

RECONSTRUCTIVE UROLOGY

doi: 10.1590/S1677-553820100001000027

Multivariate analysis of risk factors for long-term urethroplasty outcome

Breyer BN, McAninch JW, Whitson JM, Eisenberg ML, Mehdizadeh JF, Myers JB, Voelzke BB
Department of Urology, University of California, San Francisco, San Francisco, California, USA
J Urol. 2010; 183: 613-7

Purpose: We studied the patient risk factors that promote urethroplasty failure.

Materials and Methods: Records of patients who underwent urethroplasty at the University of California, San Francisco Medical Center between 1995 and 2004 were reviewed. Cox proportional hazards regression analysis was used to identify multivariate predictors of urethroplasty outcome.

Results: Between 1995 and 2004, 443 patients of 495 who underwent urethroplasty had complete comorbidity data and were included in analysis. Median patient age was 41 years (range 18 to 90). Median followup was 5.8 years (range 1 month to 10 years). Stricture recurred in 93 patients (21%). Primary estimated stricture-free survival at 1, 3 and 5 years was 88%, 82% and 79%. After multivariate analysis 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, $p = 0.14$).

Conclusions: Length of urethral stricture (greater than 4 cm), prior urethroplasty and failed endoscopic therapy are predictive of failure after urethroplasty. Smoking and diabetes mellitus also may predict failure potentially secondary to microvascular damage.

Editorial Comment

In this publication, Dr. McAninch's group ushers us into the next generation of outcomes research in urethral stricture disease. Only with a surgical volume as large as his could one account for all of these variables with enough power to reach meaningful conclusions. It is interesting to note that with long follow-up and when using Kaplan-Meier methods, the success rate of urethroplasty, by procedure type, is generally 5-10% lower than what has been reported in the literature. Anastomotic urethroplasty, for instance drops from 95% to about 85%. The fact that smoking is just as important a risk factor as previous urethroplasty underlines the strong negative impact smoking has on wound healing. Diabetes had a similar strong impact but with diabetes only present in 4% of the cohort, the study was underpowered to detect a statistically significant effect. As only 10% of the cohort was over age 65, this variable might have been better analyzed in 10 year age groups or as a continuous variable.

Dr. Sean P. Elliott

*Department of Urology Surgery
University of Minnesota
Minneapolis, Minnesota, USA
E-mail: selliot@umn.edu*

doi: 10.1590/S1677-553820100001000028

Internal urethrotomy and intraurethral submucosal injection of triamcinolone in short bulbar urethral strictures

Mazdak H, Izadpanahi MH, Ghalamkari A, Kabiri M, Khorrami MH, Nouri-Mahdavi K, Alizadeh F, Zargham M, Tadayyon F, Mohammadi A, Yazdani M

Al-Zahra Hospital, Isfahan University of Medical Sciences, Isfahan, Iran

Int Urol Nephrol. 2009 Dec 1. [Epub ahead of print]

Objectives: In clinical practice, internal urethrotomy is an easy procedure and is offered as a first modality for treatment of short urethral strictures. Internal urethrotomy refers to any procedure that opens the stricture by incising or ablating it transurethrally. The most common complication of internal urethrotomy is stricture recurrence. The curative success rate of internal urethrotomy is approximately 20%. Triamcinolone has anti-fibroblast and anticollagen properties. This study evaluated the efficacy of triamcinolone in the prevention of anterior urethral stricture recurrence after internal urethrotomy.