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AUGMENTATION ENTEROCYSTOPLASTY WITH CONTINENT ILEAL CONDUIT. SURGICAL TECHNIQUE AND OUTCOMES

Hypothesis / aims of study

The bladder augmentation is used in the treatment of both structural and functional lower urinary tract disorders, creating a reservoir with adequate capacity and compliance that allows a low pressure filling of the bladder (1-2). The purpose of this paper is to describe an augmentation enterocistoplasty with continent ileal conduit surgical technique and its outcomes.

Study design, materials and methods

Between May 2008 and May 2011, 16 patients underwent augmentation enterocystoplasties with continent illeal conduit. Among the diseases causing bladder dysfunction: 6 (37.5%) were neurogenic bladders due to spinal cord injury, 4 (25%) microbladders due to myelomeningocele, 4 (25%) microbladders secondary to radiotherapy, 1 (6.25%) tuberculous microbladder and 1 (6.25%) idiopathic bladder.

All patients mentioned urinary incontinence (UI) and urinary tract infection as the reason for consultation, 5 (31.25%) of them also had renal failure with aggregate uronephrosis and 4 (25%) used indwelling urinary catheter.

Surgical technique:

Section of 45 cm of vascularized ileum, 15 cm from the ileocecal valve, detubularizing 30 cm of the proximal portion and respecting 15 cm of distal ileum that will form the ileal conduit. (Figure 1)

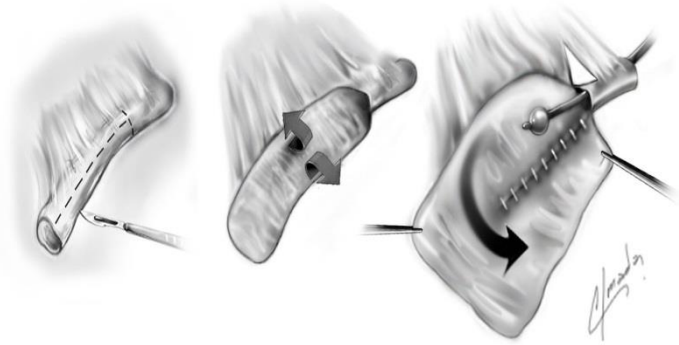

Figure 1. Detubularizing ileum 15 cm from ileocecal valve

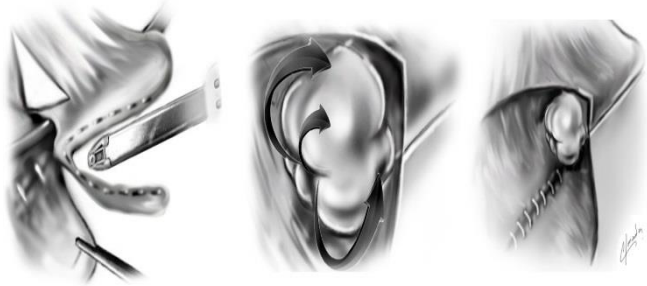

Figure 2. Forming an antireflux valve

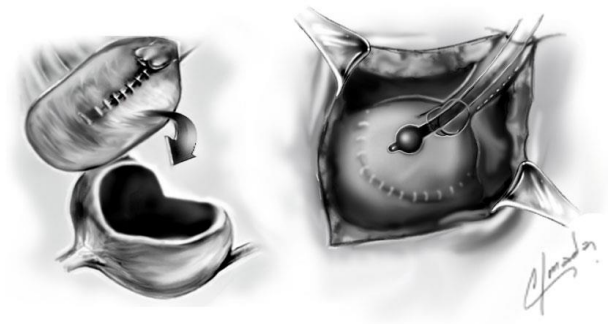

Figure 3. Bladder opened in the sagital plane and intestinal and bladder edges sutured toghether.

The open intestinal portion is folded in a "U" shape, joining the adjacent edges. Refinement and intussusception of the ileal conduit, forming an anti-reflux valve. (Figure 2)

The bladder is opened in the sagittal plane, the intestinal patch and bladder edges are sutured together. Umbilical resection and umbilical duct externalization. (Figure 3)

Results

The mean follow-up was 30.18 months (13-48). Mean age was 37 years old (23-71). Intermittent catheterization was performed from postoperative day 21.

Immediate complications occurred, 1 (6.25%) urinary fistula on the third post-op day, paralytic ileus in 2 (12.5%) patients, urosepsis in 2 (12.5%) patients. Late complications were urinary tract infection in 4 patients (25%), urinary incontinence in 4 (25%), bladder stones in 2 patients (12.5%), and 1 patient (6.25%) did not adapt to intermittent catheterization and decided to continue with permanent bladder catheter in the ileal conduit.

The average preoperative and post-operative bladder capacity after one year was 112.5 cc (40-230 cc) and 426.25 cc (250-660 cc) respectively (Table 1).

Table 1. Bladder Pressures

Bladder Pressures	
Preoperative (mean)	87 cm of H_2O
Postoperative (mean)	17 cm of H_2O

Interpretation of results

In the treatment of microbladders, the preservation of the renal function and the control of bladder emptying must be ensured. To accomplish this, a reservoir of adequate capacity and compliance that allows a low pressure filling is necessary, together with a continent diversion system that facilitates the intermittent catheterization. In this way, the persistence of post-void residual urine is avoided, which predisposes to UTI.

In our series, all patients mentioned urinary incontinence and this limited their social activity. and the ileal conduit met the objectives of continence and easy handling. Patients who presented renal failure and uronephrosis improved their biochemical, clinical and imaging parameters after surgery.

Concluding message

The surgical technique for augmentation enterocistoplasty with continent ileal conduit is a feasible and safe approach for the management of urinary incontinence and renal failure in patients with neurogenic bladder and/or microbladder refractory to other treatments.

References

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Disclosures

Funding: Hospital Italiano de Buenos Aires **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** It is a retrospective study of a surgical technique and its outcomes, which improved symptoms and quality of life of patients. **Helsinki not Req'd:** This is not a research study **Informed Consent:** Yes