

# Effect of Urethroplasty on Anxiety and Depression



Jared P. Schober, Kristian D. Stensland, Benjamin N. Breyer,  
Bradley A. Erickson, Jeremy B. Myers, Bryan B. Voelzke, Sean P. Elliott,\*  
Jill C. Buckley and Alex J. Vannit for TURNS

From the Department of Urology, Lahey Hospital and Medical Center (JPS, KDS, AJV), Burlington, Massachusetts, Departments of Urology and Epidemiology and Biostatistics, University of California-San Francisco (BNB) and Department of Urology, University of California-San Diego (JCB), San Diego, California, Division of Urology, University of Utah (JBM), Salt Lake City, Utah, and Departments of Urology, University of Iowa (BAE), Iowa City, Iowa, University of Washington (BBV), Seattle, Washington, and University of Minnesota (SPE), Minneapolis, Minnesota

## Abbreviations and Acronyms

AD = anxiety and depression  
IIEF = International Index of Erectile Function  
MSHQ = Men's Sexual Health Questionnaire  
PVR = post-void residual volume  
SHIM = Sexual Health Inventory for Men  
TURNS = Trauma and Urologic Reconstruction Network of Surgeons  
USD = urethral stricture disease

**Purpose:** To our knowledge anxiety and depression in patients with urethral stricture disease and the impact of urethroplasty on mental health has never been explored. We hypothesized that patients with urethral stricture disease would have higher than normal anxiety and depression levels, and urethroplasty would improve mental health.

**Materials and Methods:** We retrospectively reviewed the records of patients in a multi-institutional reconstructive urology database who underwent anterior urethroplasty. Preoperative and postoperative evaluation of anxiety and depression, and overall health was recorded using the validated EQ-5D™-3L Questionnaire. Sexual function was evaluated with the IIEF (International Index of Erectile Function) and the Men's Sexual Health Questionnaire. Stricture recurrence was defined as the need for a subsequent procedure.

**Results:** Median followup in the 298 patients who met study inclusion criteria was 4.2 months. Preoperative anxiety and depression was reported by 86 patients (29%). Those with anxiety and depression reported higher rates of marijuana use, a worse preoperative IIEF score (17.5 vs 19.6,  $p = 0.01$ ) and a lower image of overall health (66 vs 79,  $p \leq 0.001$ ). Improvement or resolution of anxiety and depression was experienced by 56% of patients treated with urethroplasty while de novo postoperative anxiety and depression were reported by 10%. These men reported a decreased flow rate (16 vs 25 ml per second,  $p = 0.01$ ). Clinical failure in 8 patients (2.7%) had no effect on the development, improvement or resolution of anxiety and depression.

**Conclusions:** Of patients with preoperative anxiety and depression 56% reported improvement or resolution after urethroplasty. Although new onset anxiety and depression was rare, these patients had a significantly lower postoperative maximum flow rate, possibly representing a group with a perceived suboptimal surgical outcome. A urethral stricture disease specific questionnaire is needed to further elucidate the interplay of urethral stricture disease with anxiety and depression.

**Key Words:** urethral stricture, reconstructive surgical procedures, treatment outcome, anxiety, depression

Accepted for publication December 16, 2017.  
No direct or indirect commercial incentive associated with publishing this article.

The corresponding author certifies that, when applicable, a statement(s) has been included in the manuscript documenting institutional review board, ethics committee or ethical review board study approval; principles of Helsinki Declaration were followed in lieu of formal ethics committee approval; institutional animal care and use committee approval; all human subjects provided written informed consent with guarantees of confidentiality; IRB approved protocol number; animal approved project number.

\* Financial interest and/or other relationship with American Medical Systems, Boston Scientific, PercuVision and Urotronic.

† Correspondence: Department of Urology, Lahey Hospital and Medical Center, 41 Mall Rd., Burlington, Massachusetts 01805 (telephone: 781-744-2508; FAX: 781-744-5429; e-mail: alex.j.vannit@lahey.org).

MENTAL health illnesses are common and treatable disorders that have a significant impact on the American population. Approximately 20% of the adult population of the United States is affected by mental illness each year.<sup>1</sup> AD represent the 2 most pervasive mental health disorders in the United States.

In the field of reconstructive urology the relationship between surgery and mental illness remains under explored. Recent studies have shown the prevalence of urinary urgency and incontinence in patients with USD and the significant impact of these symptoms on quality of life and emotional well-being.<sup>2,3</sup> In addition, erectile dysfunction can develop in patients treated with urethroplasty<sup>4</sup> and erectile dysfunction has a previously well documented bidirectional association with depression.<sup>5,6</sup>

To our knowledge the prevalence of mental health disorders and the effect of urethroplasty on the natural history of mental health disorders has never previously been published. In this study we investigated the prevalence of baseline AD and the effect of urethroplasty on AD. We hypothesized that 1) USD would be associated with a higher prevalence of AD compared to the national average, 2) urethroplasty would lead to resolution or improvement in AD and 3) patients with de novo AD would have a poor image of overall health and decreased sexual function.

## METHODS

### Study Population

Institutional review board approval was obtained. From a prospectively maintained multi-institutional database we retrospectively identified patients who underwent 1-stage anterior urethroplasty between June 2013 and May 2016 as performed by a total of 6 surgeons who are members of the TURNS. Patients who undergo urethroplasty are followed according to a previously described TURNS specific protocol.<sup>7</sup> Patient demographics, USD etiology and postoperative complications were recorded. The most recent evaluation was used for postoperative analysis.

### Study Outcomes

A total of 298 men completed a preoperative and a postoperative assessment of AD. Mental health and the personal image of overall health were evaluated by the validated EQ-5D™-3L questionnaire.<sup>8</sup> For anxiety/depression (EQ-5D-3L item 5) patients reported symptoms as absent, moderate or extreme. Patients were asked to quantify the personal image of overall health on a scale of 1 to 100 with 1 representing the worst imaginable health state and 100 indicating the best imaginable health state. Sexual function was evaluated by the IIEF<sup>9</sup> and ejaculatory function was evaluated by the MSHQ.<sup>10</sup>

### Stricture Recurrence

The TURNS study protocol recommends followup 3 to 6 months after surgery, at 12 months and yearly thereafter. At followup visits questionnaires are completed in addition to uroflowmetry, PVR and cystoscopy. For study purposes a functional definition of success was used with clinical failure defined as the need for any additional stricture related procedure.

### Statistical Analysis

Patients were stratified into groups according to absent, moderate or extreme baseline AD. New onset AD was defined as reports of moderate or extreme AD postoperatively by patients who initially reported absent AD preoperatively. Improved or resolved AD was defined as reports of moderate or extreme AD initially by patients who experienced improvement to moderate AD or resolution of symptoms (absent AD).

Univariate analysis was performed to evaluate potential differences in baseline characteristics in patients with the presence or absence of preoperative AD. Statistical analysis included a combination of the chi-square test, the Fisher exact test, the Student t-test or ANOVA as appropriate. All statistical analyses and data management were performed in R using R Studio®. Significance was considered at  $\alpha = 0.05$  and p values were 2-sided.

## RESULTS

A total of 298 patients met study inclusion criteria with complete information on AD in preoperative and postoperative questionnaires. Median followup was 4.2 months. Of the 298 patients 86 (29%) reported preoperative AD. At baseline the group reporting preoperative AD was similar to those without AD in age and prevalent comorbidities. There was no

**Table 1.** Background characteristics of patients with and without preoperative anxiety or depression

	Total	Anxiety or Depression		p Value
		Present	Absent	
No. pts (%)	298	86 (28.9)	212 (71.1)	—
No. procedure:				1
Excision + primary anastomosis	87	25	62	
Onlay	211	61	150	
Baseline characteristics:				
Mean age	47	46.8	47.2	0.86
Mean body mass index (kg/m <sup>2</sup> )	30.4	30.2	30.3	0.9
No. diabetes (%)	26	10 (11.6)	16 (7.5)	0.37
No. hypertension (%)	89	32 (37.2)	57 (26.9)	0.1
No. hyperlipidemia (%)	67	20 (23.3)	47 (22.2)	0.96
No. coronary artery disease (%)	22	7 (8.1)	15 (7.1)	0.94
Mean preop overall health image	75.8	66.2	78.9	<0.001
Urological factors:				
No. prior urethroplasty (%)	64	24 (27.9)	40 (18.9)	0.12
No. previous dilation (%)	134	40 (46.5)	94 (44.3)	0.35
No. previous direct vision internal urethrotomy (%)	71	19 (22.1)	52 (24.5)	0.21
Mean preop av flow rate (ml/sec)	5.1	5.25	5.05	0.72
Mean preop PVR (ml)	93.5	92.43	93.98	0.95
Mean preop MSHQ score	12.7	11.8	13.1	0.059
Mean preop SHIM score (268 pts)	19.02	17.53	19.63	0.01

Download English Version:

<https://daneshyari.com/en/article/8770878>

Download Persian Version:

<https://daneshyari.com/article/8770878>

[Daneshyari.com](https://daneshyari.com)