

# Female Urethroplasty

## - A Rare but Rewarding Challenge of Reconstructive Urology -

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### Background

Female urethral stricture are a rare, but debilitating disease. Traditionally, treatment was urethral dilation, but this is a temporising measure with high recurrence rates. Female urethroplasty has reported success rates of 80-94% in the literature.<sup>1</sup> However, Urologists may be reluctant to embark on a female urethroplasty due to limited exposure to female urethral reconstructive surgery.

The techniques of dorsal and ventral graft/flap urethroplasty<sup>2</sup> as well as double-face graft urethroplasty<sup>3</sup> have been described for female urethral strictures. A “one-size-fits-all” approach is not feasible. Deciding which urethroplasty technique is most appropriate requires careful consideration of the stricture’s aetiology, location, and length as well as the health of the surrounding vulva and vaginal tissues.<sup>3</sup>

#### Case 1: Ventral Inlay for Iatrogenic Stricture

A 56-year-old female developed a weak urinary stream and increased urinary frequency following the excision of a urethral caruncle. An attempt to perform Urodynamic studies was abandoned because it was impossible to pass a catheter into the urethra. A retrograde urethrogram demonstrated a 2 cm near-obliterative distal urethral stricture (Figure 1).

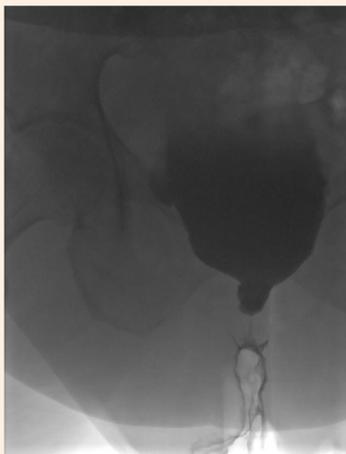


Figure 1. Voiding cystourethrogram

A ventral inlay urethroplasty was performed with a 1.5 x 4 cm buccal mucosa graft (BMG) harvested from the Right cheek.

#### Case 2: Male-To-Female Transgender Urethroplasty

A 69-year-old male-to-female transgender patient developed obstructive lower urinary tract symptoms almost 40 years after undergoing gender reassignment surgery in 1983. A voiding cysto-urethrogram revealed a 2 cm mid-to-distal neo-urethral stricture (Figure 2). A ventral inlay urethroplasty was performed by using a 1.5 x 3 cm BMG graft (Right cheek).

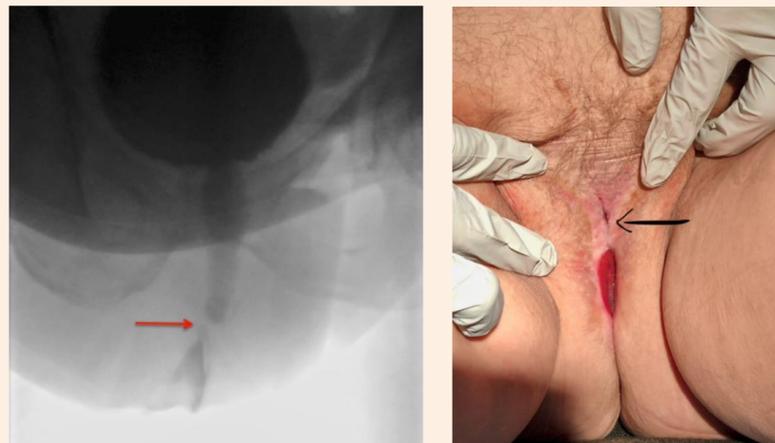


Figure 2. (A) Voiding cystourethrogram. (B) Tight neo-urethra.

Unfortunately, this patient re-developed a stricture in 2 years. This recurrence was treated by dorsal onlay urethroplasty with a 2 x 6 cm BMG graft (Left cheek).

This case series describes four unique female urethroplasty cases performed in a regional Australian centre.

#### Case 3: Double-Face Female Urethroplasty

A 47-year-old lady presented with a recurrent, near-obliterative 2 cm distal urethral stricture due to lichen sclerosus (Figure 3). Despite undergoing 15 urethral dilations, this patient had a poor urinary flow for 18 years.

A double-face female urethroplasty (Figure 3) was performed by using a 2 x 6 cm BMG graft (Right cheek).



Figure 3. (A) Lichen sclerosus. (B) Post BMG urethroplasty.

Post urethroplasty, the patient’s urinary flow rate significantly improved by 140% ( $Q_{max}$  28.1 mL/s).

#### Case 4: Ventral Inlay for Obliterative Stricture

A 63-year-old female presented with acute urinary retention and urosepsis requiring insertion of a SPC. This patient had a history of 2 urethral dilations that were done 7 years ago. A voiding cystourethrogram revealed a 2 cm distal urethral stricture (Figure 4).

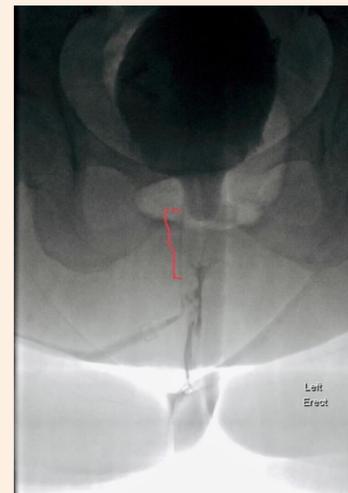


Figure 4. Voiding cystourethrogram.

Given the obliterative nature of this stricture, a ventral inlay urethroplasty was performed with a 2 x 4 cm BMG graft (Right cheek). A biopsy of the scar tissue demonstrated dense fibrocollagenous tissue.

#### References

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