Minimaly invasive repair of hypospadiac urethral duplication: A case report

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Introduction: Urethral duplication (UD) is a rare anomaly with various clinical presentations, and multiple techniques have been described for its repair. We report a case of hypospadiac UD and its surgical management.

Case: A 1-year-old boy with double urinary stream was referred to us for the management of UD diagnosed elsewhere. The child had a poor stream from a meatus located on the tip of the glans and a good stream from a hypospadiac meatus located in the ventral mid-shaft. Ultrasonography ruled out associated upper urinary tract anomalies. Voiding cystourethrography and retrograde urethrography showed the dorsal urethra arising from the prostatic portion of the ventral urethra. Narrowing of the proximal anterior portion of the dorsal orthotopic urethra with the dilated posterior portion suggested urethral stenosis and posterior urethral valve. The normal-caliber ventral urethra was dominant, arising from the bladder. Cystourethroscopy through the hypospadiac-dominant urethra revealed the verumontanum which was visualized on the way to the bladder. The non-dominant dorsal urethra 3 cm long from the tip of glans had a good caliber, thus this segment used for repair. Urethral reconstruction was performed. The common wall of both urethras was opened by an 8 mm vertical midline incision through the hypospadiac meatus, and reconstructed in a way similar to side to side urethrourethrostomy. Hypospadiac opening was closed and reinforced with external spermatic fascia flap. The 6 Fr urethral catheter stented was removed on the 7th postoperative day, and he has been passing urine in a single stream.

Conclusion: If the dorsal urethra has a good caliber in hypospadiac UD, an incision on the common wall is a simple surgical option with good outcome.