

MULTIPLE SCLEROSIS VOIDING DISORDERS MANAGEMENT AND CUTANEOUS NON-CONTINENT ILEAL CONDUIT

Hypothesis / aims of study

To assess the outcome (early and late complications, quality of life) of cutaneous non-continent diversion (CNCD) for neurogenic bladder management in multiple sclerosis (MS).

Study design, materials and methods

This retrospective study was conducted from the charts of 23 consecutive multiple sclerosis patients (20 women, 3 men) operated on between November 1994 and April 2004 within a neurourology unit for a CNCD. Diversion was indicated for septic shock (4) or recurrent pyelonephritis (3), functional or social reasons (15), perineal dryness (1). In 17 patients (74%), a cystectomy was performed at the same time. Mean age of patients at operation was 50 years (23-68 years). The mean duration of MS was 17 years (1-38 years). The mean expanded disability status scale (EDSS) before operation was 7,48 +/- 1,03 (4,5-9). All patients were unable or unwilling to perform self clean intermittent catheterisation leading to a non continence urinary diversion choice. The cutaneous diversion was performed via a midline incision (after retroperitoneal cystectomy, when requested) and according to Bricker's description. Both ureters were prepared for a Wallace 1 or 2 anastomosis according to presentation and length. Sutures were performed with absorbable suture material. Catheters intubating the ureters were fixed to the new distal ureteral plate and passed through the ileal lumen. Follow-up assessment included clinical exam, serum creatinine, creatinine clearance, and kidney ultrasound. Criteria of analysis were report of surgical complications, functional outcome (kidney function) and Quality of life evaluation. Qualiveen questionnaire was performed by patients in December 2004, to assess the impact of urinary problems on Health-related quality of life (HRQOL).

Results

Mean follow-up was 30,6 months (1-121). Per-operative complications included 2 massive haemorrhage during cystectomy requiring blood transfusions (8,6%).

Early complications rate (within 2 first months) was 13% (3/23). No death was reported. 3 patients were lost to follow-up after the third month.

Major late complications rate was 17,4% (4/23). Locally, cutaneous retraction of the stoma was described. A pyocystitis was reported in one of the 6 patients whose bladder was preserved. 3 obstructive pyelonephritis occurred at 2 months, 18 months and 5 years of CNCD, which required ureteral stents.

Uretero-ileal stenosis was suspected in 3 patients (13%), and one urinary fistulae (4 %) required re-operation.

A renal failure at 31 months of surgery was described (Male patient with hepato-renal polykystosis).

During follow-up, 4 women died (at 9, 10, 11 and 33 months of operation) of MS's evolution.

Mean serum creatinine and mean creatinine clearance before operation were respectively 67 micromoles/liter (28-279) et 76 milliliters/minute (38-114), and in December 2004 114 micromoles/liters (41-650) et 62 milliliters/minute (30-85).

Answering Qualiveen questionnaire rate was 68,7% (11/16); 2 women were not able to answer because of cognitive deterioration.

Mean impact of urinary problems on HRQOL was 1,15 (0,123-2,19), (scale ranged from 0 to 4: 0=Minimum limitations, 4= maximal limitations). Mean HRQOL was 0,13 (-0,66 - 0,77) (scale ranged from -2 to 2 : -2= worse situation, 2= high level of satisfaction).

Interpretation of results

No studies tried to define the place of CNCD for management of voiding disorders in patients suffering MS. As majority of debilitated patients are not candidate for bladder enlargement using self clean intermittent catheterisation, two surgical procedures have been described:

ileovesicostomy (1) and CNCD (2) with or without cystectomy. This retrospective study has been able to describe the use of CNCD as a safe and well-tolerated procedure in MS impaired patients despite high EDSS score. Cystectomy should be done to prevent pyocystitis formation and avoid any additional surgery during follow-up. MS patients are often unable to perform self-catheterization because of limited manual dexterity (cerebellar syndrom, spasticity, quadriplegia, cognitive impairment), this technique can be indicated despite all neurological disorders to improve quality of life and avoid indwelling catheters. Clinically significant urinary infection must be avoided. Patient's information must be delivered early during MS evolution to give the opportunity to choose such treatment before end-stage presentation (kidney function and/or complications of quadriplegia)

Concluding message

CNCD is indicated in MS impaired patients refractory to medical treatment. This procedure warrants neurological bladder symptoms' disappearance. Renal function is preserved. MS's QOL seems improved, by assessment of Qualiveen questionnaire (3).

Bibliography :

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- (3) Measuring quality of life in multiple sclerosis patients with urinary disorders using the Qualiveen questionnaire
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