

LONG-TERM COMPLICATIONS OF NON-CONTINENT CUTANEOUS URINARY DIVERSION (ILEAL CONDUIT) IN ADULT SPINAL CORD INJURED PATIENTS: A MONOCENTRIC EXPERIENCE AMONG A MULTIDISCIPLINARY TEAM

Hypothesis / aims of study

To report the long-term complications of non-continent cutaneous urinary diversion (NCCUD) in adult spinal cord injured (SCI) patients.

Study design, materials and methods

A retrospective monocentric study included all adult SCI patients who underwent a NCCUD between June 1997 and June 2014. The urinary diversion consisted in an ileal conduit according to the Bricker's technique [1]. Patients were evaluated at 1, 3, and 6 months after surgery and annually thereafter. Early complications (<30 days) were reported according to Clavien-Dindo classification. Long-term complications were reported as well as renal function, stoma management and autonomy improvement related to urinary function.

Results

Overall, 102 patients median age 53.5 years (IQR 44–63) were included. A concomitant cystectomy was performed in 87 cases. The surgical indications were the following: failure of intermittent catheterization (n= 43), urethral fistulae due to skin ulcers (n=50), renal failure (n=8), recurrent urinary tract infections (n=9), lithiasis (n=3) and bladder tumours (n=2). The median follow-up time was 48.0 months (IQR 25.5 - 77). There were 67 early postoperative complications (**figure1**), occurring in 44 patients: 43 grade I or II, 17 grade III, 6 grade IV and 1 grade V (death). A surgical procedure had to be performed in 15 cases.

A total of 39 late complications occurring in 38 patients were reported: 17 ureteral anastomosis stenosis, 3 stoma hernia, 3 pyocystis, 7 pyelonephritis, 2 renal failures, 2 ureteral lithiasis, 1 uterine prolapse, 1 incisional hernia and 3 deaths (not linked to the NCCUD or SCI). A surgery had to be performed in 39 cases. The median time from the initial surgery to the reoperation was 6 months (IQR: 2-25.5). Moreover, 9 patients (8.8%) underwent a repeated change of ureteral stents every 6 months because of ureteral anastomosis stenosis. Renal function remained unchanged (p=0.53). Autonomy related to urinary function was improved in 87.5% patients. The correct fitting of the stoma was possible for 81.6% of the patients.

Interpretation of results

This series is the largest of cutaneous non-continent urinary diversion for neurogenic bladder we could find in the literature. Our complications rate is similar to the other studies including spinal cord injured patients or multiple sclerosis [2] [3]. Functional outcomes rates (autonomy, fitting of the stoma) were very high and assessed that the procedure was also a functional surgery for rising the quality of life of these patients.

Concluding message

Despite a perioperative morbidity of 43,1 % and a late complications rate of 37,3 %, NCCUD is a very effective procedure in the care of SCI patients, rising the autonomy of the patients and protecting the upper urinary tracts.



Figure 1: Repartition of the complications and their management

References

1. Bricker EM. Bladder substitution after pelvic evisceration. Surg Clin North Am. 1950 Oct;30(5):1511–21.

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3. Chartier-Kastler EJ, Mozer P, Denys P, Bitker M-O, Haertig A, Richard F. Neurogenic bladder management and cutaneous non-continent ileal conduit. *Spinal Cord*. 2002 Sep;40(9):443–8.

Disclosures

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