



Trauma and reconstruction

Urology case report – Emergency penectomy for the transfeminine patient

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ABSTRACT

Management of gender dysphoria and healthcare for transgender and non-binary patients is a growing field in Australia and abroad. Currently, gender-affirming surgery is not offered under Australia's national public health insurance.

We present an unusual case of emergency penectomy required for a 57-year-old woman assigned-male-at-birth from rural Australia after a self-inflicted chemical burn. This case report outlines the surgical challenges of partial penectomy and neo meatus formation to allow for future gender-affirming surgery and highlights the lack of infrastructure within the public healthcare system for management of gender dysphoria both in rural and metropolitan settings.

1. Introduction

We present a case of self-inflicted chemical penile burn requiring emergency penectomy in a *trans*-feminine patient. This case highlights challenges of balancing adequate resection of non-viable necrotic tissue whilst allowing for adequate cosmesis for future gender-affirming surgery (GAS) in a quaternary facility that does not provide gender reassignment services.

Management of gender dysphoria and healthcare for transgender and non-binary (TGNB) patients is currently a growing field. GAS is not covered by Medicare (Australian national public health insurance) and patients must seek treatment within the private sector. Certain public health networks and local health districts provide genders dysphoria clinics, which link patients with allied health and primary care providers but often with long waiting lists.

2. Case presentation

A 56-year-old woman assigned male at birth presented to the emergency department of a large rural town (2019 Modified Monash Model 3) 7 days after a circumferential chemical burn injury to their penis. She was transferred to Royal North Shore Hospital for urology and burns review. Prior to injury, she was on androgen deprivation therapy but was unable to continue this after moving rurally.

On arrival she was assessed to have superficial necrosis of glans and mixed thickness burns to penile shaft with significant oedema and erythema of the penile shaft that began 2cm from the proximal end of her penis with a clear demarcation (Fig. 1). The patient underwent an urgent

flexible cystoscopy (FCE), suprapubic catheter (SPC) insertion, and wound debridement. FCE demonstrated urethral erythema but no necrosis, thus conservative management was trialled with gelonet dressing, urinary diversion via SPC and intravenous cefazolin. This approach continued for 7 days however worsening necrosis noted on dressing changes (Fig. 2) and rising inflammatory markers necessitated an emergency penectomy.

Necrosis from the urethral meatus to base of penis was noted intra-operatively. An elliptical incision was made 1cm from the base to preserve penile length and future reconstructive options. The corporal bodies and urethra were dissected and excised at healthy tissue, and the urethra was refashioned into a neo-meatus with a 1cm penile stump. An indwelling urinary catheter (IDC) was inserted to prevent stricture formation and a minovac drain was placed (Fig. 3). Post-operatively, the patient had an uneventful recovery with drain removal on post-operative day (POD) 2, IDC removal on POD5, SPC removal on POD7 before being cleared for discharge on POD8. On discharge, the patient was referred to a transfeminine GAS specialist. There are no post-operative complications to date.

3. Discussion

GAS incorporates multiple complex procedures for the TGNB patient. For the transfeminine patient GAS procedures include chest surgery, facial feminisation surgery and vaginoplasty – which itself includes orchidectomy, penectomy, partial urethrotomy and vaginal construction. These procedures are largely irreversible and require a great deal of multi-disciplinary care and specialist input including plastics, colorectal

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Fig. 1. Photo of chemical injury to penis 7 days after initial injury.



Fig. 2. Progression of chemical injury to penis 14 days after initial injury, 7 days after admission to Royal North Shore Hospital.

and urology.¹

The World Professional Association for Transgender Health (WPATH) provides a standard of care guideline that suggests GAS should proceed after fulfilling the following criteria²:

- a. Marked and sustained gender incongruence
- b. Meets diagnostic criteria for gender incongruence prior to gender-affirming surgical intervention in regions where a diagnosis is necessary to access health care
- c. Demonstrates capacity to consent for the specific gender-affirming surgical intervention
- d. Understands the effect of gender-affirming surgical intervention on reproduction and they have explored reproductive options
- e. Other possible causes of apparent gender incongruence have been identified and excluded
- f. Mental health and physical conditions that could negatively impact the outcome of gender-affirming surgical intervention have been assessed, with risks and benefits have been discussed
- g. Stable on their gender affirming hormonal treatment regime (which may include at least 6 months of hormone treatment or a longer period if required to achieve the desired surgical result, unless hormone therapy is either not desired or is medically contraindicated)

Transfeminine genitourinary surgery carried out in the outpatient elective setting is mostly comprised between three techniques: genital skin flap vaginoplasty, intestinal vaginoplasty and non-genital skin flap vaginoplasty.³ These techniques provide a cosmetically gender-congruent appearance for the patient whilst also allowing for adequate urinary function and sexual intercourse (albeit without fertility).

The operative technique used came from classical partial penectomy



Fig. 3. Post partial penectomy, demonstrating penile stump and neo-meatus formation.

usually reserved for management of distal penile cancer.⁴ However, our functional goals were to maintain urethral length for future GAS that would be cosmetically adequate and avoiding anterior mispositioning of urethra which could lead to difficulty urinating whilst sitting down.³ For patients with penile cancer the aims would be to achieve safe excisional margins, maintain ability to urinate whilst standing and sexual function.⁴ The limits of care were limited to penectomy and neo-meatus formation due to lack of access to local surgeons that subspecialised in GAS.

Significant necrosis of the glans contraindicated neo-clitoris formation in this case. Additionally, it is unclear how neo-meatus formation

would affect vaginoplasty techniques. There may be options for minimal-depth and zero-depth vaginoplasty³ if the afore-mentioned techniques were unable to be performed.

Service providers able to provide androgen deprivation, GAS and access to mental health services are not readily accessible in rural areas⁵ as was apparent with this patient. Barriers to her receiving further GAS is limited by lack of access to her previous androgen deprivation therapy. Solutions suggested included telehealth to reach patients in regional and rural areas but there is minimal infrastructure in place for this at current.⁵

4. Conclusion

Our aim was to highlight the surgical challenges of partial penectomy and neo-meatus formation to allow for future GAS and highlight the lack of infrastructure within the public healthcare system for management of gender dysphoria both in rural and metropolitan settings.

Consent

The patient consented to presentation of this case report including

the use of photos and intra-operative video.

Declaration of competing interest

There was no conflict of interest or special funding for this article.

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