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AUGMENTATION CYSTOPLASTY IN PATIENTS WITH MULTIPLE SCLEROSIS – LONG TERM FOLLOW-UP

Hypothesis / aims of study
To evaluate a long-term follow-up of patients with augmentation cystoplasty due to multiple sclerosis – progressive disease deteriorating essentially body functions and ability to take care of augmented bladder.

Study design, materials and methods
17 patients (12 women and 5 men) mean age 40 with multiple sclerosis underwent augmentation cystoplasty (Goodwin's cup-patch). The indication for all of them was overactive bladder refractory to a conservative treatment, in one case with bilateral vesico-ureteral reflux and renal insufficiency and in the other patient with large symptomatic bladder diverticulum. All patients were assessed before the surgery, 6 months after the operation and at present. Subjective evaluation was performed by means of questionnaires (micturition problems, needs for clean intermittent autocatheterization (CIAC), incontinence and quality of life). Objective parameters were determined by micturition diary, urodynamic studies, imaging methods and blood and urine tests.

Results
According to neurological classification (Expanded Disability Status Scale (EDSS) 0-10) the mean score of patients worsened from 4,2 (fully ambulatory without aid, self-sufficient, up and about some 12 hours a day despite relatively severe disability; able to walk without aid or rest some 500 meters) to 5,3 (ambulatory without aid or rest for about 100 meters; disability severe enough to preclude full daily activities) with the mean follow-up 61 months.
4 patients were performing CIAC before the surgery with the mean frequency 10,3 a day, the others with a spontaneous voiding showed the mean IPSS 22 points. All patients performed CIAC with the mean frequency 3,3 a day at 6 months after the augmentation and 7 of them were still able to urinate spontaneously. Currently all patients perform CIAC with the mean frequency 4,7 a day and one patient has difficulties with the CIAC. 13 patients were incontinent before the operation and all of them become fully continent afterwards. The mean quality of life improved from 4,7 to 1,0 (scale 0-6) at 6 months after the surgery and it still remains unchanged.
The mean maximal bladder capacity increased from 116 ml to 637 ml at 6 months after surgery and to 580 ml at present. The mean maximal bladder pressure decreased from 84 cm H_20 to 26 cm H_20 at 6 months after operation and to14 cm H_20 at present. The mean fluid intake per 24 hrs increased from 1100 ml before surgery to 2200 ml at present. Creatinine decreased from 286 µmol/l to 150 µmol/l in the patient with renal insufficiency. There was one early complication (orchiepididymitis requiring orchidectomy) and two late complications (multiple bladder calculi requiring cystolithotomy).

Interpretation of results
Despite progression of multiple sclerosis from the mean EDSS score 4,2 to 5,3 augmentation cystoplasty is safe and efficient method. With the mean follow-up 61 months all patients perform CIAC with the mean frequency 4,7 a day and are continent. The mean quality of life improved significantly in the long terms. The mean maximal bladder capacity increased and the mean maximal bladder pressure decreased significantly. One early and two late complications were observed.
Concluding message
Despite progression of multiple sclerosis augmentation cystoplasty is safe and efficient method in selected patients and it significantly improves their quality of life in the long terms.

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