

VAGINAL SPARING PHALLOPLASTY AND METOIDIOPLASTY WITH URETHRAL LENGTHENING: EVOLUTION OF TECHNIQUE AND OUTCOMES

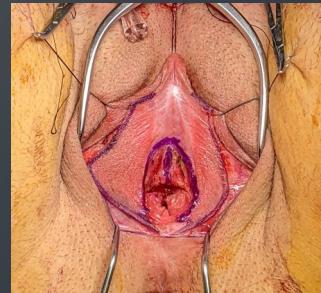
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Objectives: Transmasculine and non-binary individuals requiring vaginal-sparing phalloplasty/metoidioplasty with urethral lengthening (UL) understand urethral complications occur more frequently. Without vaginectomy, there is less tissue to cover the proximal urethral anastomosis. We describe our technique evolution from simultaneous to delayed scrotoplasty and evaluate outcomes of UL with vaginal preservation.

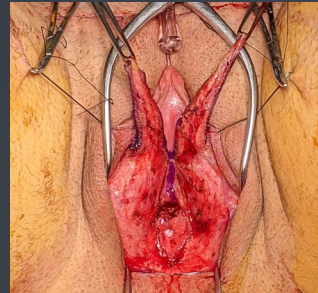
Methods: We retrospectively reviewed outcomes of vaginal-sparing phalloplasty/metoidioplasty with labia minora ring flap UL. The ring flap is composed of labia minora and tissue surrounding the vaginal introitus. The ventral chordee of the clitoris is released, and the ring portion of the flap is superiorly repositioned to form the dorsal urethral plate. An anterior vaginal wall flap is created through dissection between the native urethra and vagina. Proximal de-epithelialized sections of the ring flap are sewn over the urethral meatus anastomosis and interposed between the meatus suture line and anterior vaginal wall flap. Rotational advancement labia majora flap scrotoplasty was initially performed at the time of UL. Scrotoplasty was subsequently delayed to reduce complications.

Results: Between November 2017 through April 2024, 16 patients underwent vaginal-sparing phalloplasty and metoidioplasty with UL: 8 had index scrotoplasty, and 8 had delayed scrotoplasty. Mean follow-up was 33 months. Overall, urethrocutaneous fistulas, mostly urethrovaginal fistulas (UVF), developed in 15 (94%) patients, 4 of whom had spontaneous fistula closure. Urethral strictures occurred in 5 (31%) patients. Fistula repair and/or urethroplasty was required in 11 (68.8%) patients. With index scrotoplasty (N=8), fistulas developed in 8 patients, with an average size of 1.3cm, with no spontaneous UVF healing. Recurrent fistulas/strictures occurred in 6 patients (75%) after attempted repair. Vaginectomy was needed in 1 patient to resolve a recurring UVF. With delayed scrotoplasty (N=8), fistulas developed in 7 patients, with an average size of 1.1cm. Fistulas spontaneously healed in 4 patients (50%) with no recurrence after repair.

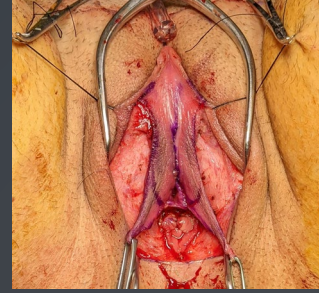
Conclusions: Vaginal-sparing transmasculine genital surgery with UL has a high fistula rate. Delaying scrotoplasty reduces fistula size and repair rates. Index surgery scrotoplasty fistulas were larger and often recurred after repair. In patients seeking UL without vaginectomy, scrotoplasty should be delayed.



Ring flap demarcated



Ring flap elevated
Chordee released (not shown)



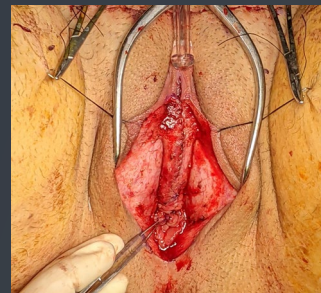
Ring flap sewn proximally with
excess tissue inferolaterally



Inferolateral tissue is de-
epithelialized to create flaps



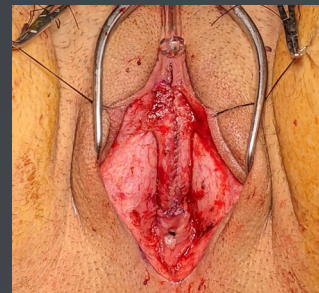
Flaps created near the native
meatus are preserved



The flaps created near the native
meatus are interpositioned
between the urethra and vagina



The anterior vaginal wall covers
the interposition flaps



Anterior vaginal wall flap is sewn
over the urethral anastomosis



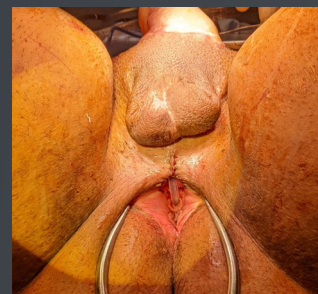
Another example of the vaginal
wall flap



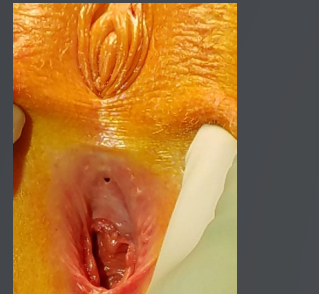
Wall flap sewn over the urethral
anastomosis



Scrotoplasty was performed at
the index procedure. The fistula
was large



Catheter is seen within the large
fistula



Without scrotoplasty,
the fistula is small

