

INTRODUCTION

The term urethral stricture refers to anterior urethral disease or a scarring process involving the spongy erectile tissue of the corpus spongiosum (spongiofibrosis). Contraction of this scar reduces the urethral lumen. The term graft means that the tissue has been excised and transferred to a graft host bed where new blood supply develops by a process termed take. The grafts that have been successfully used for primary urethral reconstitution are the full-thickness skin graft, bladder epithelial graft and buccal mucosal graft (*Jordan and Schlossberg, 2007*).

Several surgical techniques have been described to treat bulbar urethral strictures based on the stricture length, degree of spongiofibrosis, and surgeon preference and experience (*Berger et al, 2005*).

Excision and primary end to end anastomosis has traditionally been reserved for strictures no more than 2 cm long, but recently the accepted limits are expanding and anastomotic repair was reported for urethral defects of 3 or even up to 5 cm. However, in addition to the resected strictured tract, the need for spatulation of the two stumps may lengthen the urethral gap, increasing the risk for complications. Therefore, a group stated that only bulbar strictures less than 2 cm were amenable for anastomotic reconstruction due to concerns that tension or tethering may cause resticture or erectile problems (*Guralnick and Webster, 2001, Palminteri et al, 2008*).

Conversely, when compared with buccal mucosal graft (BMG) patch techniques, the anastomotic procedures showed higher incidence of

penile curvature (36% vs. 8%), penile shortening (38% vs. 11%), impaired erection (79% vs. 15%). The overall satisfaction about sexual life was 97% in patients who underwent BMG repairs versus 74% of those having anastomotic repairs (*Kessler et al., 2002*).

BMG has become an increasingly popular graft tissue for bulbar urethroplasty . It has a thick epithelium rich in elastin making it easy to handle and is durable . The lamina propria is thin compared with that of bladder mucosa and skin , facilitating inosculation and neovascularization . It has high capillary density and easily harvested, with immunologic properties similar to that of urothelium (*Fichtner et al, 20004*).

Buccal mucosal onlay graft urethroplasty is one of the most widely used methods for the repair of the strictures in the bulbar urethra and provides excellent results (*Barbagli et al , 2006*).

Since the resurgence in the use of buccal mucosa in bulbar urethroplasty in the late 1980s and early 1990s, there has been controversy about the surgical technique of its application either ventral or dorsal (*Patterson and Chapple, 2007*).

The placement of the graft on dorsal urethral surface is simpler and safer in the distal part of bulbar urethra, whereas ventral placement of the graft is more efficacious in the proximal part of bulbar urethra where the spongiosum tissue is thicker and well vascularized. In experienced hands, the outcome of both ventral and dorsal buccal mucosal onlay grafts appears to be similar (*Barbagli et al., 2005*).