

CENTER FOR RECONSTRUCTIVE URETHRAL SURGERY



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USI – Instructional Course on Reconstructive Urology

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CENTER FOR RECONSTRUCTIVE UROLOGICAL SURGERY

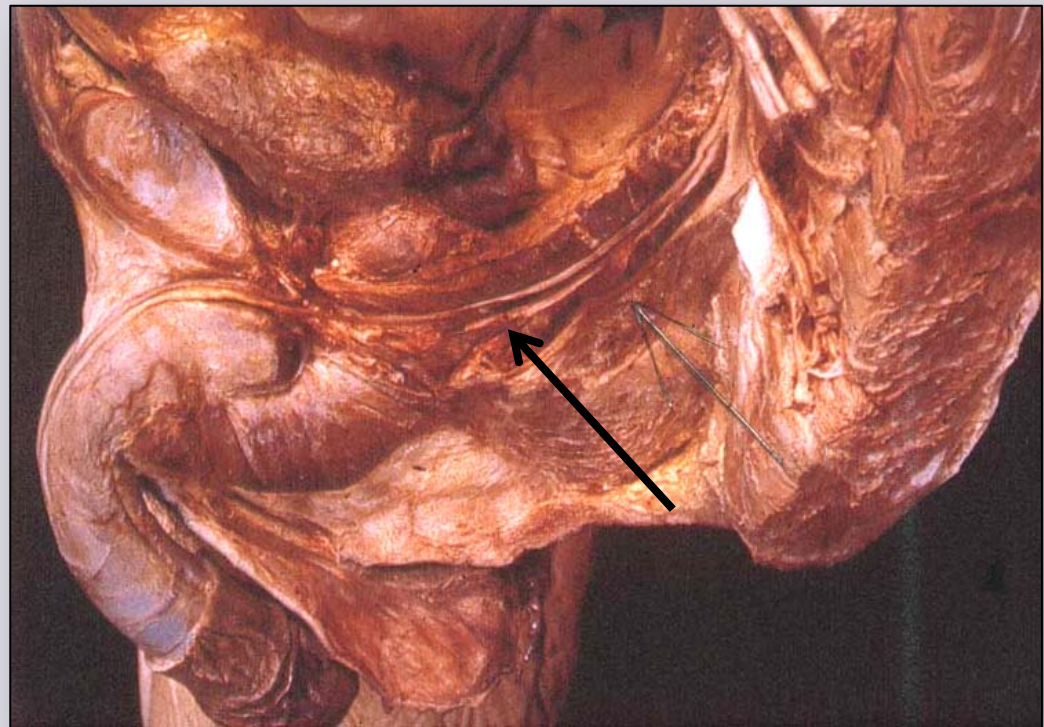
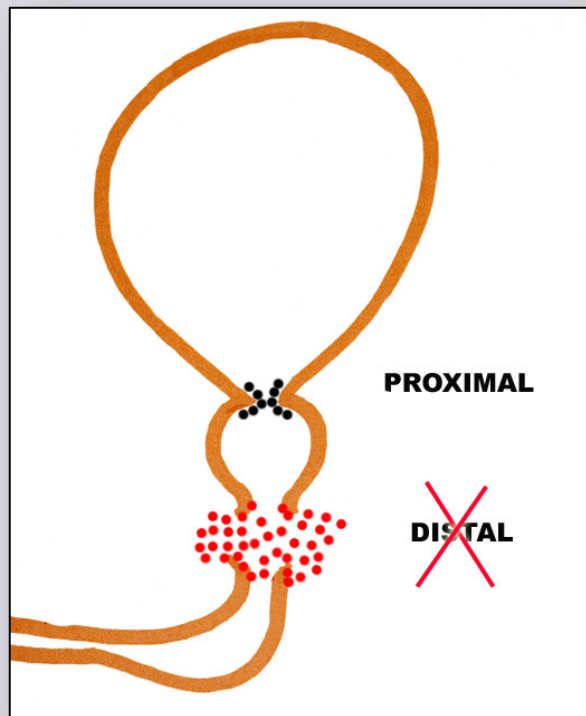
Early management in pelvic urethral injuries

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Pelvic urethral injury

Posterior urethra is fully involved in the mechanisms of urinary continence and penile erection



Pelvic urethral injury require immediate surgical exploration only:



bladder



bladder neck



rectum

Other non frequent particular conditions

Goal of the early management in pelvic urethral injury

**Resuscitation of the patient
to preserve life**

**Divert urine away
from the site of
injury**

**Preserve the residual
sphincter mechanism
at the bladder neck**

**Avoid jeopardizing sexual
function residual to the
trauma**

Goal of the early management in pelvic urethral injury



**Preserve the residual
sphincter mechanism
at the bladder neck**

- 1. Diagnosis of urethral injury requires a high index of suspicion and should be excluded **before catheter is inserted !****

Goal of the early management in pelvic urethral injuries



Preserve the residual sphincter mechanism at the bladder neck

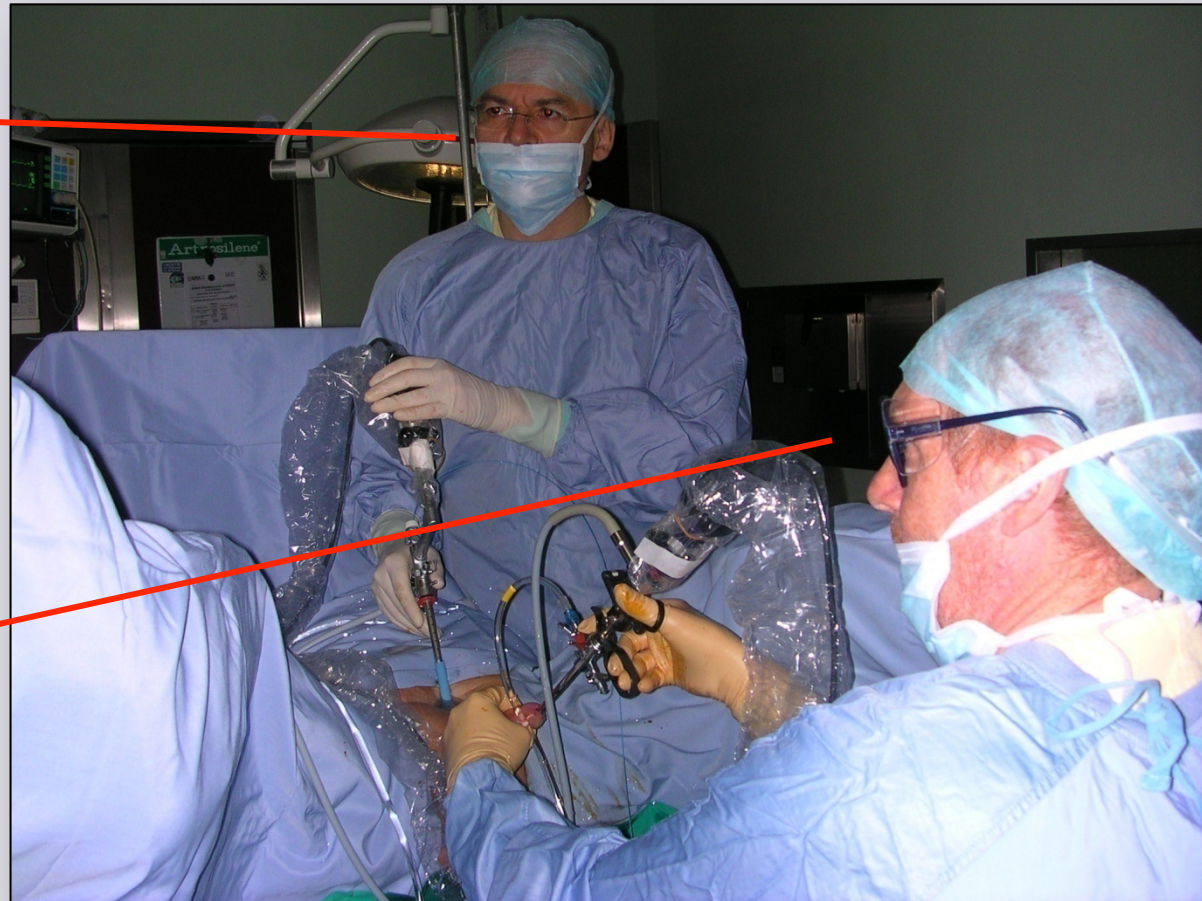


2. Avoid the use of any metallic blind instrument !



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3. Any diagnostic or operative procedure should be performed **ONLY** under direct vision !

Imaging techniques

- Antero-posterior pelvic X-ray
 - Abdominal and pelvic ultrasonography
 - Retrograde urethrography
- Abdominal and pelvic CT scan
- Pelvic MRI

Radiological investigations should be arranged according to the patient clinical status

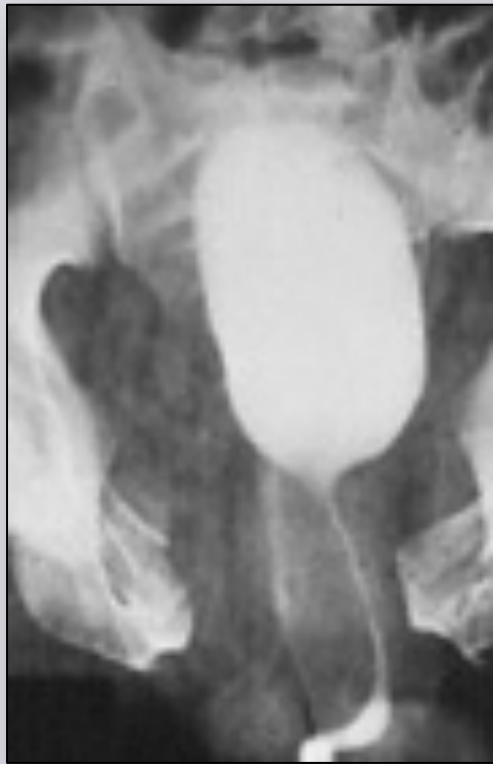
Emergency treatment of pelvic urethral injuries

suprapubic urinary diversion
immediate

endoscopic urethral realignment
7 – 15 days after trauma

delayed urethroplasty
4 months after trauma

Type of urethral lesion



stretched

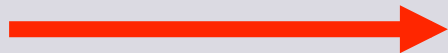
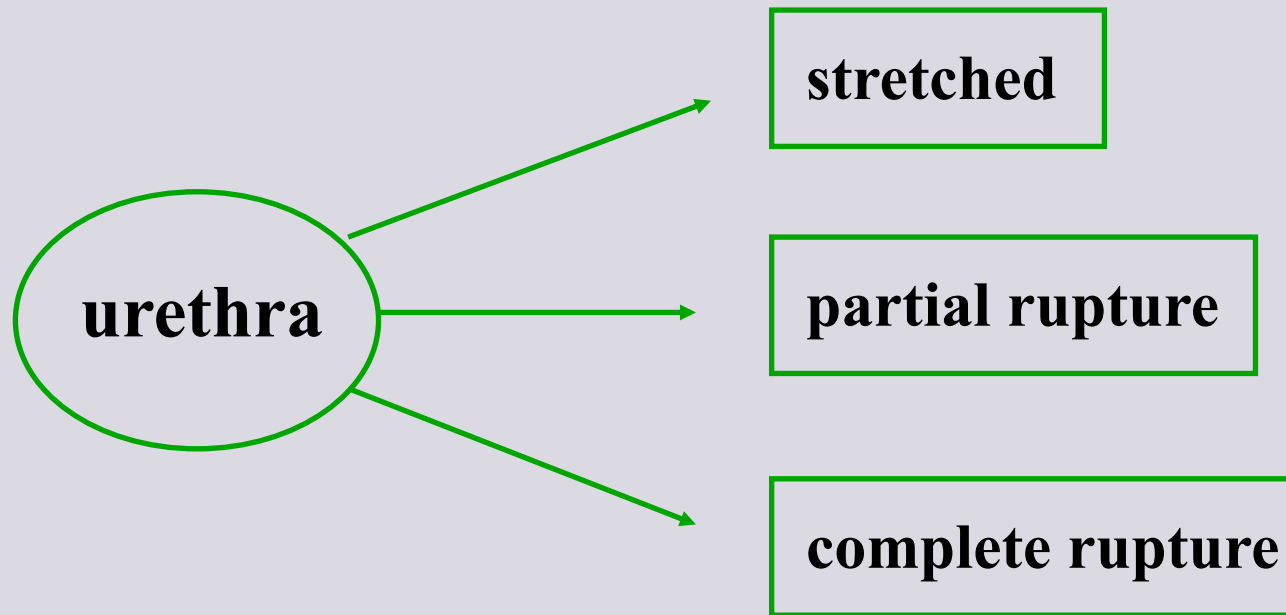


partial rupture



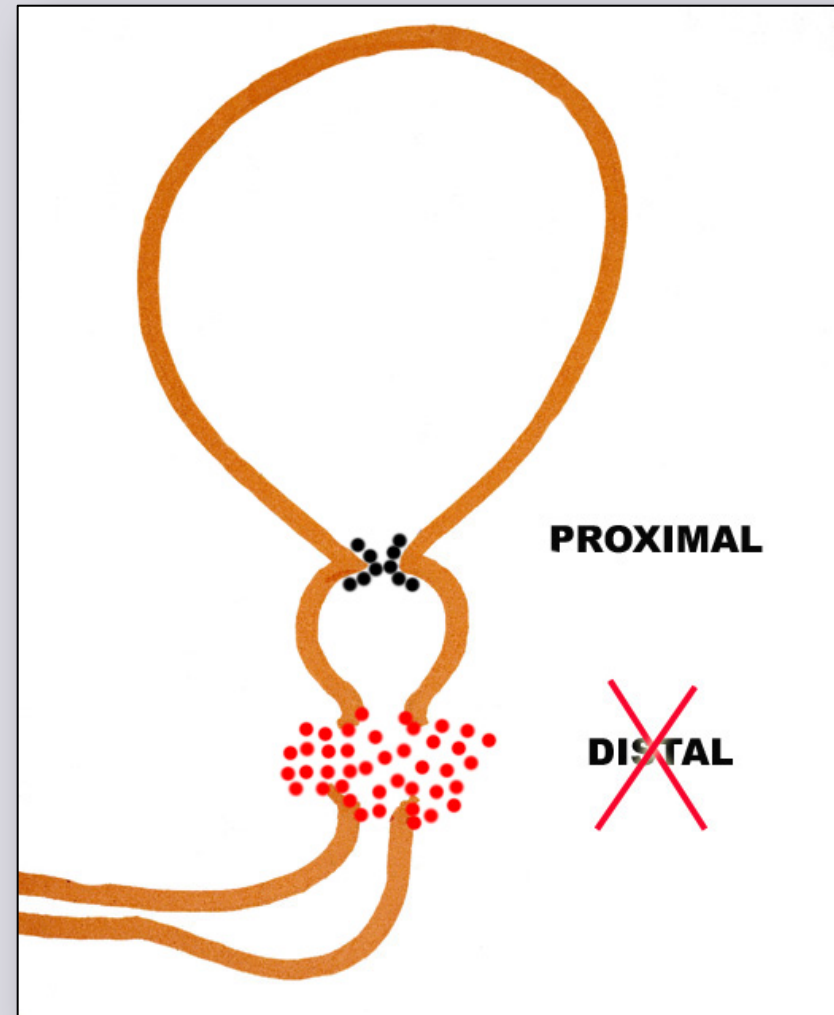
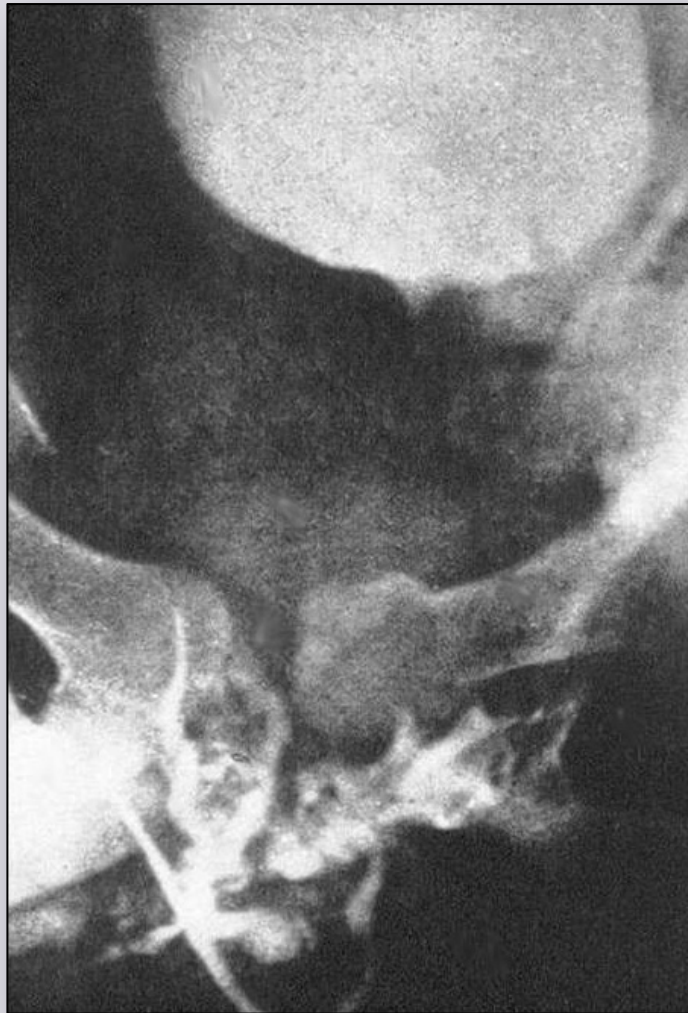
complete rupture

Immediate management of pelvic urethral injury without associated lesions

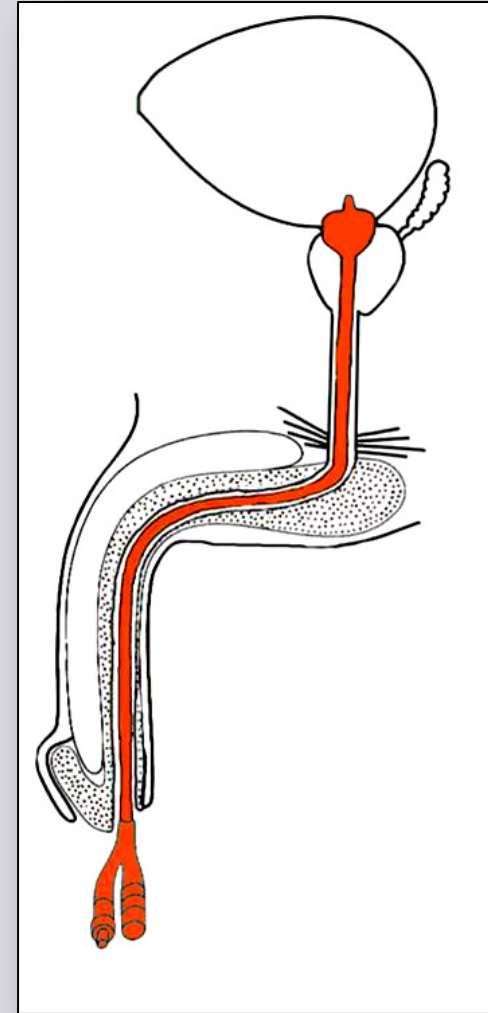


**Percutaneous suprapubic cystostomy
under ultrasonographic guidance**

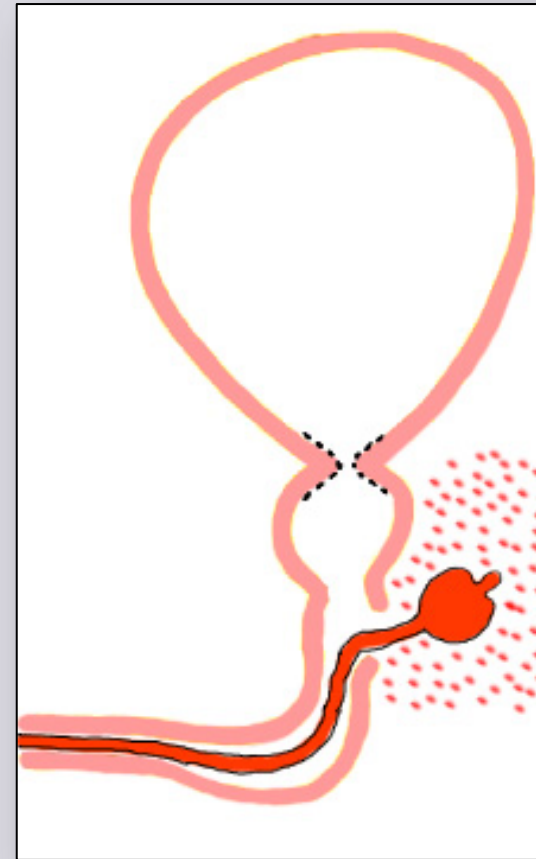
Suprapubic cystostomy: why?



Urethra: stretched

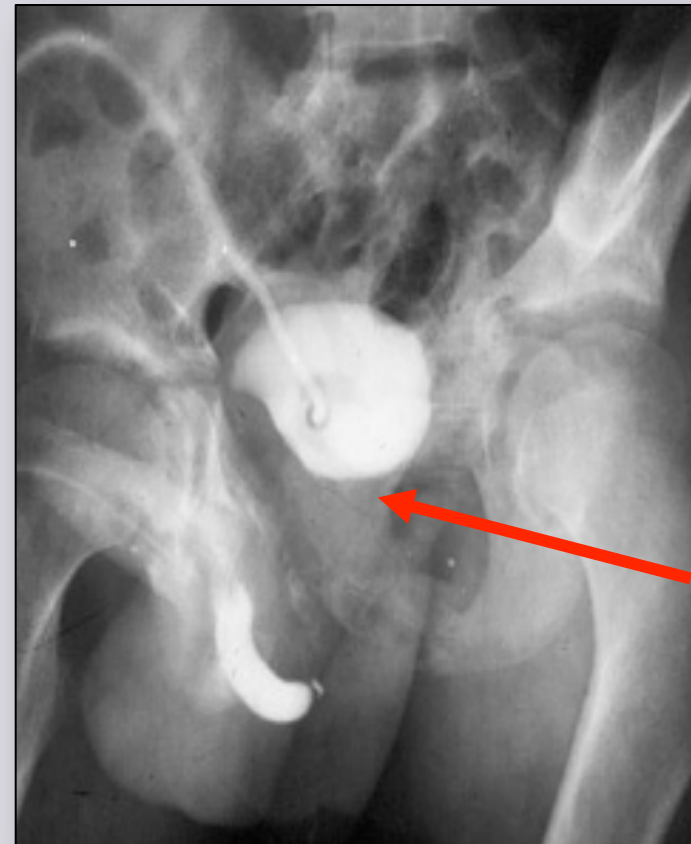
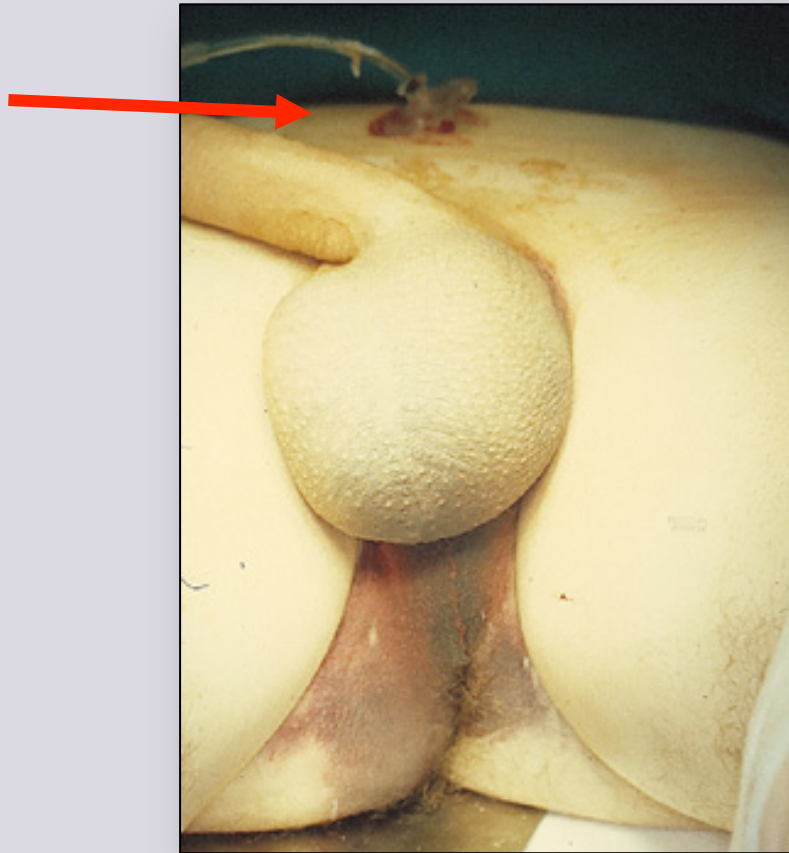


Urethra: partial rupture



Urethra: complete rupture





Suprapubic cystostomy is the only method than can surely avoid damage to the bladder neck, thus fully preserving urinary continence !

Emergency treatment of pelvic urethral injury

immediate suprapubic urinary diversion

→ empty the bladder and release pain due to the over distended bladder

→ divert urine away from the site of injury

→ perform a cystography

Emergency treatment of pelvic urethral injuries

suprapubic urinary diversion
immediate

endoscopic urethral realignment
7 – 15 days after trauma

delayed urethroplasty
4 months after trauma



Endoscopic urethral realignment is not an emergency procedure and should be performed **ONLY if there are the following conditions:**

Endoscopic urethral realignment

appropriate operating room

appropriate instruments

appropriate patient

appropriate surgeon

Endoscopic urethral realignment

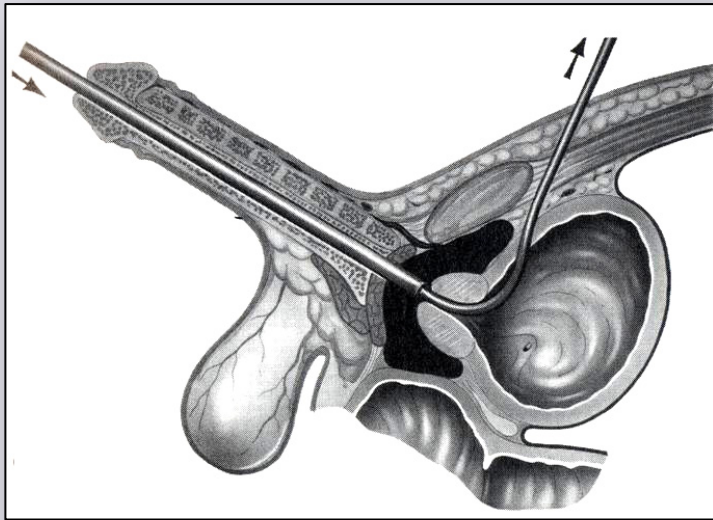


appropriate operating room ?

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Endoscopic urethral realignment



appropriate instruments ?

Endoscopic urethral realignment



appropriate patient ?

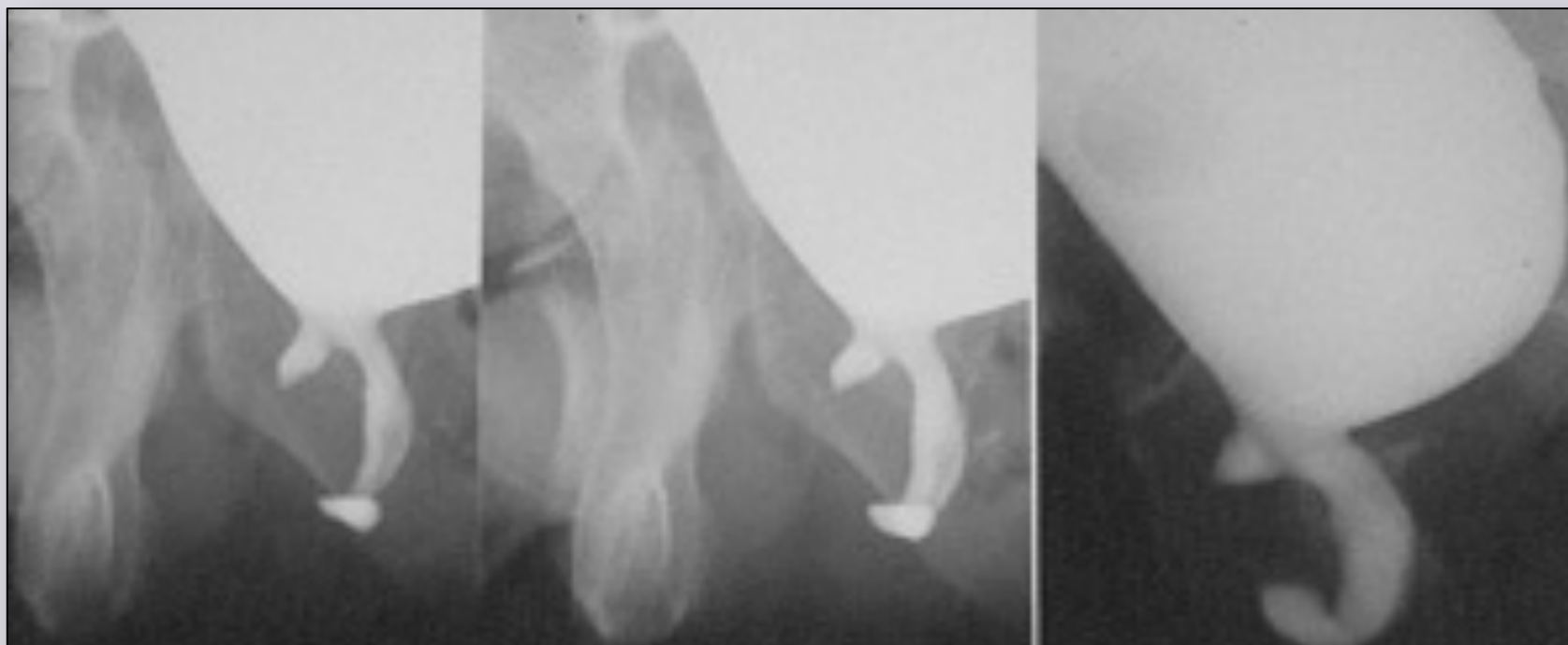
Endoscopic urethral realignment



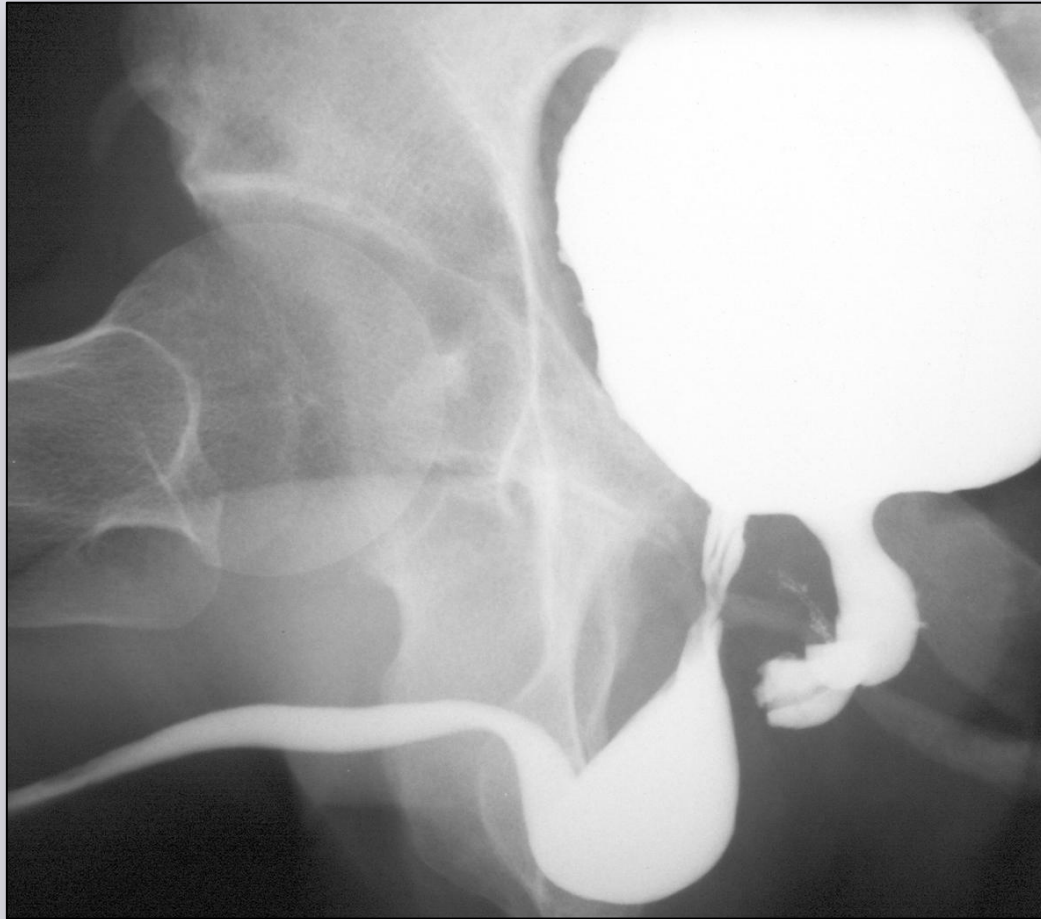
appropriate surgeon ?

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Four-hour emergency (?) urethral realignment in the plaster-cast room (?)



Five-hour emergency (?) urethral realignment

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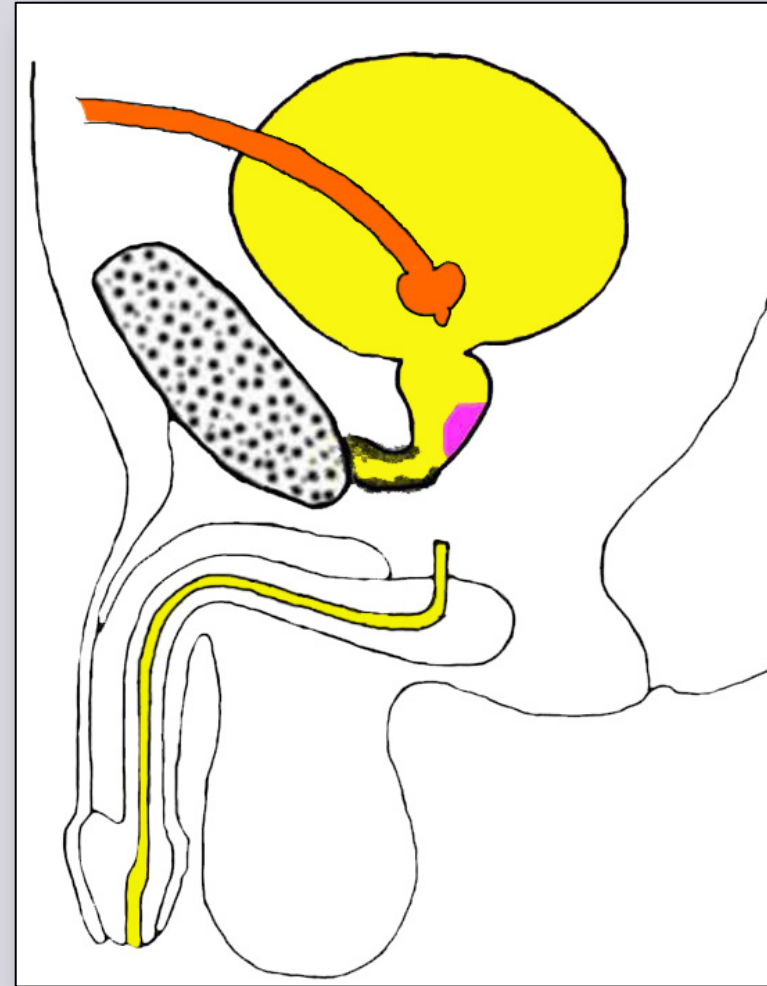
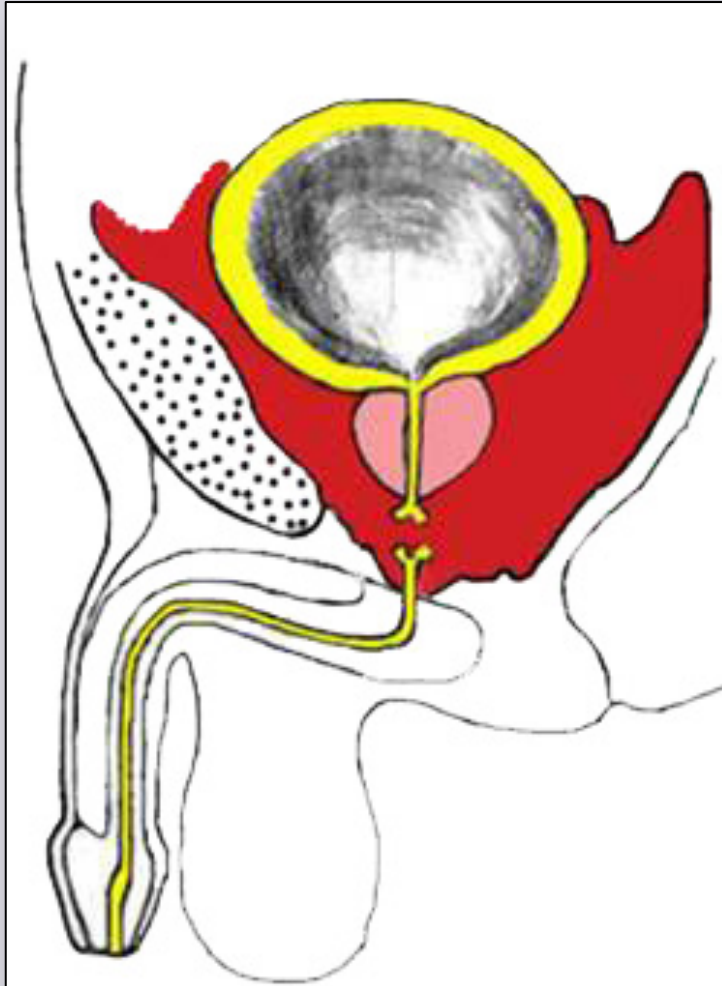
In one week, this patient underwent **five attempts (?)** to perform urethral realignment

Endoscopic urethral realignment

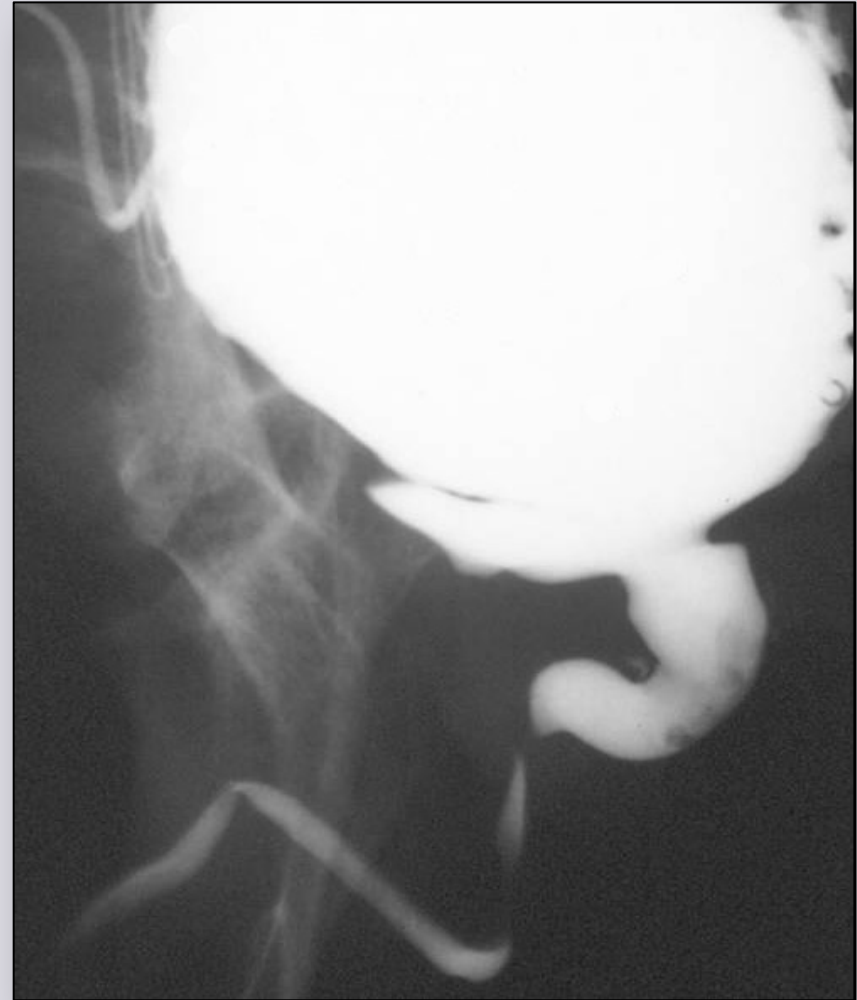
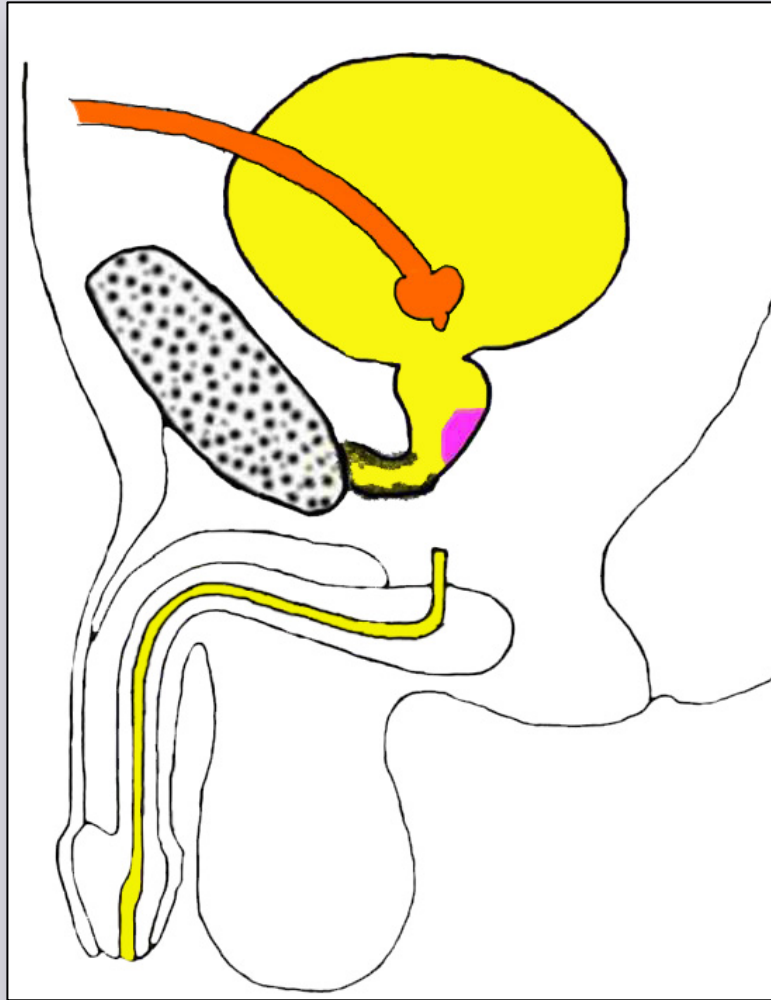
7 – 15 days following trauma

Why ?

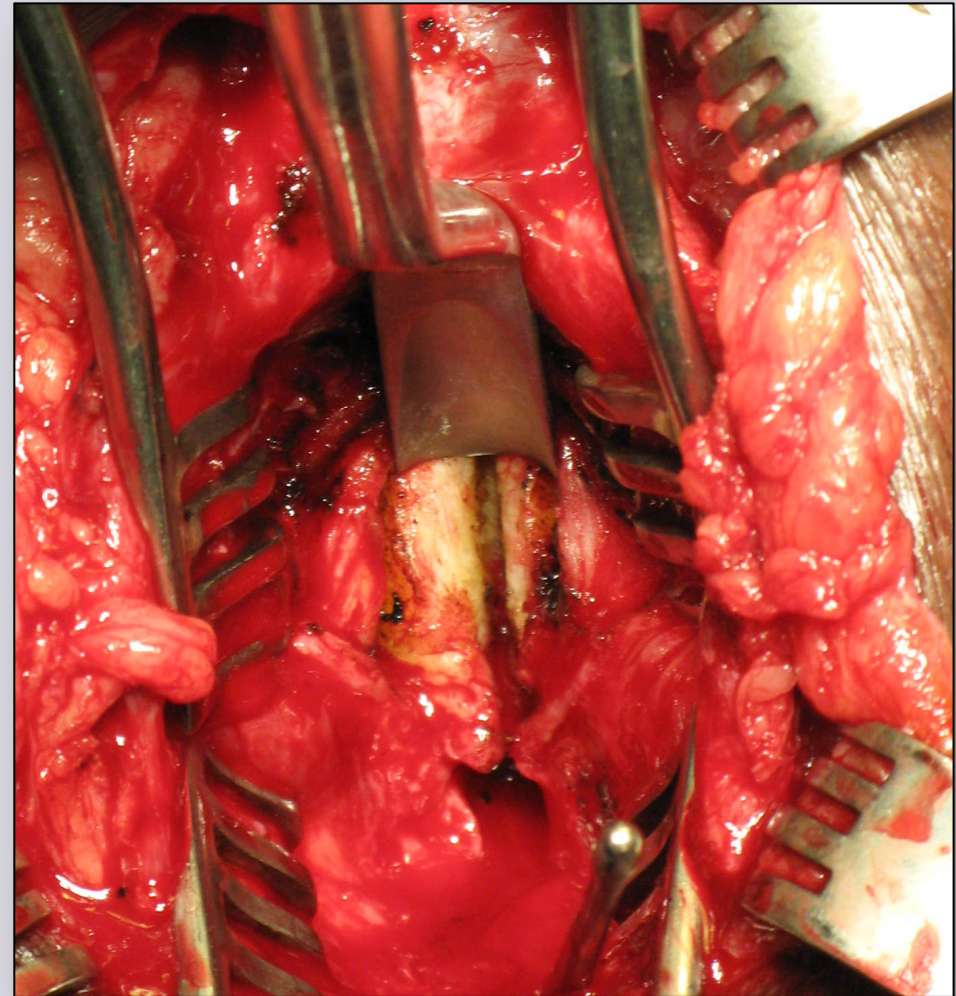
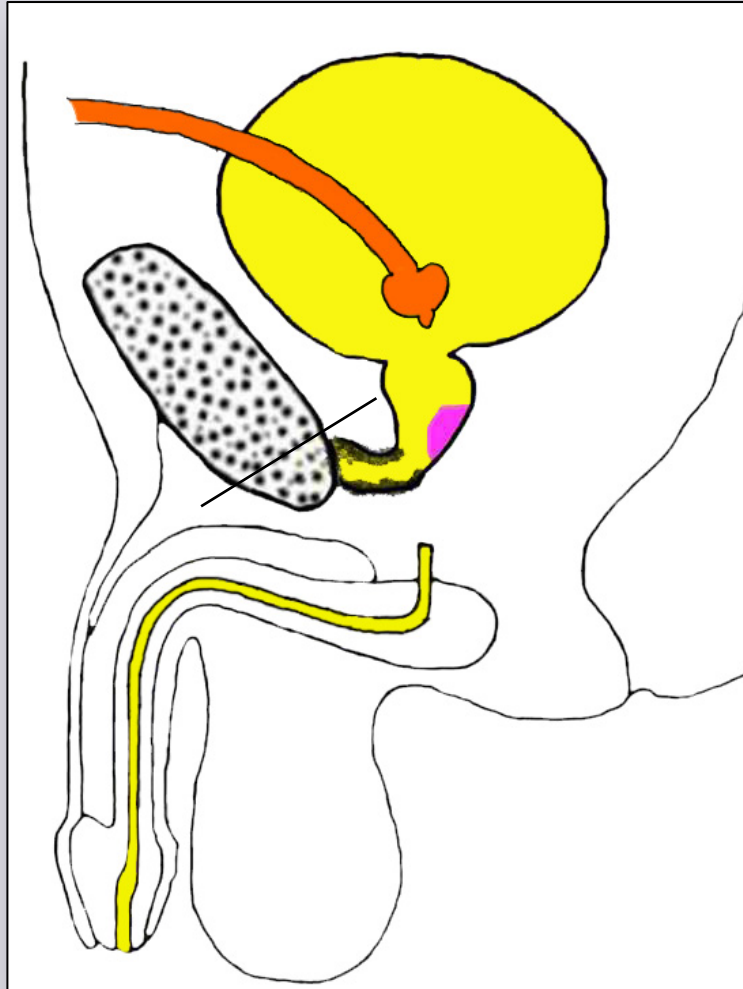
NO - Endoscopic urethral realignment



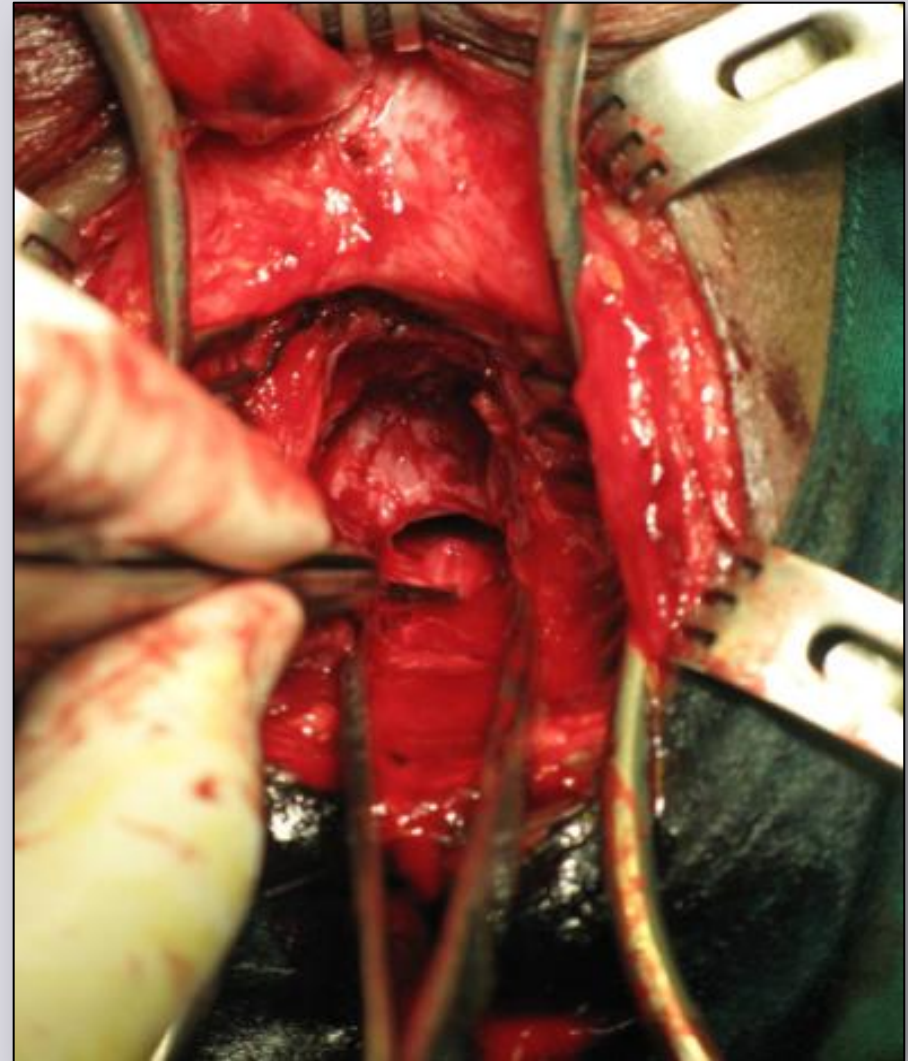
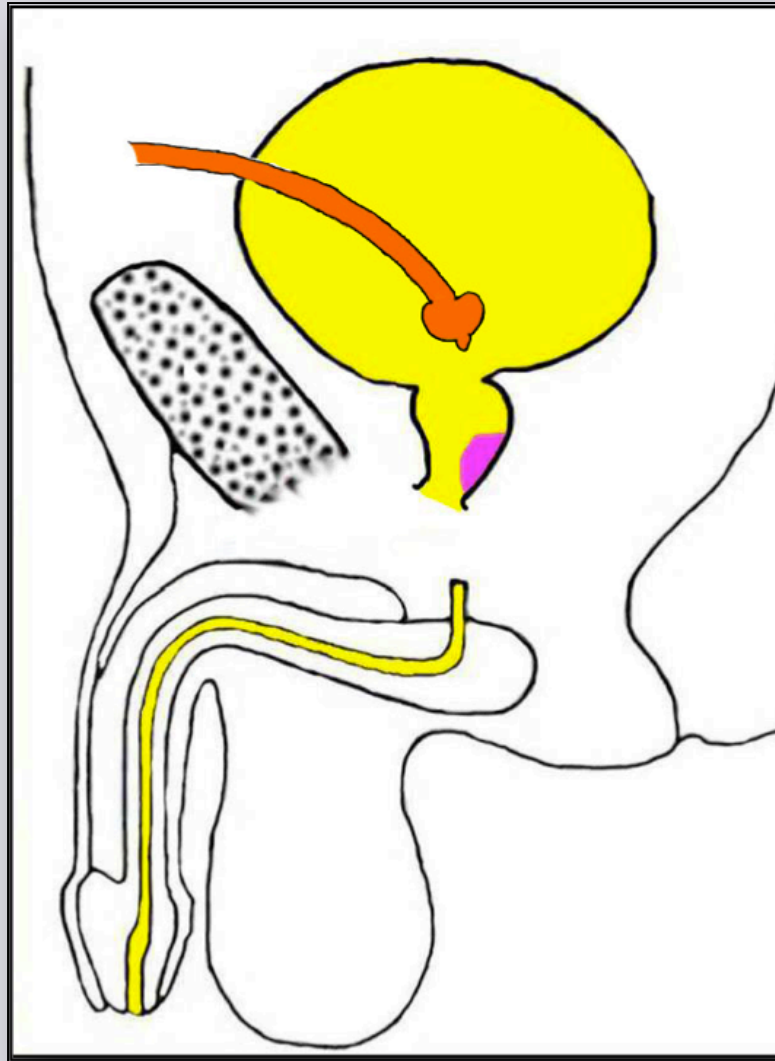
Complex posterior urethral stricture



Perineal pubectomy



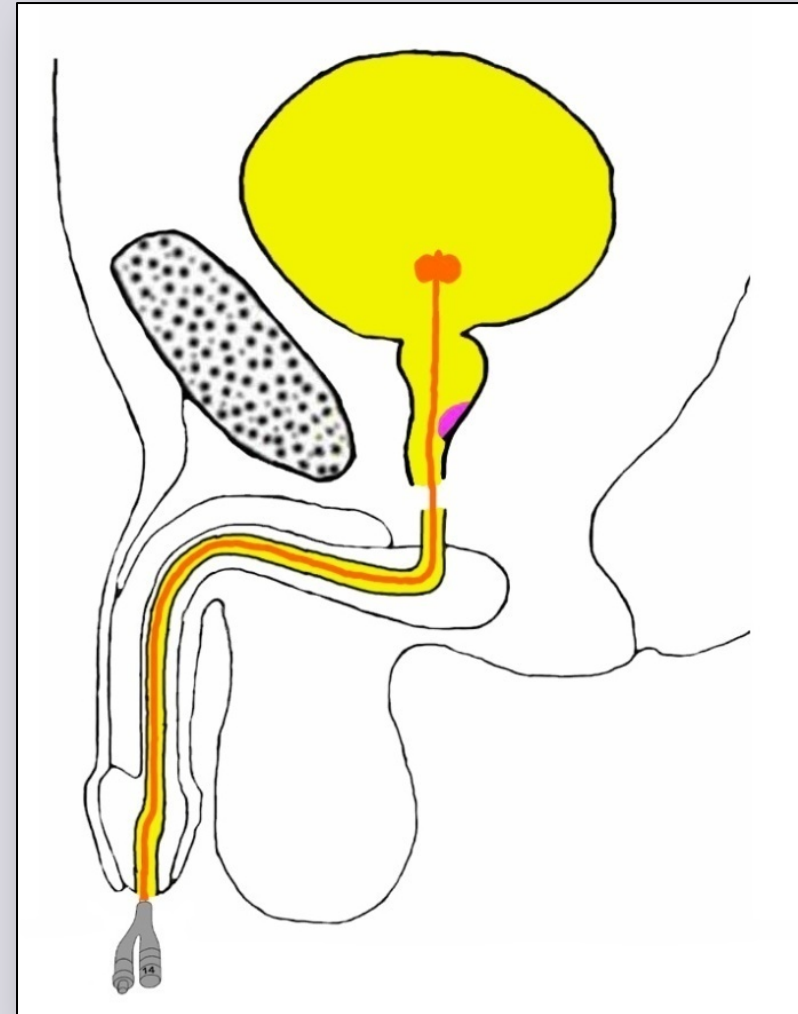
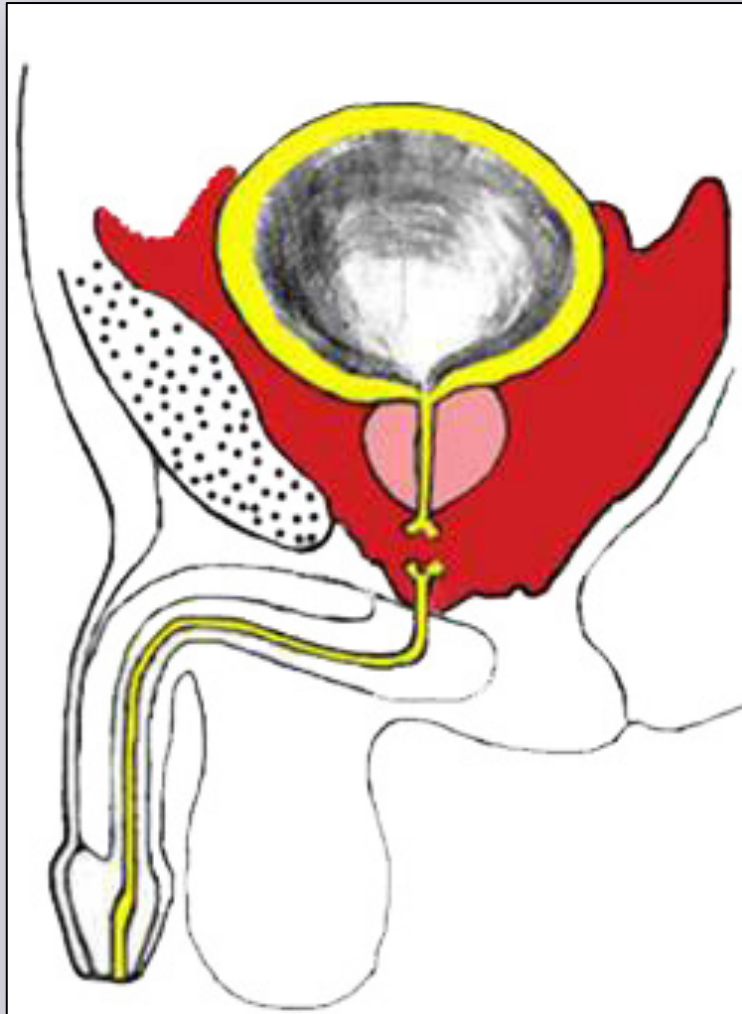
Perineal pubectomy



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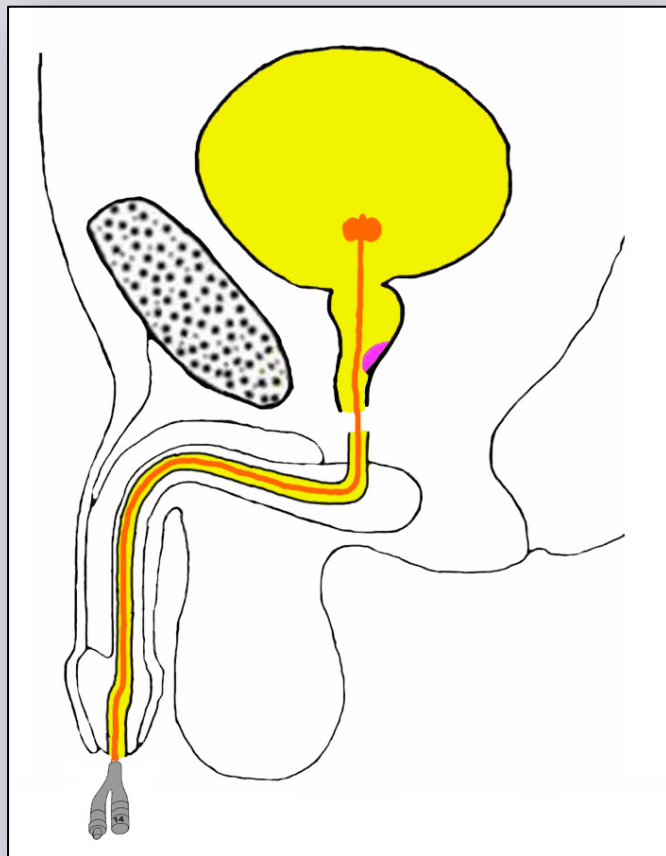
YES - Endoscopic urethral realignment



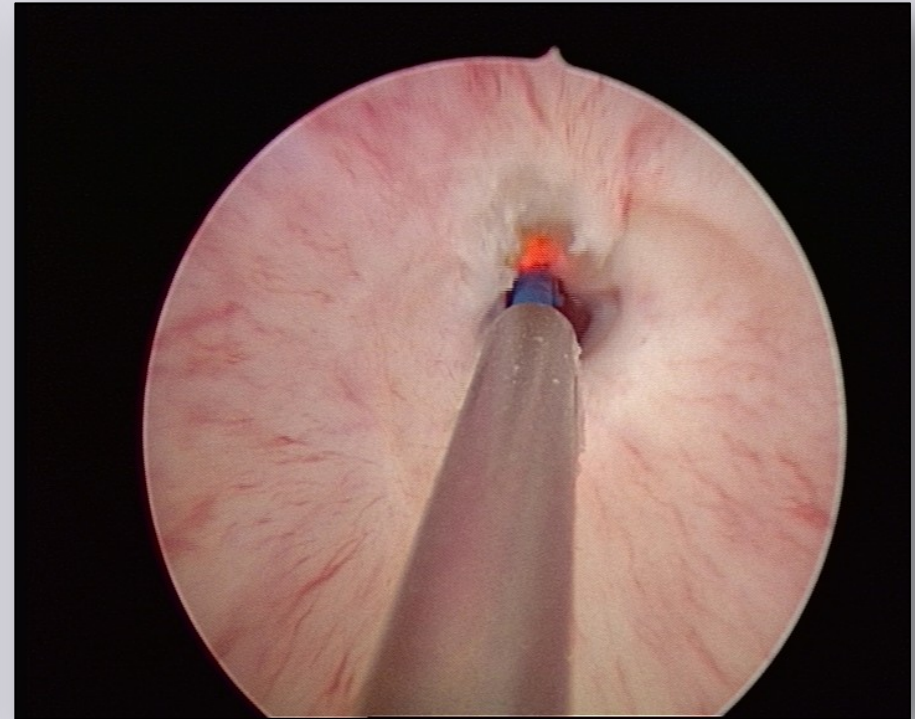
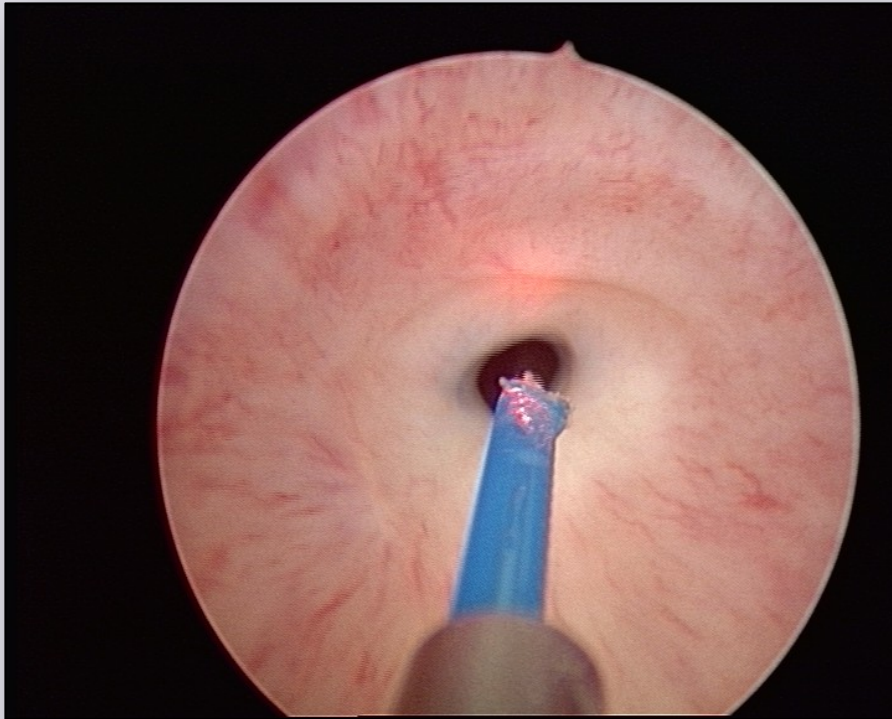
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Simple posterior urethral stricture



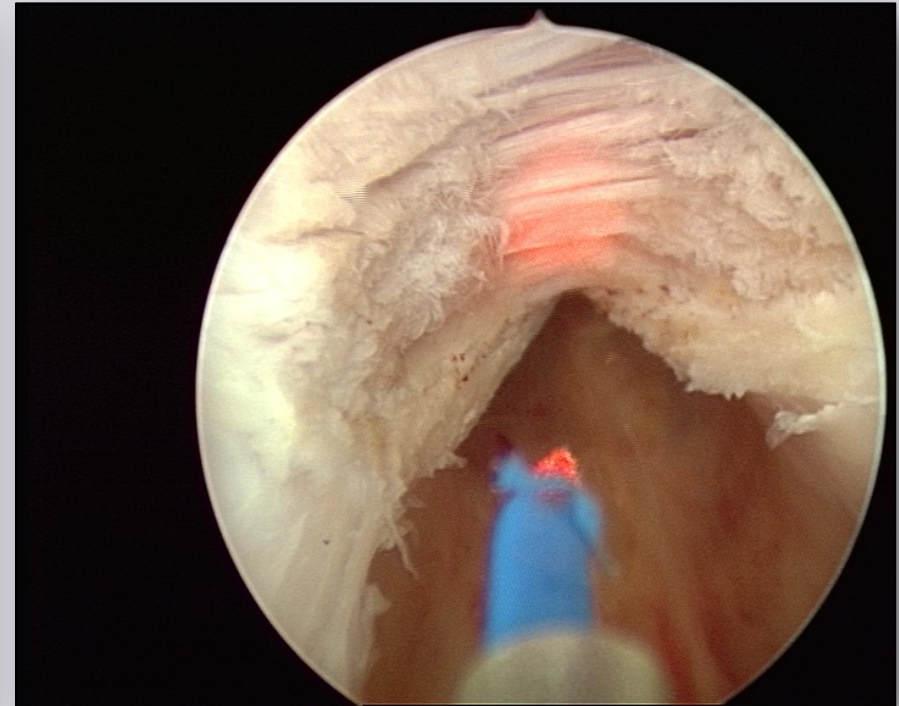
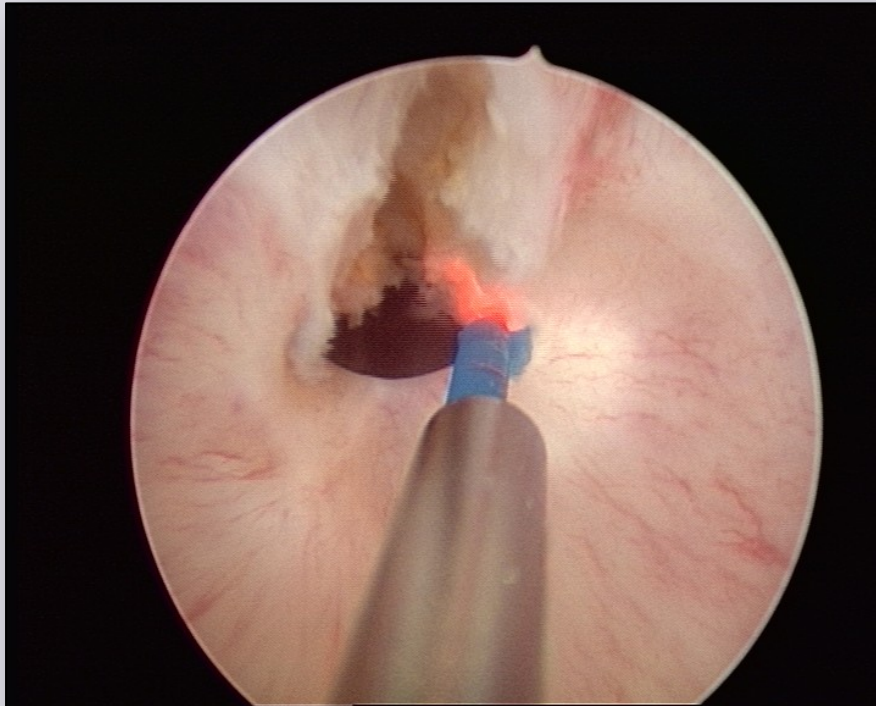
Holmium laser urethrotomy



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Holmium laser urethrotomy

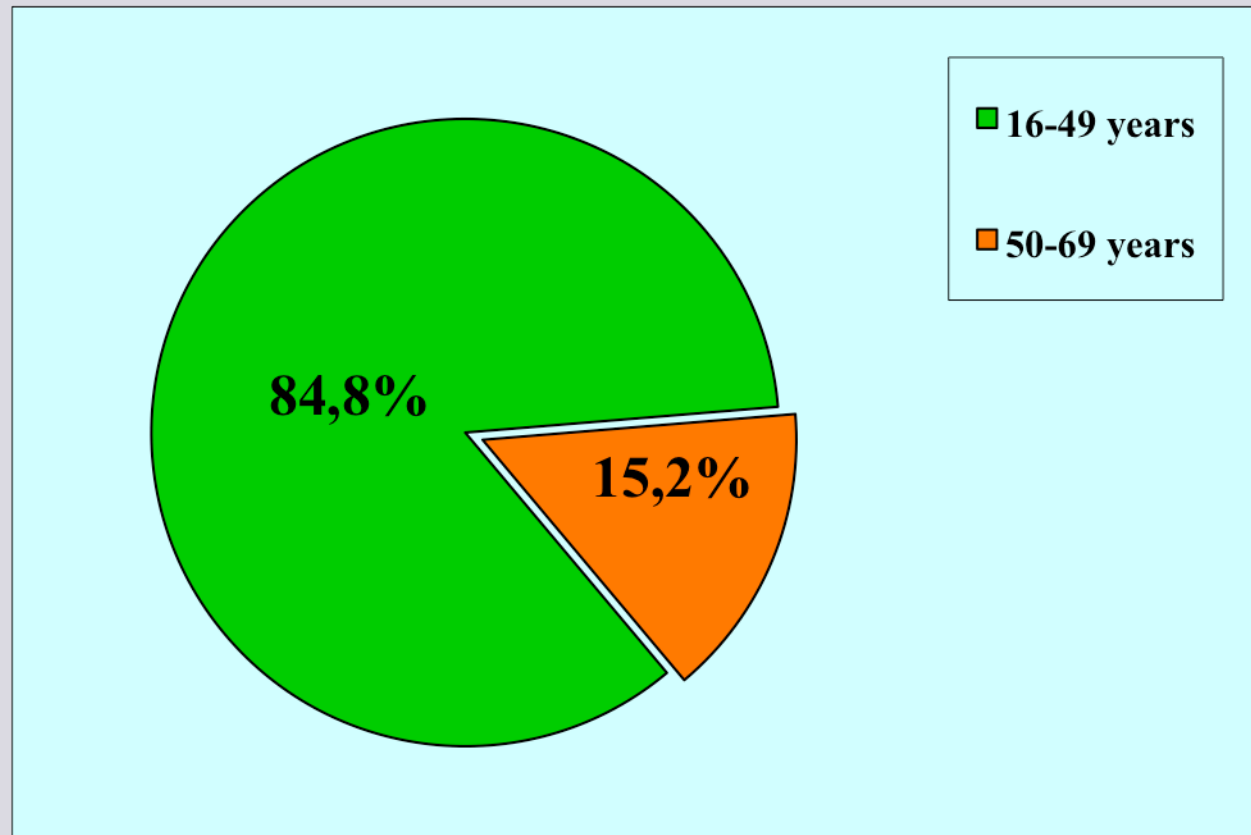


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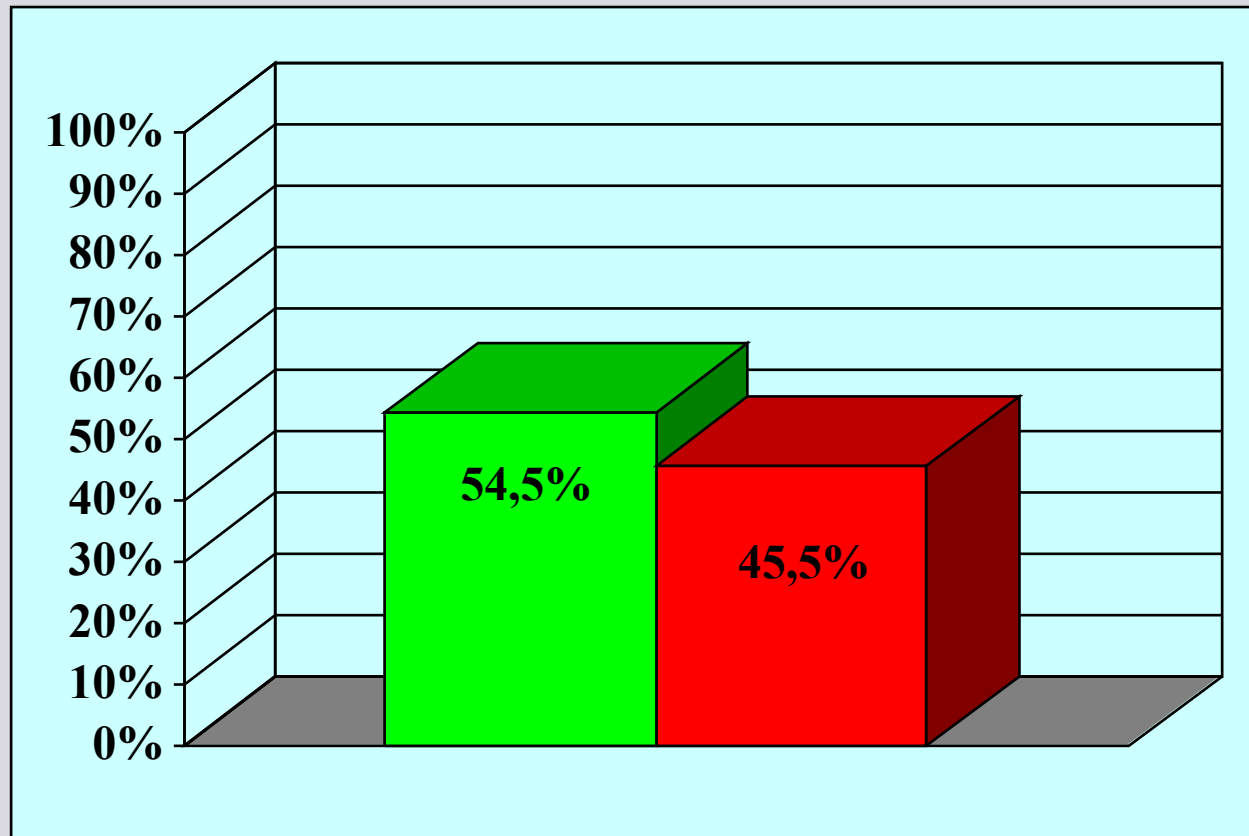
Holmium laser urethrotomy

Results on 33 patients



Age

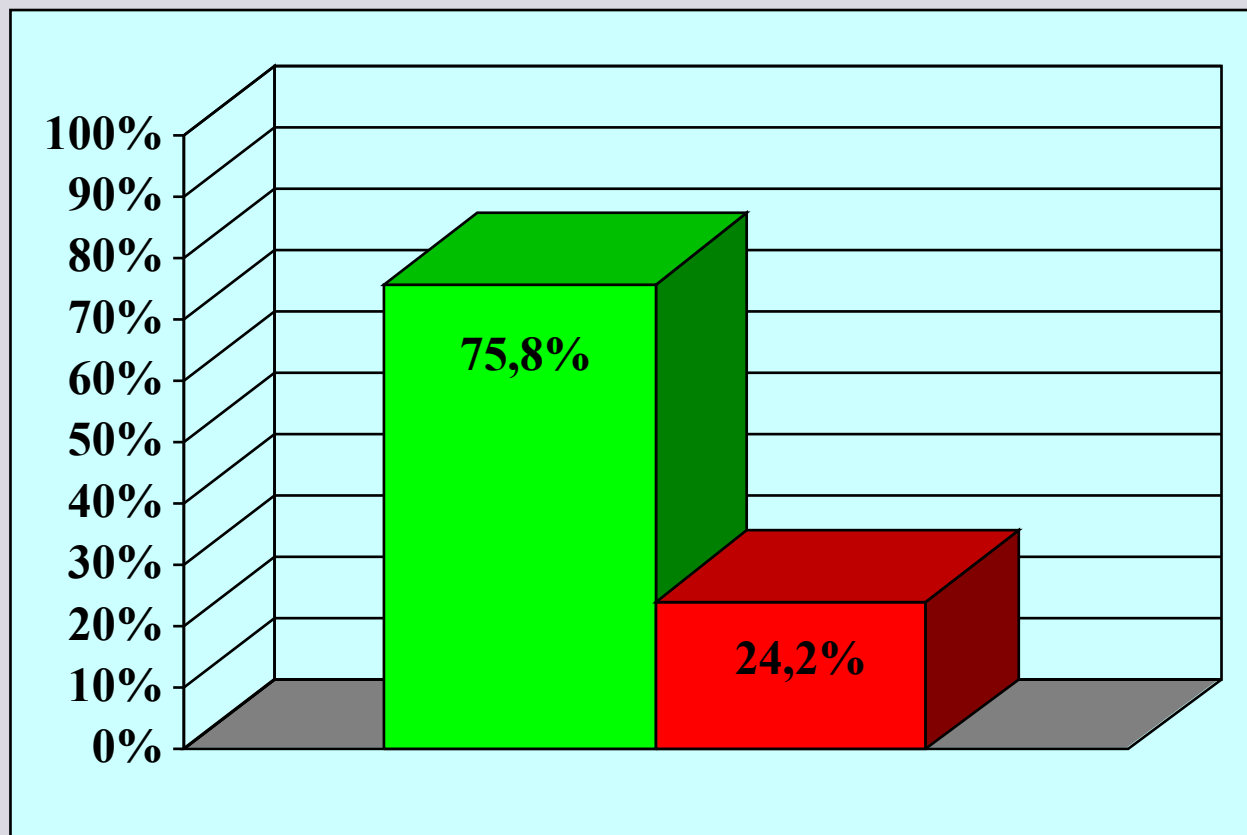
Results on 33 patients after 1 urethrotomy
Median followup 86 months (range 24 – 137)



■ success	18 (54.5%)
■ failure	15 (45.5%)

Results on 33 patients after 2 urethrotomies

Median followup 86 months (range 24-137)



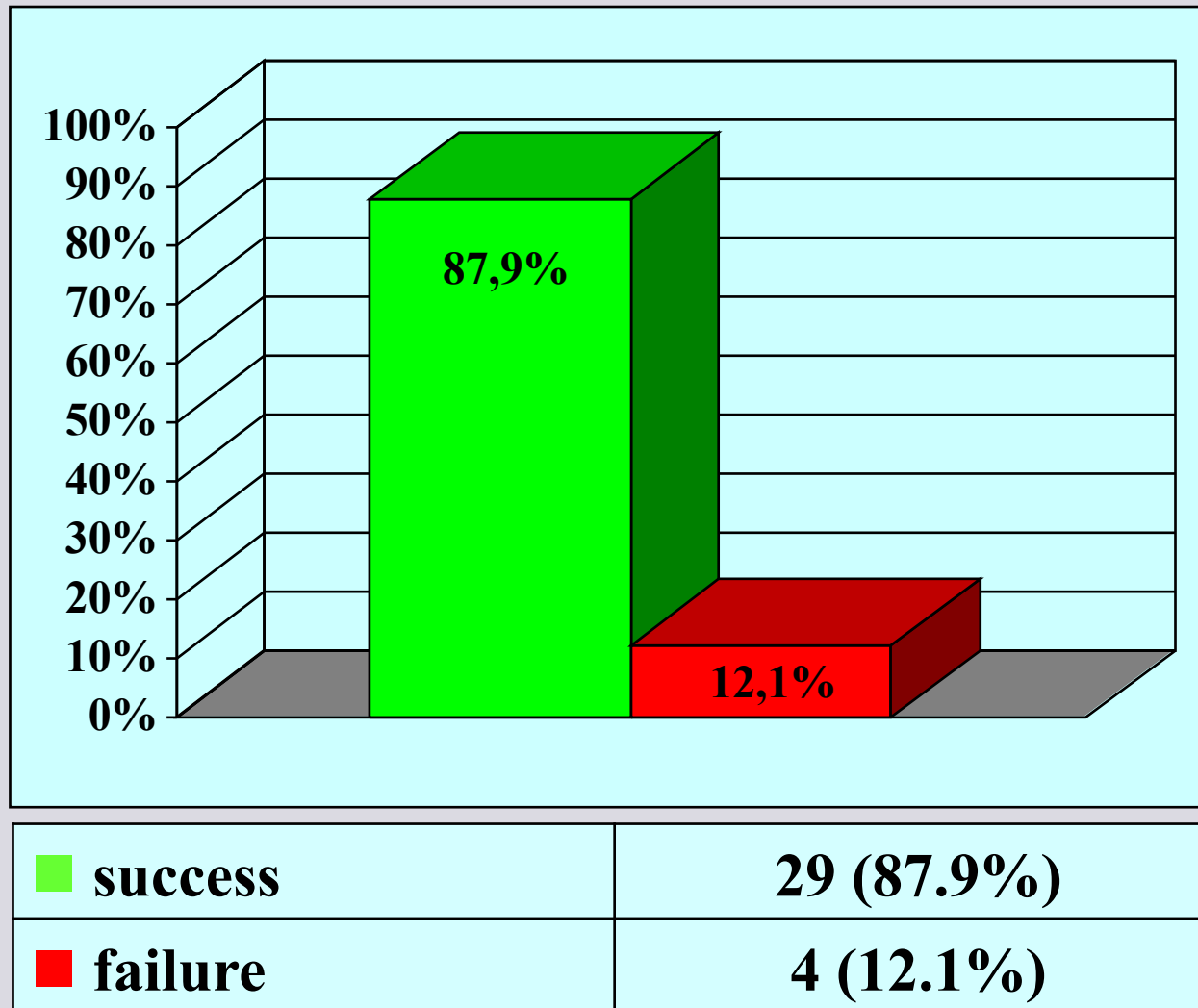
■ success

25 (75.8%)

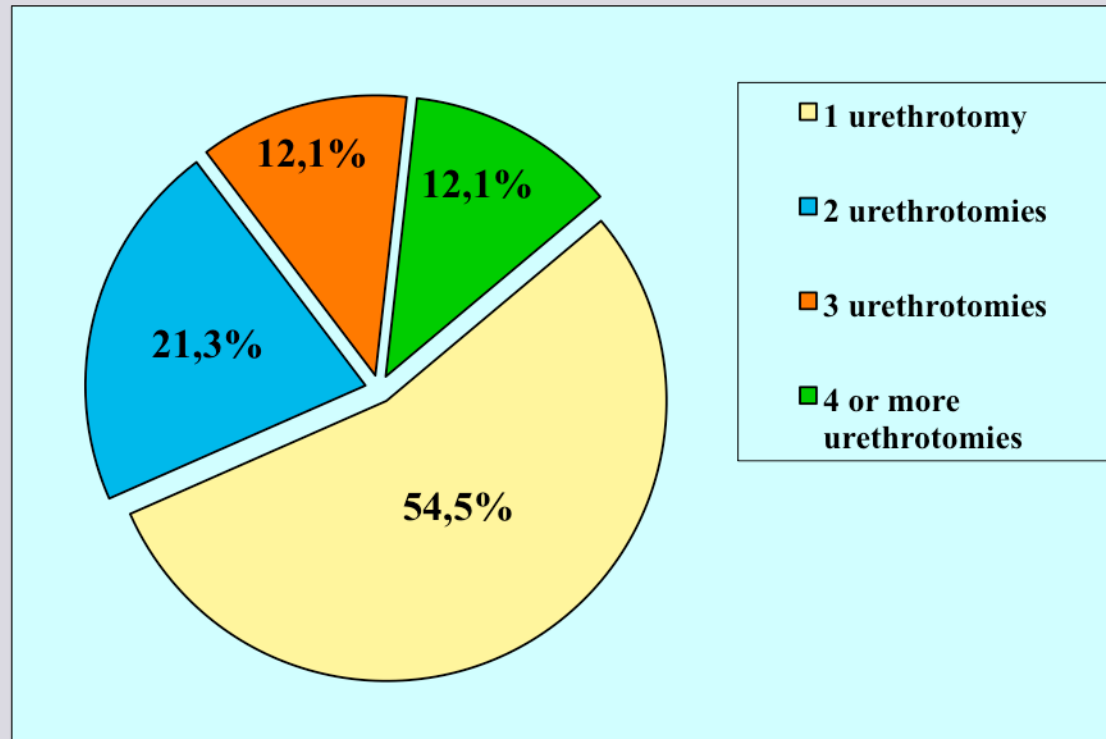
■ failure

8 (24.2%)

Results on 33 patients after 3 urethrotomies
Median followup 86 mesi (range 24-137)



Holmium laser urethrotomy



18 patients (54.5%): 1 urethrotomy

7 patients (21.3%): 2 urethrotomies

4 patients (12.1%): 3 urethrotomies

4 patients (12.1%): 4 or more urethtomialies

Goal of the early management in pelvic urethral injuries



1. Preserve the residual sphincter mechanism at the bladder neck

Goal of the early management in pelvic urethral injuries



2. Realignment of the injured urethra and restore the urethral lumen

Goal of the early management in pelvic urethral injuries



3. Avoid jeopardizing sexual function residual to the trauma



Register now !

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