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## Robotic ileal interposition for long ureteric stricture

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The classical operation for the management of long ureteric stricture is ileal interposition. The ileum has the advantages of rich blood supply and high mobility. However, this kind of major reconstructive surgery often requires an open approach. Minimally invasive surgery has the advantages of smaller wounds and faster recovery. We present a case of ureteric stricture managed with total robotic ileal interposition.

In a 75-year-old male with history of an inflammatory type of infrarenal aortic aneurysm and retroperitoneal fibrosis, bilateral hydronephrosis was noted. Further workup demonstrated that his right kidney was the main functioning kidney (DMSA findings: right kidney 89%, left kidney 11%), and retrograde pyelogram found ureteric stricture involving right middle and distal ureter. Preliminary drainage with percutaneous nephrostomy (PCN) was performed. Definite reconstructive surgery with robotic ileal interposition for the right ureter was agreed to by the patient.

The procedure involved putting the patient in the Trendelenburg position at 15 degrees with legs split apart. An 8 mm supra-umbilical camera port was created, followed by a 12 mm left lower quadrant working port, three 8 mm robotic ports and one upper abdomen 5 mm assistant port. After mobilizing the urinary bladder from the anterior abdominal wall, we proceeded with the preparation of small

bowel length, we prepared the small bowel segment with an Endo-GIA stapler. After finishing the small bowel anastomosis, the urinary bladder was hitched to psoas with Vicryl suture. This anchoring can facilitate the ileal segment to sit in an advantageous position between the renal pelvis and bladder in the later part of the surgery. After all the set-up had been completed, a vesicostomy was made at the most superior part of the bladder. The anastomosis between small bowel and bladder was made with continuous suture.

The second stage involved further mobilization of the proximal ureter and renal pelvis, and required repositioning of the patient into a semi-lateral position. Furthermore, an additional robotic port was added to the upper abdomen for manipulation. After further reflection of the ascending colon to expose the upper ureter and renal pelvis, the ureter was transected after identifying the healthy segment for subsequent anastomosis. End-to-end anastomosis was made between the small bowel and the proximal ureter. A JJ stent was inserted across both anastomoses in a retrograde manner by the use of a flexible cystoscope. When the anastomoses were completed, two drains were placed near both anastomoses, respectively.

The operation lasted 285 minutes. Blood loss was 50 ml. The patient was discharged and the Foley catheter was removed on postoperative Day 14. At 1-year postoperative follow-up, the patient had stable renal

function and clinical condition without the need of any further intervention.

In conclusion, total robotic ileal interposition is a safe alternative to the conventional open approach. It provides a minimally invasive option to relieve the symptoms and complications of long ureteric strictures.

**CONFLICTS OF INTEREST**

The authors declare no conflicts of interest.

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