



## African Journal of Urology

Official journal of the Pan African Urological Surgeons' Association  
web page of the journal

[www.ees.elsevier.com/afju](http://www.ees.elsevier.com/afju)  
[www.sciencedirect.com](http://www.sciencedirect.com)



### Review

# Ventral onlay graft bulbar urethroplasty using buccal mucosa



H. Wessells

Department of Urology, University of Washington, 1959 Pacific Avenue NE, Box 356510, Seattle, WA 98195, United States

Received 29 October 2015; accepted 29 October 2015  
Available online 21 January 2016

#### KEYWORDS

Urethra;  
Stricture;  
Free graft;  
Substitution

#### Abstract

**Objective:** To assess the ongoing role of ventral onlay oral mucosa free graft in the treatment of bulbar urethral stricture.

**Methods:** Detailed review of technical consideration and outcomes from the author's institution along with review of other peer reviewed literature.

**Results:** Of 62 patients undergoing ventral onlay buccal mucosa urethroplasty, 19% had recurrence of stricture, and an additional 5% exhibited diverticulum formation. Complications were self-limited. Previously published case series and meta-analysis demonstrate similar results.

**Conclusion:** Ventral onlay remains an effective and versatile part of the armamentarium for bulbar urethral stricture.

© 2015 Pan African Urological Surgeons' Association. Production and hosting by Elsevier B.V. All rights reserved.

#### Introduction

Urethral strictures have plagued men since antiquity, with etiologic evolution reflecting changes in population distribution, human diseases, occupational hazards, and environmental factors [1]. African urologists have contributed substantially to the advance in techniques of urethroplasty, notably Quartey [2] who sought to reconstruct long bulbar urethral strictures due to gonococcal

urethritis, and El-Kasaby [3], a pioneer in the use of buccal mucosa for anterior urethroplasty. Bulbar urethral strictures, due to anatomical and etiological differences from strictures in the penile urethra, can be treated effectively with very high success rates. In this location, stricture outcomes are less impacted by variables such as prior irradiation; comorbid medical conditions; deficiencies in genital skin; or lichen sclerosus. However, due the greater ease and safety of endoscopic procedures, many patients undergo innumerable dilations or internal urethrotomies, even when success is unlikely [4]. The long-term consequence of this practice pattern will be to increase the length of strictures, rendering some unsuitable for primary anastomotic repair and instead requiring substitution procedures such as oral graft urethroplasty.

E-mail address: [wessells@uw.edu](mailto:wessells@uw.edu)

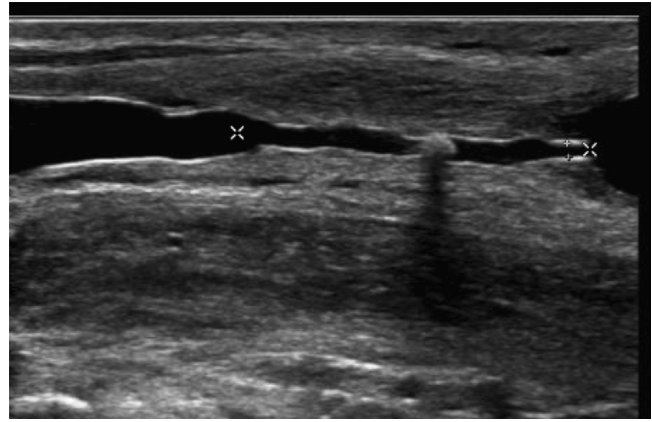
Peer review under responsibility of Pan African Urological Surgeons' Association.

<http://dx.doi.org/10.1016/j.afju.2015.10.001>

1110-5704/© 2015 Pan African Urological Surgeons' Association. Production and hosting by Elsevier B.V. All rights reserved.



**Figure 1** Retrograde urethrogram showing a 2.5 cm proximal bulbar stricture.



**Figure 2** Ultrasound urethrogram showing details of stricture from Fig. 1. Note small stone in midsection of stricture, and narrowness of lumen.

Contemporary urethral stricture disease in the United States most commonly is caused by idiopathic and traumatic causes [5]. Although accurate statistics have not been determined for African men, traumatic bulbar urethral strictures are postulated to predominate, reflecting the burden of motor vehicle, pedestrian, and other transport injuries, and war, on young men across the continent. The Global Burden of Disease Study 2013 ranks these as major sources of disability worldwide, with a greater burden in developing countries [6]. In contrast, iatrogenic and idiopathic causes will increase in prevalence in parallel with the increasing frequency of urological interventions in the aging male across the world. This paper reviews the diagnostic concerns, technique, and outcomes of substitution urethroplasty using ventrally placed oral mucosa and speculates on the future of urethroplasty.

**Methods**

*Preoperative evaluation*

Cystoscopy is a simple way to confirm the presence of suspected urethral stricture disease. However, it has limited value in preoperative planning because it cannot determine the length of the stricture or the status of the more proximal urethra. This is of particular importance to the current discussion, because ventral onlay approach allows easy extension of the substitution “onlay” or “patch graft” into the most proximal portions of the anterior urethra.

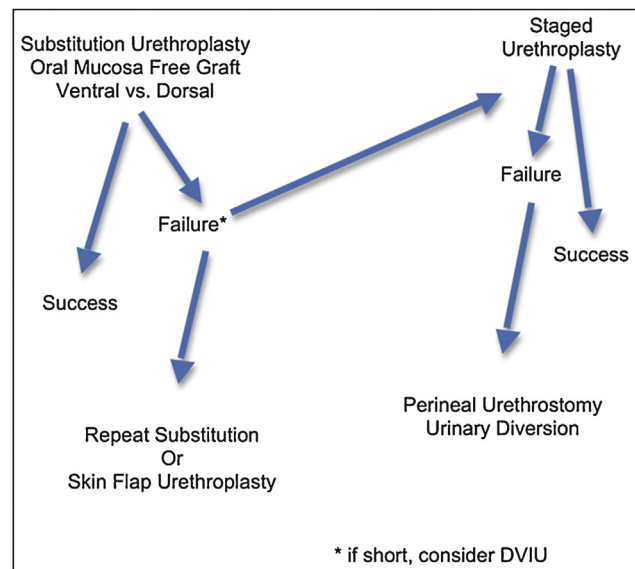
The combination of retrograde urethrogram and voiding cystourethrogram accurately assesses the bulbar urethra and determination of the length of a stricture along with its functional significance. Techniques for retrograde and voiding urethrography have been reviewed elsewhere [7]. However, one point requires elaboration related to *bulbar* urethral stricture: the penis must be adequately stretched so that the pendulous portion of the penile urethra and the penoscrotal junction are appropriately visualized (Fig. 1).

Ultrasonography [8] provides a very accurate delineation of a bulbar urethral stricture and may be valuable in assessing the luminal diameter of the stricture (Fig. 2), which determines strategies for addressing very narrow portions of a longer stricture (see below).

*Reconstructive considerations*

Antegrade and retrograde blood supply of the corpus spongiosum is key to successful bulbar urethroplasty because it affords the reconstructive surgeon the ability to mobilize, excise [9] and reanastomose the urethral plate in combination with free graft tissue transfer [10]. However, many strictures exceed the limits of urethral mobilization and primary anastomosis, leading to the innovations in substitution urethroplasty. Free grafts have been used for reconstruction of complex urethral strictures since the 1960s [11]. No controlled clinical study has definitively shown superiority of oral mucosa to full thickness genital skin, and odds of recurrence are similar to earlier series using penile skin [12]. Nevertheless, ease of harvesting and lack of donor site morbidity have led to widespread adoption of oral mucosa for substitution urethroplasty.

A brief algorithm for the treatment for urethra strictures is shown in Fig. 3. Strictures greater than 2 cm in length in the bulbar urethra generally require substitution urethroplasty with a free graft, although longer gaps can be bridged depending on the elasticity of



**Figure 3** Algorithm for the treatment of bulbar urethral stricture.

Download English Version:

<https://daneshyari.com/en/article/4267552>

Download Persian Version:

<https://daneshyari.com/article/4267552>

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