Quantification Of Urethral Translation Length During Perineal Urethrostomy Dissection

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Introduction: Postoperative urethral stenosis is a potential complication of perineal urethrostomy (PU), often caused by inadequate periurethral dissection leading to cranio-caudal tension.[1] This study evaluated the length of urethral translation at each step of dissection during PU.

Materials and Methods: Staged dissection for PU was performed on 14 male cat cadavers. Urethral length was measured under standardised traction at each stage using digital callipers. Location of bulbourethral glands (BUGs) relative to the caudal aspect of the pubis was documented. Descriptive statistics were performed.

Results: Each stage of dissection resulted in an increase in urethral translation length, with an overall average increase of 17 ± 1.94 mm. The most significant increase occurred following blunt dissection of the fibrous attachment between the ventral surface of the urethra and the dorsal surface of the pubis, extending to the pubic brim, accounting for 43.1% of the total translation length. Ventral dissection resulted in a 3.9-fold increase in urethral translation compared to dorsal dissection. After the final stage of dissection, BUGs were either level with or below the pubis.

Conclusions: The most significant caudal translation occurred during the ventral dissection of the fibrous attachments between the urethra and pelvis. This step is crucial for minimizing tension on the final stoma and reducing the risk of postoperative stenosis.

References

1. Phillips H, Holt DE. Surgical revision of the urethral stoma following perineal urethrostomy in 11 cats: (1998–2004). *J Am Anim Hosp Assoc* 2006;42:218–222.