

DISEASE MANAGEMENT IN MALES I:

CONSERVATIVE OPTIONS:

A stricture will usually result in diminution in flow once the calibre of the urethral lumen is < 10 Fr. Patients with asymptomatic incidental (> 16 Fr) strictures have a low risk of progression and to develop symptoms.

A suprapubic catheter is also an option in frail patients not able to undergo surgery or in patients who do not want (further) urethral surgery and are willing to accept the complications of a suprapubic catheter.

Recommendations	Strength rating
Do not intervene in patients with asymptomatic incidental (> 16 Fr) strictures.	Weak
Consider long-term suprapubic catheter in patients with radiation-induced bulbomembranous strictures and/or poor performance status.	Weak

ENDOLUMINAL TREATMENT OF ANTERIOR URETHRAL STRICTURES:

Direct vision internal urethrotomy (DVIU): Commonly performed as a first-line treatment of urethral strictures.

In selected patients with a primary, single, short (< 2 cm) and non-obliterative bulbar stricture, a five year stricture-free rate of up to 77% can be expected.

DVIU performs poorly in penile strictures. At the penile urethra might provoke venous leakage from the corpora cavernosa with risk of erectile dysfunction.

Increased stricture length is associated with higher risk of failure of DVIU.

DVIU for recurrent strictures and as salvage treatment:

DVIU has a stricture-free rate of 51-71% if performed for a short (< 2 cm) recurrent stricture after prior bulbar urethroplasty.

Recommendations	Strength rating
Do not use direct vision internal urethrotomy (DVIU) for penile strictures.	Strong
Do not use DVIU/dilatation as solitary treatment for long (> 2 cm) segment strictures.	Strong
Perform DVIU/dilatation for a primary, single, short (< 2 cm) and non-obliterative stricture at the bulbar urethra.	Weak
Perform DVIU/dilatation for a short recurrent stricture after prior bulbar urethroplasty.	Weak
Use either "hot" or "cold knife" techniques to perform DVIU depending on operator experience and resources.	Weak

"Hot-knife" direct vision internal urethrotomy: laser or bipolar urethrotomy:

There is conflicting evidence that "hot knife" (laser, plasmakinetic) DVIU would be superior compared to "cold knife" DVIU after more than one year of follow-up.

Based on the conflicting results described above and considering the heterogeneity of series and absence of long-term follow-up, overall, the available studies do not support the efficacy of one technique of DVIU over another.

Single dilatation:

Dilatation can be done in the office, under local anaesthesia and without complex resources. The urethral mucosa at the stricture site is stretched and the scarring is disrupted.

Visually controlled dilatation after endoscopic or fluoroscopic guidewire placement has a low complication rate.

Repetitive dilatations/DVIU have no long-term freedom of recurrence and increase stricture complexity.

Recommendations	Strength rating
Use visually controlled dilatation in preference to blind dilatation.	Weak
Do not perform repetitive (> 2) direct vision internal urethrotomy/dilatations if urethroplasty is a viable option.	Strong

Recommendations	Strength rating
Perform intermittent self-dilatation (ISD) to stabilise the stricture after dilatation/direct vision internal urethrotomy if urethroplasty is not a viable option.	Weak
Use intra-urethral corticosteroids in addition to ISD to stabilise the urethral stricture.	Weak

Intralesional injections: The rationale of adjuvant intralesional injections is to reduce fibroblast proliferation and excessive urethral scarring

Intralesional injections (steroids, mytomicin C, platelet rich plasma...) after DVIU might improve stricture-free rates on the short-term compared to DVIU alone. Experience is limited and the use of these drugs are off-label.

Recommendation	Strength rating
Do not use intralesional injections outside the confines of a clinical trial.	Weak

Urethral stents:

Urethral stents are designed with the aim to oppose wound contraction after dilatation or DVIU.

Stent insertion is a short procedure (< 60 minutes) that can be done under local or spinal anaesthesia as "oneday" surgery.

Urethral stents are classified as permanent or temporary (removable, after six to twelve months).

Permanent urethral stents have a high complications and failure rate and make subsequent urethroplasty more challenging if they fail.

In the case of stent failure, subsequent urethroplasty (usually with stent removal) is possible, but this urethroplasty is very likely to be more complex than it would have been had it been performed initially

Recommendations	Strength rating
Do not use permanent urethral stents.	Strong
Do not use urethral stents for penile strictures.	Strong
Use a temporary stent for recurrent bulbar strictures after direct vision internal urethrotomy to prolong time to next recurrence only if urethroplasty is not a viable option.	Weak