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Title: URETEROCYSTOPLASTY IN NEUROGENIC BLADDER AUGMENTATION IN CHILDREN

Aims of study:

To discuss augmentation technique using megaureter in presence of a non-functioning kidney. To reprot our experience and long-term results after ureterocystoplasty.

Material and method:

Since 1995 to 1999 augmentation ureterocystoplasty was performed in 11 children with neurogenic bladder dysfunction after meningocele repair. 7 patients had failed earlier treatments by intermittent catheterisation and anticholinergic agents. Patients were 1 – 17 years old (mean age 7,3). Of these 11 children 9 had severe paresis and 8 ventriculo-peritoneal shunt in consequence of hydrocephalus. 9 patients had severe vesico-ureteral reflux and 2 had stenosis of ureterovesical junction as the cause for deterioration of one kidney from both. One child suffered from renal insufficiency. One patient had cross renal ectopia and one duplex kidney on the reflux side with non-functioning lower pole. The urodynamic study before ureterocystoplasty showed small bladder capacity and low compliance bladder in 7, hyperreflexive bladder in 2 and together low compliance and hyperreflexia in 2 patients. Nine children had undergone nephrectomy during ureterocystoplasty, one before augmentation and one heminephrectomy. In child with renal insufficiency the both ureters was used for augmentation cystoplasty after nephrectomy. Ureterocystoplasty allowed to create a low pressure bladder with adequate capacity for future kidney transplantation. MACE procedure (Malone antegrade continence enema) was performed in one patient and in other the appendix was long, enabling it to be divided using one end for MACE procedure and the other for the Mitrofanoff stoma.

Results:

Patients follow up ranged from one to five years. All operated children were controlled urodynamically and by examinations estimating condition of the upper and lower urinary tract. In 9 children capacity of the bladder increased and in 10 patients intravesical pressure decreased. Bladder capacity no changed in 2 children, intravesical pressure no changed in 1 patients. All have been dry on CIC for 3-4 hours periods.

Conclusions:

Ureterocystoplasty is an option for bladder augmentation in selected group with neurogenic bladder dysfunction that obviates many of the risks associated with enterocystoplasty. This procedure may be used for bladder enlargement in the presence of a dileted ureter and poorly functioning kidney. Because the method may be performed as a retroperitoneal procedure, the intraabdominal cavity is preserved for future peritoneal dialysis and is precluded risk for a ventriculoperitoneal shunt infection. Augmentation ureterocystoplasty allows to prepare the bladder for kidney transplantation in children with renal

insufficiency.