

Original Research Article

Our experience with ileocystoplasty for augmentation of tuberculous bladders

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Abstract

Augmentation cystoplasty has traditionally been used in the treatment of low capacity, poorly compliant or contracted bladders. Various bowel segments can be used for augmentation with its own advantages and disadvantages like ileum, sigmoid, cecum, ileo cecal, stomach etc. The surgical technique involves detubularisation and reconfiguration of bowel to create a patch. A successful clinical outcome depends on creating a large capacity, low pressure reservoir to store urine. Present study was retrospective study conducted from November 2010 to March 2014 on 7 patients (5 men, 2 women with mean age 32 years). Early complications: wound infection in 3 cases, wound dehiscence in 2 cases, urinary leakage in 1 case. Late complications: recurrent UTI in 2 cases, increased mucus production in one case, bladder stone formation in one case. All were grade I to III according to Clavien- Dindo classification. No major (grade IV or V) complications. As in our experience ileocystoplasty for augmentation of tuberculous bladder is a safe and effective procedure.

Key words

Tuberculous bladder, Augumentation, Ileocystoplasty.

Introduction

Augmentation cystoplasty has traditionally been used in the treatment of low capacity, poorly compliant or contracted bladders [1]. In principle, it involves the use of bowel segment to increase the bladder capacity. Allows the patients to be continent and improving their symptoms

[2]. Various bowel segments can be used for augmentation with its own advantages and disadvantages like ileum, sigmoid, cecum, ileo cecal, stomach etc. The surgical technique involves detubularisation and reconfiguration of bowel to create a patch. A successful clinical

outcome depends on creating a large capacity, low pressure reservoir to store urine [3].

Aim and objectives

- To discuss our experience with ileocystoplasty for augmentation of low capacity, poorly compliant bladders in patients with genito-urinary tuberculosis.

Materials and methods

Present study was retrospective study conducted from November 2010 to March 2014 on 7 patients (5 men, 2 women with mean age 32 years). All were having GUTB treated with ATT and presented with various symptoms as irritative LUTS, incontinence, pain, hematuria, uremia with failed conservative treatment.

Evaluation

- Blood tests (CBP, ESR, RFT, etc.)
- Urine tests, (CUE, URINEC/S, AFB, etc.)
- Imaging, (chest X-ray, USG, CT, IVP, VCUG, etc.)
- Frequency volume chart, urodynamics,
- Cystoscopy.
- 3 pts (2 men, 1 woman) have dense lower ureteric strictures bilaterally. (IVP, RGP)
- UDS findings: Mean preop bladder capacity 90ml (70 to 110 ml), Mean preop maximum detrusor pressure 63 cm H₂O (54 to 80 cm H₂O)

Pre operative preparation

- DJ stenting, PCN done if necessary to optimise renal function.
- Ability to do CISC is assessed.
- Bowel preparation done in all cases.
- Peri-operative broad spectrum antibiotics given.
- Informed written consent.

Surgical Technique

- Exposing bladder
- Bivalving bladder sagittally

- Isolation of ileal segment
- Detubularisation and reconfiguration.
- Ureteric reimplantation
- Anastomosis of ileal patch to bivalved bladder

Post-operative management

- Continuous bladder drainage done by SPC, PUC.
- Soda bicarb wash given 3 times a day for 2weeks postoperatively.
- cystogram done 2 wks after surgery.
- CISC training given in all cases before discharge.
- SPC is removed only after adequate performance of CISC
- Bicarbonate and potassium citrate suppliments given.
- Follow up investigation were CBP, urine c/s, Imaging (USG), Renal function tests, Electrolytes, (3m, 6m, 1yr)

Results

Complications

Early complications: wound infection in 3 cases, wound dehiscence in 2 cases, urinary leakage in 1 case.

Late complications: recurrent UTI in 2 cases, increased mucus production in one case, bladder stone formation in one case.

All are grade I to III according to Clavien- Dindo classification.

No major (grade IV or V) complications.

Discussion

GUTB occurs in as many as 15% to 20% of cases of pulmonary TB. Accounts for 30% to 40% of all extra pulmonary TB, second only to lymphonodal. Tuberculosis of the bladder occurs secondary to TB of the kidney. Starts as patchy inflammation of bladder mucosa. As a late sequele leads to low capacity poor compliant bladder. Resulting in troublesome storage symptoms, incontinence, pain, upper tract deterioration [4].

Augmentation cystoplasty is a well known procedure for these contracted tuberculous bladders (<100 ml capacity). Allows the patient to be continent, improves storage symptoms, prevents upper tract damage. Modern operative technique of detubularised ileal patch described by Goodwin in 1959.

Ileal Augmentation

Advantages

- Familiar,
- Abundant and mobile with reliable blood supply,
- Low rate of metabolic complications,
- Less mucus production than colon,
- Can be used as ureteral replacement [5]

Disadvantages

- Diarrhea/ malabsorption,
- Electrolyte problems,
- Vitamin B12 deficiency [6]

Conclusion

As in our experience ileocystoplasty for augmentation of tuberculous bladder is a safe and effective procedure [7]. With mean increase in bladder capacity to 420ml, mean decrease in maximal detrusor pressures to 16 cm of H₂O.

Significant improvement in storage symptoms and stable renal function [8].

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