041

BLADDER AUGMENTATION IN ANURIC/DEFUNCTIONED MICROBLADDERS AND A NOVEL ANTIREFLUX MECHANISM FOR MITROFANOFF ANASTOMOSIS TO THE ILEAL PATCH

Joana Lopes, Andy Robb, Liam McCarthy
Birmingham Children's Hospital, Birmingham, UK

Background: Reconstruction of microbladders is a difficult surgical challenge: How can a neobladder be recreated when >90% of the new bladder is augmented patch, and how can a Mitrofanoff conduit be anastomosed when the native bladder is so tiny? This series describes 10 microbladders secondary to anuria and/ or diversion that required augmentation. This was done using a de-tubularized ileal segment, and due to the small size of the native bladder, Mitrofanoff anastomosis was performed to the bowel patch (using a novel "Keel Procedure"). Technique and outcomes, especially success of the antireflux procedure for the Mitrofanoff channel are described.

Aims and methods: Our surgical experience in reconstruction of microbladders was reviewed: age, pre augmentation size, compliance and maximum detrusor pressure were compared with post augmentation parameters. The success of the Mitrofanoff anti-reflux technique is described. Data given as median (interquartile range) for volume mls, compliance mls/cmH_20, pressure cmH_20, and compared by Wilcoxon paired rank test, $p<0.05$ taken as significant.

Results: 10 patients, median bladder capacity pre-op 10(9-20) mls were reconstructed. 9/10 were transplant patients, 1 complex cloacal abnormality with no functional bladder neck. Figure 1 illustrates the technique. Post-op bladder capacity increased 16-fold to 167(114-281) mls, $p<0.01$. Compliance significantly improved from 1.7(0.3-4.8) to 14.3(4.1-66.3) mls/cmH_20, $p<0.05$. Maximum detrusor over-activity decreased from 27(7-120) to 12.5(8-26) cmH_20, (not significant, $p=0.3$).

Videourodynamics confirmed a leak in 2 patients (1st repaired, 2nd awaiting repair), leading to incorporation into the technique of a non-absorbable seromuscular suture to provide long-term robustness to the antireflux procedure.

Conclusion: Bladder augmentation in microbladders is possible, and a functional Mitrofanoff procedure with a continent anti-reflux procedure can be created using the "keel" technique implanting the Mitrofanoff into the augment patch, with 80% success (similar to published results for conventional anastomosis to native bladders).