THE OUTCOMES OF MODIFIED WALLACE ANASTOMOSIS TECHNIQUE: CAN IT REDUCE THE RISK OF STRICTURES?

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Introduction

- ✓ Radical cystectomy and ileal conduit urinary diversion or continent urinary diversion and neobladder reconstruction are the most commonly performed curative surgical treatment options for patients with invasive bladder cancer.
- ✓ The two most common types of ureteroenteric anastomosis during these procedures are the refluxing Bricker and Wallace techniques.
- ✓ In the literature, the overall stricture rates were 5.7% for Bricker anastomosis technique and 3.9% for Wallace anastomosis technique (1).
- ✓ In this study, we aimed to show stricture rate and stricture releated interventions related to our modified Wallace anastomosis technique and compare the outcomes with other techniques.

Methods

- ✓ From Janurary 2008 to January 2018, 169 patients who underwent radical cystectomy and urinary diversion were included in this study.
- ✓ Stricture rates and stricture releated symptoms and interventions were documented from hospital records retrospectively.

Surgical Technique (Modified Wallace Anastomosis)

I. After the cystectomy completed, both ureters are gently mobilized with meticulous dissection to preserve vascular supply.
II. Left ureter is transferred to the contralateral site under the sigmoid colon at the level of sacral promontorium.
III. A 15 centimeters long ileal segment is taken if the procedure is planned to proceed with ileal loop or a 45 centimeters ileal segment is taken and the proximal 7 to 8 centimeters is left intact as a chimney if a continent neobladder is to be created.
IV. Medial walls of both ureters are incised 5 centimeters and spatulated (Figure-1). A 4/0 Vicryl suture is passed through the corners of the proximal ends of the incisions and tied with the knot outside (Figure-2). The spatulated edges of the both ureters are sutured to the opposite site with 4 to 5 single 4/0 Vicryl sutures and distal ends of the both ureters form a single unit (Figures 3 and 4).
V. Two 4/0 Vicryl sutures are passed through the corners of the distal ends of each ureteral unit and relevant sites on the ileal segment and tied (Figure-5).
VI. Then ureteroileal anastomosis is completed with these two sutures on each site in continuous fashion. First, posterior site is completed and 6F feeding tubes or mono-J ureteral catheters are negotiated into the ureters before completing the anterior site anastomosis (Figures 6 and 7).
VII. Ileal segment or neobladder is filled with saline and anastomosis is checked for water-tightness

Results

- ✓ Bricker or Wallace techniques were performed in 102 patients, and our modified Wallace technique was used in 69 patients.
- ✓ In Bricker or Wallace anastomosis groups, stricture was observed in 17 (16%) patients.
  - ➢ 10 patients → Mild dilatation with no pain or renal functional deterioration → managed consevatively without having any intervention and they were followed up.
  - ➢ 5 patients → Mild dilatation with pain or renal functional loss → Antegrade or retrograde baloon dilatations were performed in these patients. After removing jj stent mild dilatation was observed in 1 patient and treated with baloon dilatation again succesfully.
  - ➢ 2 patients → Severe hydroureteronephrosis and renal detoration → Open anatomosis revision
- ✓ In modified Wallace anastomosis group → Only 2 (2.9%) patients had mild dilatation and managed conservatively.

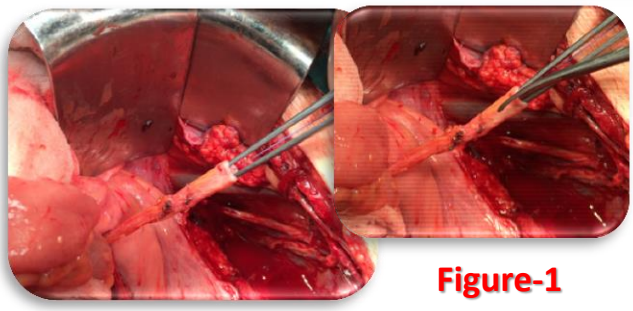
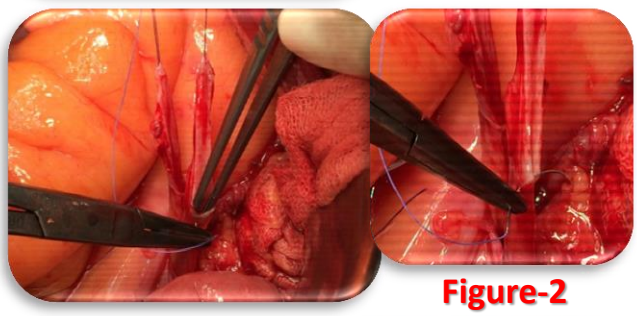


Figure-1



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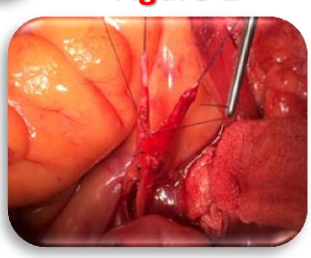

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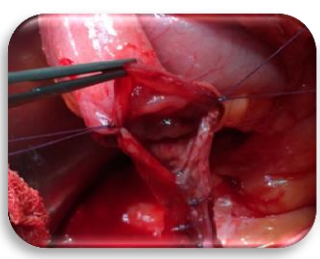

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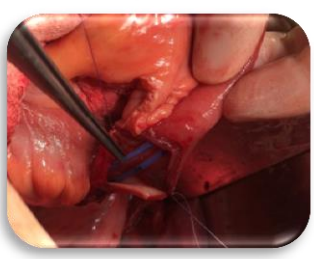

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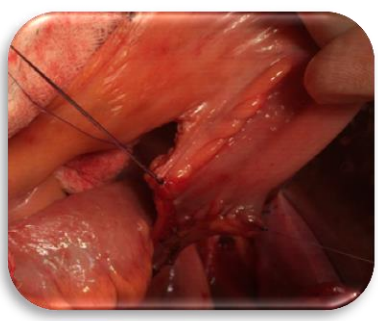

Figure-7

Conclusions

- ✓ Although Bricker and Wallace surgical techniques remain the two most common methods of ureteroenteric anastomosis for ileal conduit, there is little comparative data on their associated outcomes.
- ✓ Stricture rate of our modified anastomosis technique was lower and did not necessiate any further invasive treatment modalities.
- ✓ Our modified Wallace anastomosis technique is safe, practical and feasible.

References

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