

Urethral stricture

Guidelines of guidelines: a review of urethral stricture evaluation, management, and follow-up

[David B. Bayne](#),¹ [Thomas W. Gaither](#),¹ [Mohannad A. Awad](#),¹ [Gregory P. Murphy](#),¹
[E. Charles Osterberg](#),¹ and [Benjamin N. Breyer](#)^{1,2}

▶ [Author information](#) ▶ [Article notes](#) ▶ [Copyright and License information](#) [Disclaimer](#)

Abnormal narrowing of the urethra resulting from fibrosis in the surrounding corpus spongiosum

Cause: idiopathic, followed by iatrogenic causes, including transurethral resection, urethral catheterization, prostate cancer treatments, and previous hypospadias surgery

The annual \$200 million dollars with approximately 5,000 new inpatient visits yearly

In the United Kingdom, it is estimated that 700 urethroplasties and 16,000 urethrotomy and dilation procedures are performed annually

Internal urethrotomy versus dilation as treatment for male urethral strictures: a prospective, randomized comparison

J W Steenkamp¹, C F Heyns, M L de Kock

Affiliations + expand

PMID: 8976225

men randomized to undergo filiform dilation (106) or optical internal urethrotomy analyzed at 12 months

no significant difference between the 2 treatments

< 2cm - 40%

2 to 4 cm. - 50% at 12 months to approximately 75% at 48 months.

80% for those longer than 4 cm.

Treatment of male urethral strictures: is repeated dilation or internal urethrotomy useful?

C F Heyns ¹, J W Steenkamp, M L De Kock, P Whitaker

Affiliations + expand

PMID: 9679876 DOI: 10.1016/s0022-5347(01)62894-5

1991 and January 1994, 210 men prospectively randomized to undergo filiform dilation (106) or internal urethrotomy (104).

Dilation or internal urethrotomy was repeated at the first and second stricture recurrence.

After a single dilation or urethrotomy not followed by re-stricturing at 3 months, the estimated stricture-free rate was 55 to 60% at 24 months and 50 to 60% at 48 months.

After a second dilation or urethrotomy for stricture recurrence at 3 months the stricture-free rate was 30 to 50% at 24 months and 0 to 40% at 48 months.

After a third dilation or urethrotomy for stricture recurrence at 3 and 6 months the stricture-free rate at 24 months was 0 (p <0.0001).

Internal urethrotomy in patients with recurrent urethral stricture after buccal mucosa graft urethroplasty

Clemens M Rosenbaum ¹, Marianne Schmid, Tim A Ludwig, Luis A Kluth, Philip Reiss, Roland Dahlem, Oliver Engel, Felix K-H Chun, Silke Riechardt, Margit Fisch, Sascha A Ahyai

- Retrospective study
- Forty-three patients underwent DVIU for short stricture recurrence after BMGU for bulbar (81.3 %), penile (14.0 %) and membranous (4.7 %) strictures.
- At a mean follow-up of 11.7 (± 9.7) months, stricture recurrence was observed in 48.8 % of our patients.
- Stricture recurrence was significantly associated with weak urinary stream (9.3 ml/s vs. no recurrence 19.5 ml/s) and patient dissatisfaction (66.7 % vs. no recurrence 18.1 %; both $p < 0.001$).
- The overall success rate was 60.5 % 15 months after DVIU.
- Moderate Success

Multivariate analysis of risk factors for long-term urethroplasty outcome

Benjamin N Breyer¹, Jack W McAninch, Jared M Whitson, Michael L Eisenberg, Jennifer F Mehdizadeh, Jeremy B Myers, Bryan B Voelzke

Affiliations + expand

PMID: 20018318 DOI: [10.1016/j.juro.2009.10.018](https://doi.org/10.1016/j.juro.2009.10.018)

Retrospective study of urethroplasty

1995 and 2004, 443 patients

Stricture recurred in 93 patients (21%).

Primary estimated stricture-free survival at 1, 3 and 5 years was 88%, 82% and 79%.

smoking (HR 1.8, 95% CI 1.0-3.1, $p = 0.05$), prior direct vision internal urethrotomy (HR 1.7, 95% CI 1.0-3.0, $p = 0.04$) and prior urethroplasty (HR 1.8, 95% CI 1.1-3.1, $p = 0.03$) were predictive of treatment failure.

On multivariate analysis diabetes mellitus showed a trend toward prediction of urethroplasty failure (HR 2.0, 95% CI 0.8-4.9, $p = 0.14$).

Long-term followup and deterioration rate of anterior substitution urethroplasty

Guido Barbagli ¹, Sanjay B Kulkarni ², Nicola Fossati ³, Alessandro Larcher ³, Salvatore Sansalone ⁴,
Giorgio Guazzoni ³, Giuseppe Romano ¹, Joshi M Pankaj ², Vincenzo Dell'Acqua ³,
Massimo Lazzeri ⁵

retrospective descriptive analysis

1-stage anterior urethroplasty using penile skin or oral mucosa with a minimum of 6 years followup

359 patients.

Median follow up was 118 months. Most failure happens within 5 years

Of the procedures 265 (73.8%) were successful and 94 (26.2%) failed, including 91 (96.8%) within the first 5 years.

oral mucosa > penile skin (HR 1.86, p = 0.005).

Summary

- DVIU 50-60% success <2cm
- DVIU -> DVIU 40-50% success
- DVIU -> DVIU -> DVIU 0% success
- DVIU -> BMGU -> increase stricture rate compared to direct BMGU
- BMGU short stricture -> DVIU moderate success (60% 15 months)

Not address directly but noted in articles

- Low success <3months repeat DVIU
- More anterior, more likely to stricture
- recommended to do DVIU in settings of palliative for cath or unable to do urethroplasty

comments

- Most studies from 1990s
- AUA recommendations not updated with modern technology as not very many studies, out of scope of this presentation