

Club de la
URETRA

DIAGNOSIS OF URETHRAL STRICTURE

ANY MAN WITH DIFFICULTY URINATING SHOULD BE SPECIFICALLY EVALUATED FOR URETHRAL STRICTURE

DIFFERENTIAL DIAGNOSIS

FUNCTIONAL PROBLEM

- Underactive bladder
- Detrusor sphincter dyssynergia
- Primary bladder neck obstruction

ANATOMICAL PROBLEM

- Prostatic obstruction
- Urethral stricture

ANAMNESIS

KEY QUESTIONS

SUSPECTED DIAGNOSIS: urinary difficulty

ETIOLOGY:

Congenital: Hypospadias

Acquired: Trauma, surgery, radiation, catheterization...

WHEN?: When was the accident, surgery, or procedure?

When did urinary difficulty begin?

URINARY DIVERSION: Do you have a urethral catheter or cystostomy?

URINATION: Is urine coming out of the urethra?

SPHINCTER COMPLEX: Have you had prostate surgery?

ERECTILE FUNCTION: Do you have erectile dysfunction?

PHYSICAL EXAMINATION

- Previous surgeries?: multiple hypospadias surgeries, flaps
- Fibrous cord?
- Circumcision?
- Lichen sclerosus?
- Quality of the foreskin
- Bladder distension



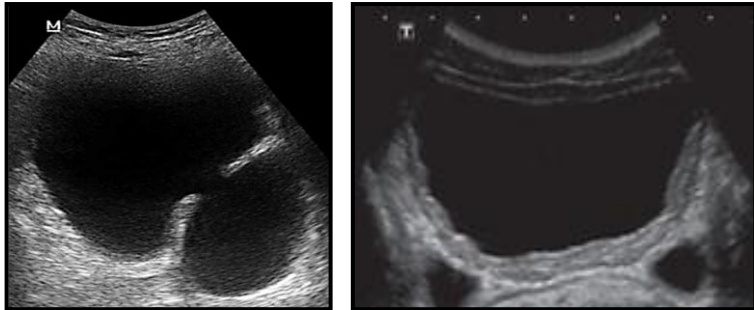
ADDITIONAL DIAGNOSTIC STUDIES

- Renal and bladder ultrasound
- Uroflowmetry: Non-invasive
- Urethrocystoscopy: Flexible or rigid
- **Urethrocystography: Key examination**
- Penile ultrasound: Anterior urethral stricture
- MRI: Complex cases

ULTRASOUND



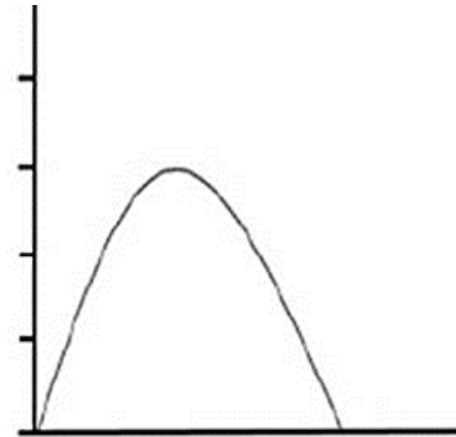
Bilateral ectasia



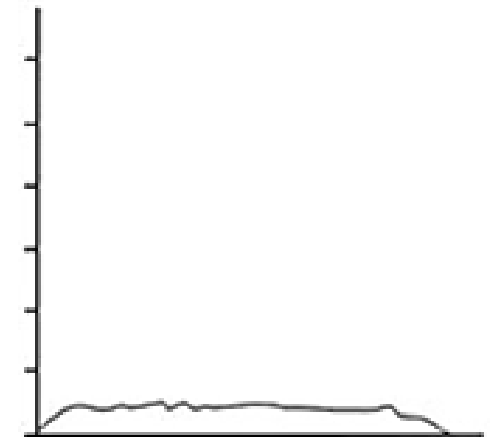
Damaged bladder
High post-void residual urine

UROFLOWMETRY

- Non-invasive examination
- Void volume per unit of time (ml/s)
- Plateau graph



Bell curve
Normal



Plateau curve
Urethral stricture/stenosis

URETHROSCOPY



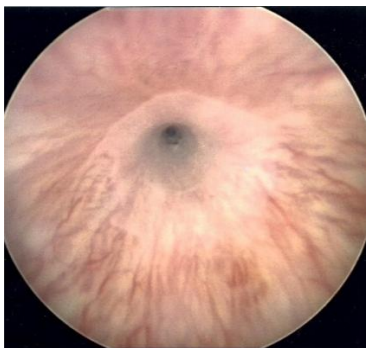
Soft ring



Pale mucosa



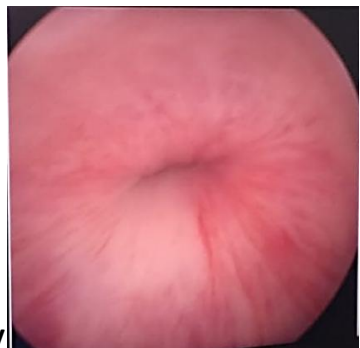
Fibrosis +++



90% light occupancy

Evaluation:

- Confirms stricture
- Distal end
- Degree of fibrosis
- Urethral mucosa
- Urethral lumen occupancy
- Sphincter competence



sphincter

URETHROCYSTOGRAPHY

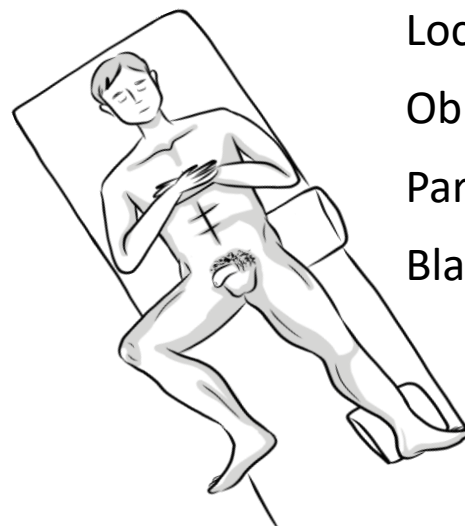
- Key examination
- Ideally performed by a urologist
- Radiation protection
- Retrograde and voiding phases
- Data: Urethral distensibility

Location and length

Obliterative/non-oblitterative

Partial/complete injury (trauma)

Bladder neck continence



REFERENCES

- **EAU Guidelines.** Edn. presented at the EAU Annual Congress Madrid 2025. ISBN 978-94-92671-29-5. <http://uroweb.org/guidelines/compilations-of-all-guidelines/>
- Wessells H, Morey A, Vanni A, Rahimi L, Souter L. **Urethral stricture disease guideline** amendment (2023). J Urol. 2023;210(1):64-71.
- Alvaro A. Saavedra and Keith F. Rourke (2020). **Clinical Presentation and Diagnostic Evaluation of Male Urethral Stricture.** In book: Textbook of Male Genitourethral Reconstruction (pp.45-65). doi:[10.1007/978-3-030-21447-0_5](https://doi.org/10.1007/978-3-030-21447-0_5)
- Mikolaj F, Karolina M, Oliwia K et al (2021). **Retrograde urethrography, sonourethrography and magnetic resonance urethrography in evaluation of male urethral strictures. Should the novel methods become the new standard in radiological diagnosis of urethral stricture disease?** Int Urol Nephrol;53(12):2423-2435. doi: 10.1007/s11255-021-02994-5.
- Morel-Journal N, Neuville P, Fourel M et al (2024). **Diagnosis and evaluation of anterior and posterior urethral stenosis in men: Clinical and radiological aspects.** Fr J Urol;34(11):102721. doi: 10.1016/j.fjurol.2024.102721.