

*Picture Story*

## Clitorovaginoplasty in a severely virilized adrenogenital girl

Anuruddha M Abeygunasekera<sup>1</sup>, Ruwan Jayasinghe<sup>2</sup>, Sarojini Wijeratna<sup>2</sup>

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### Case report

An 11-year old severely virilized adrenogenital female was referred for reconstructive surgery of her external genitalia. There was gross clitoromegaly and she had no vagina (see Figure 1). Urethral opening was near the tip of the enlarged clitoris. Though her birth certificate carried a masculine name she has been brought up as a girl. Hence the family and the patient wanted cosmetically acceptable female genitalia.

Clitoral reduction surgery and vaginal reconstruction in severely masculinized female pseudohermaphrodites is challenging as most techniques produce unsatisfactory results. The commonly used technique advocated by Hendren and Crawford has several disadvantages<sup>1</sup>. The vaginal introitus is located in the perineal wall far from the urethral meatus and there is no mucous lining in the vulva between the urethral meatus and the vagina. The vaginal opening has a tendency to become stenotic and periodic dilatations are necessary. We used a modification of this technique where the excess urethral mucosa (distal urogenital sinus) was used to form the anterior vaginal wall and the vulva between the clitoris and the vaginal introitus.

An inverted 'Y' shaped incision was made. Reduction clitoroplasty was done by excising the shaft of the enlarged clitoris and part of its tip while preserving the neurovascular bundle<sup>2</sup>. The urethra was dissected and isolated around a catheter (Figure 2).

It was laid open through a 'Y' shaped incision. The small proximal flap was sutured to the clitoris. The cutaneous flaps of the clitoris were rotated downwards and sutured to the lateral borders of the split urethra to form a mucocutaneous plate<sup>3</sup>. Using the cystoscope the bladder and landmarks of the proximal urogenital sinus were identified. Then the distal end of the true vagina was defined and rectum

dissected carefully from the urethra anteriorly and the posteriorly. The mucocutaneous plate was sutured to the distal end of the true vagina in the form of an incomplete cylinder. The posterior skin flap of the inverted 'Y' was sutured to the posterior-most vagina and to the edges of the incomplete cylinder (Figure 3).

When she was reviewed six months after the operation she had a satisfactory cosmetic outcome (Figure 4).

### Discussion

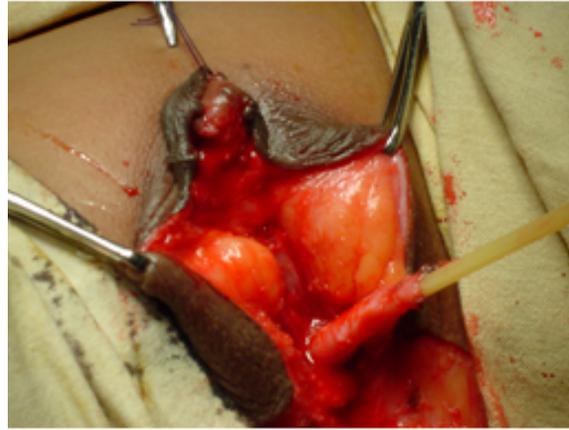
A successful feminizing genitoplasty should address three structural abnormalities to produce a satisfactory outcome. Firstly it should reduce the size of the clitoris without jeopardizing its blood and nerve supply. Secondly it must feminize the labioscrotal folds. Lastly it should be able to form a functional urethra, vagina and a mucosa-lined vulva from the clitoris to the vagina. The technique described above achieves all three aims. The advantages of this modified procedure are many. It provides a mucous lining of the vulva extending from the clitoris to the vaginal introitus. The risks of stenosis of the urethral meatus and vaginal introitus are minimal. The operation can be done in a single stage. Since the urethra gives rise to erotic sensations it may help in the quality of future sexual intercourse. Although this girl had a satisfactory outcome there are potential complications that can occur. Dissection of the distal end of the true vagina may be technically difficult and may cause inadvertent damage to the urethra anteriorly and rectum posteriorly. The resultant fistulae may be difficult to correct. In cases of high vaginal insertion (Prader V type) this perineal approach alone may be inadequate. Such patients may require an additional transvesical approach via the abdomen<sup>4</sup>. This entails extensive surgery and potentially serious complications.

<sup>1</sup>*Urological Surgeon*, <sup>2</sup>*Senior House Officer, Urology Unit, Karapitiya Teaching Hospital, Galle.*

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**Figure 1: Gross clitoromegaly**



**Figure 2: Urethra dissected & isolated around catheter**



**Figure 3: Suturing of posterior skin flap of Inverted Y**



**Figure 4: Review after six months**

## References

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