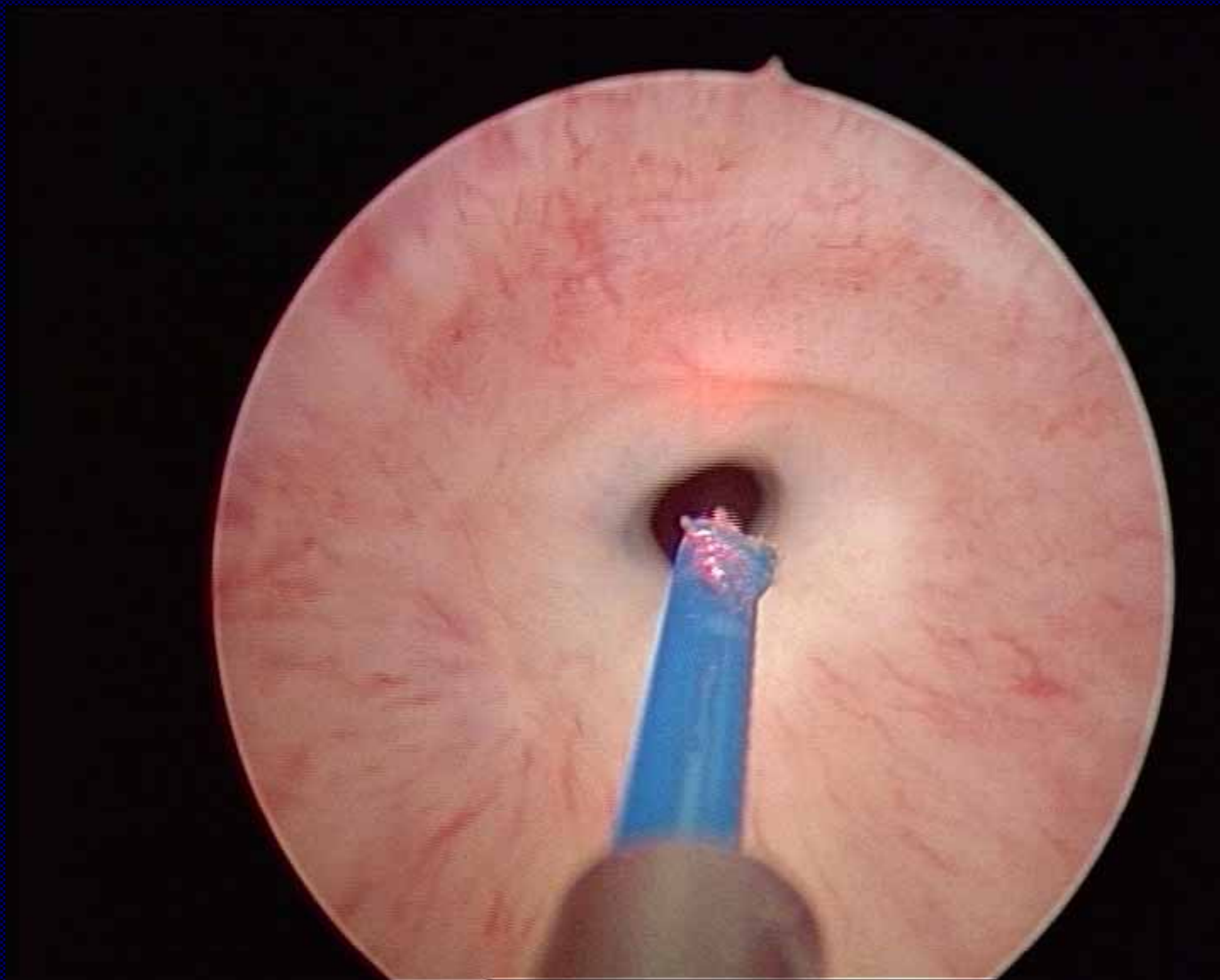


- following radical prostatectomy



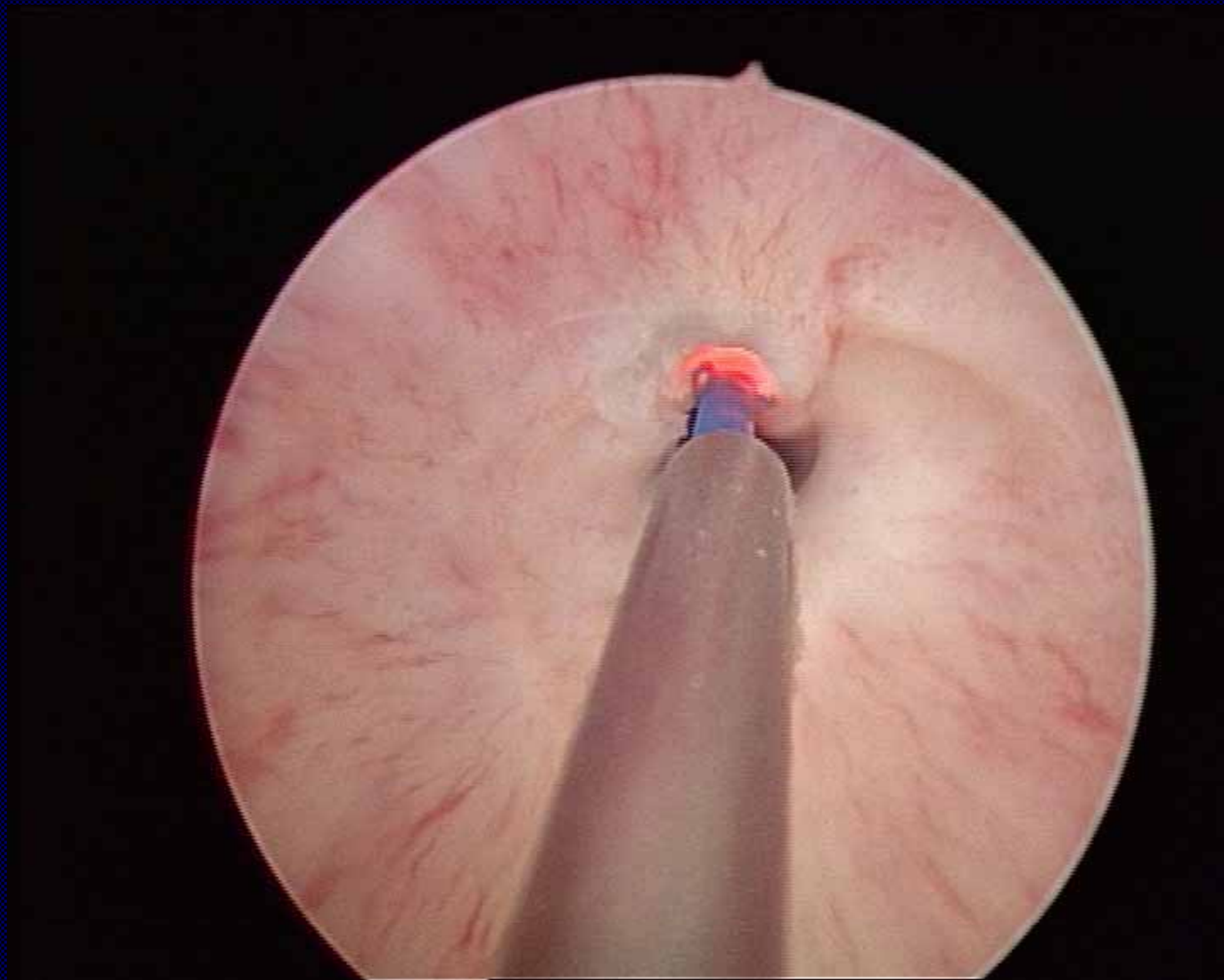
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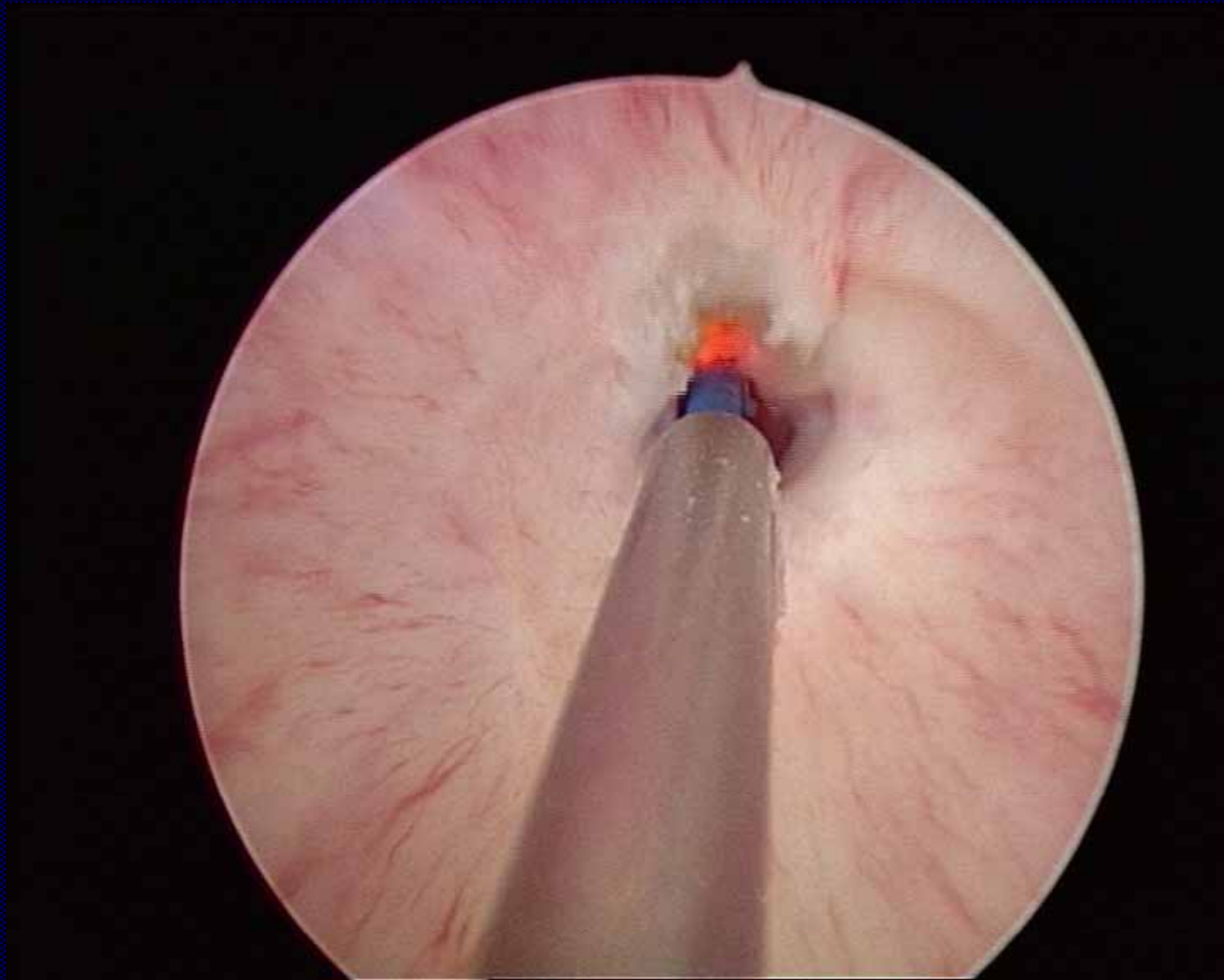
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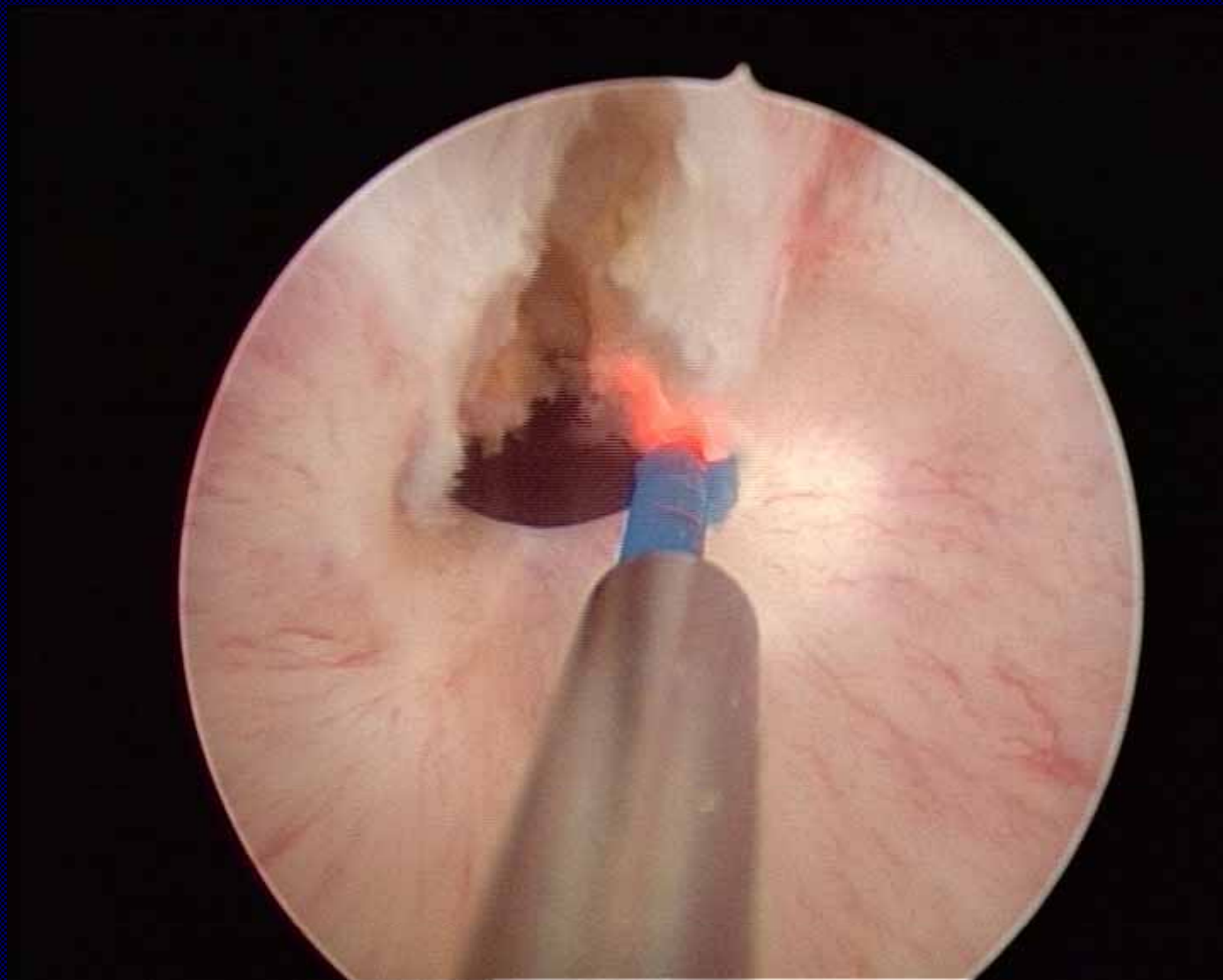


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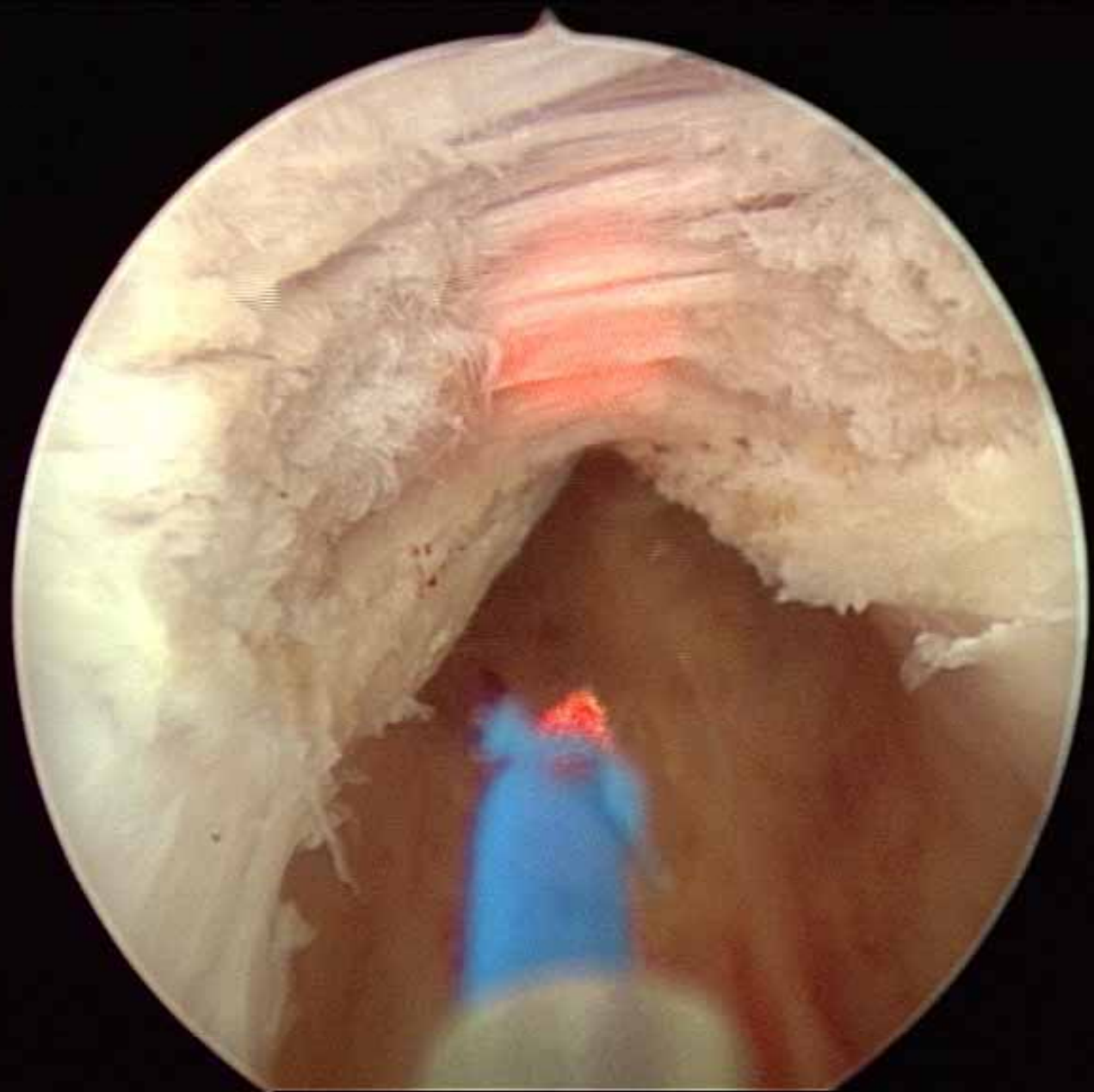




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Post-operative course following holmium laser urethrotomy

- 24 Ch. silicone grooved catheter in place for 30 days



- uroflowmetry every 30 days

when uroflowmetry is less than 12 ml/sec



urethroscopy



repeated holmium laser
urethrotomy (3 times)

Results of holmium laser urethrotomy in the treatment of traumatic posterior strictures

Data presented at the AURO National Congress, Italy 2006

- period 2002 – 2005
- patients 35
- age 16 – 55 years
- mean followup 24 months

Success 31/35 (88%)

Failure 4/35 (12%)



Results of holmium laser urethrotomy in the treatment of bladder neck strictures

Data presented at the AURO National Congress, Italy 2006

- period 2002 – 2005
- patients 45
- age 55 - 75 years
- mean followup 24 months

Success 43/45 (95%)

Failure 2/45 (5%)



ACTA CHIRURGICA SCANDINAVICA

SUPPLEMENTUM 176

FROM THE DEPARTMENT OF SURGERY (HEAD: PROFESSOR J. HELLSTRÖM),
KAROLINSKA SJUKHUSET AND THE DEPARTMENT OF HISTOLOGY (HEAD:
PROFESSOR G. HÄGGQVIST) KAROLINSKA INSTITUTET, STOCKHOLM, SWEDEN.

RECONSTRUCTION
OF THE MALE URETHRA IN STRICTURES

Application of the Buried Intact

Epithelium Technic

By

BENGT JOHANSON

STOCKHOLM 1953



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Conclusion

Internal urethrotomy dates back many years and has been regarded with varying enthusiasm.

Since a urethral stricture pathologically is not formed by scar tissue in the mucous membrane alone, but by contraction of fibrous tissue, which replaces the corpus spongiosum in its entire thickness, it is difficult to understand that further traumatization of such tissue will have any beneficial effect.

BENGT JOHANSON

STOCKHOLM 1953

I showed you the use and the results of endoscopic urethral surgery for repair of anterior and posterior urethral strictures

What approach to take will be decided by you, your experience, your surgical background and your patient's expectation

There is nothing more I can tell you !



Thank you



www.urethralcenter.it



What can you find in www.urethralcenter.it?

- Up-to-date Information on urethral pathology and surgery
- Everything you need to know about urethral stricture diseases
- How to make a diagnosis
- All the surgical techniques performed at our Center
- An up-to-date database of surgical outcome
- Information and opportunities for "hands-on" training
- Up-to-date literature
- The articles published by Guido Barbagli
- The books published by Guido Barbagli
- The lectures presented by Guido Barbagli at Meetings and Congress
- The history of urethral surgery
- An Atlas of Surgical Techniques
- Video
- Comments and suggestion for the urologists of XXI century
- ...and more!

The website is up-to-date monthly

**Next month, this lecture will be fully available in
our website**

Welcome !

