

## LONG-TERM OUTCOME AFTER AUGMENTATION CYSTOPLASTY.

### Hypothesis / aims of study

Augmentation cystoplasty has been widely used during the last decades as treatment of patients with insufficient bladder capacity due to lower urinary tract malformation, inflammatory processes or neurogenic detrusor overactivity. There are escalating data pertaining to the outcome of the procedure. However, only few studies address long-term effects. This study evaluates the outcome in 50 patients, consecutively operated on in our hospital between 1987 and 1995.

### Study design, materials and methods

The hospital files of the 50 (26 female and 24 male) patients were retrospectively studied. Median age at time of surgery was 47 years (range 14-70 years). Median follow up was 128 months (range 32-195 months). All patients had failed conservative treatment. Twenty-eight of the 50 patients had neurogenic bladder dysfunction, while the remaining 22 had non-neurogenic bladder dysfunction due to insufficient bladder capacity, urgency/urge incontinence or needed urinary tract reconstruction (miscellaneous). In 12 of the patients the procedure was combined with either implantation of an artificial urethral sphincter or continent cystostomy.

### Results

In the group of 28 patients with neurogenic bladder dysfunction, median cystometric capacity increased from 285 mls to 620 mls. Twenty-three out of 27 patients became continent. Twenty-three patients had to practice clean intermittent catheterisation (CIC) postoperatively compared to 15 patients preoperatively. In the group of 12 patients with insufficient bladder capacity of non-neurogenic origin, median cystometric capacity increased from 100 mls preoperatively to 500 mls postoperatively. Eleven of the 12 patients had urgency prior to surgery compared to one patient postoperatively. None of the patients had to use CIC preoperatively compared to 3 patients postoperatively.

Three of the 50 patients had serious early (within 30 days) complications (bowel obstruction in 2 and recurrent vesico-vaginal fistula in 1). Late complications were not unusual. Most serious was one case of bladder perforation in conjunction with CIC more than 6 years after surgery. Four out of 7 artificial sphincters had to be removed due to infection. Bladder stone formation was diagnosed in 3 patients and 2 patients developed a vesicovaginal or a vesicointestinal fistula. Four patients were hospitalised due to pyelonephritis and 2 were hospitalised due to subileus. Further, seven patients underwent secondary surgical procedures due to sphincteric incompetence.

### Interpretation of results

Augmentation cystoplasty seems to be a favourable procedure to achieve continence and reduce urgency in selected patients with poor bladder capacity or neurogenic detrusor overactivity refractory to conservative treatment. The rate of serious complications is high both in the short-term and in the long-term follow-up, necessitating a close follow-up.

### Concluding message

Good clinical results can be obtained with augmentation cystoplasty in patients with neurogenic bladder dysfunction or poor bladder capacity. However, the risk of complications and secondary procedures has to be considered.