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THE EVOLUTION OF PYRAMIDALIS BASED FASCIAL SLINGS TO PROVIDE OUTLET RESISTANCE IN CHILDREN WITH NEUROPATHIC BLADDER

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INTRODUCTION:

In children with neuropathic bladder and poor outlet resistance it is difficult to achieve sufficient outlet resistance with surgery unless a bladder neck closure is performed. In children and adolescents from variable social backgrounds sacrificing urethral access to the bladder can be problematic. We describe our experience with a retro pubic fascial and pyramidalis muscle sling, which aims to increase outlet resistance while preserving urethral access to the bladder.

METHOD:

A retrospective casenote review of procedures performed between 2007-2019 was conducted. Demographic, clinical, operative data, complications and continence outcomes were recorded.

RESULTS:

28 patients were identified as having rectus based fascial sling over the last 15 years. Mean age at operation was 11.8 years (6.7-17.1). 20 patients had an underlying diagnosis of spina bifida, 4 caudal regression, 3 anterior spinal abnormality, 1 VACTERL. 27 patients had a bladder augmentation and 27 had mitrofanoff performed. Complications included 1 failure due to non-compliance with CIC, 1 bowel obstruction and 1 pelvic sepsis with loss of mitrofanoff. 18 had a good outcome with 4 hourly catheterisation and no leakage between drainage. 2 patients were only dry with more frequent drainage and 1 of these had leakage via mitrofanoff. Outcome data unavailable for 5 patients. 4 patients proceeded to antegrade bladder neck injection.

CONCLUSION:

Bladder neck surgery in children is difficult and achieving the holy grail of good bladder volumes, easy urethral access and minimal urethral leakage only on a full bladder is challenging. The pyramidalis based rectal sling can achieve reasonable results in these challenging patients using native tissue. The outlet resistance can also be "fine tuned" using antegrade bladder neck injection if required. This technique should be considered as a first line option in this patient group.