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Editorial

The Dilemma of Ureteroileal Anastomosis Stricture

Usama Nihad Rifat*

Emeritus Professor of Urology, Iraqi Board for Medical Specializations

*Corresponding author: Usama Nihad Rifat, Emeritus Professor of Urology, Iraqi Board for Medical Specializations, POB: 954410, Amman, Jordan

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Ureteroileal anastomosis stricture is a frequent complication after radical cystectomy and ileal conduit or orthotopic neobladder formation. The incidence was studied based on the technique for urinary diversion and on the surgical approach (open, laparoscopic or robot-assisted). Surgical method in cystectomy does not influence future development of ureteroileal strictures; however, laparoscopic and robot-assisted ureteroileal reimplantation achieved high success rates [1].

Uretero-enteric anastomotic strictures after robot-assisted radical cystectomy represent the main cause of post-operative renal dysfunction. The standard for treatment is open uretero-ileal reimplantation, which is a complex procedure associated with considerable morbidity. It requires multidisciplinary teams including urologists, endourologists, general and vascular surgeons [2].

Other authors found in cases of ureteroileal anastomosis strictures, that robotic reimplantation is a safe and highly effective procedure, with a high success rate and excellent perioperative and functional outcomes. Near-Infrared Fluorescence Imaging (NIFI) provides an easy guide to identify and progressively dissect the ureter [3].

In general, the incidence of ureteric strictures is low in patients undergoing Robot-Assisted Radical Cystectomy (RARC) with totally intracorporeal urinary diversion. Strictures were more common on the left side, which has been described in open series and is probably related to the increased mobilization on the left side required to cross the ureter to the right side [4].

Minimally invasive definitive revision of ureteroileal anastomotic strictures is feasible with a robotic surgical approach. The advantages of robotic instrumentation allows successful repair and avoids major open surgery [5].

A laparoscopic approach for patients with a ureteroileal anastomosis stricture after radical cystectomy was described to avoid the complications associated with open surgery. This was found to be practical and safe with good long-term results [6].

Before that, it was known that ureteroenteric anastomotic strictures are common after cystectomy with urinary diversion postcystectomy ureteral reimplantation and was associated with relatively low rates of major iatrogenic injuries and high-grade complications. Preoperative percutaneous nephrostomy PCN placement rather than percutaneous nephroureterostomy PCNU was suggested to give better results [7].

Benign Ureteroenteric Anastomosis Strictures (UESs) are one of many critical complications that may cause irreversible disability following Robot-Assisted Radical Cystectomy (RARC).

Previous studies have shown that the incidence rates of UES after RARC can reach 25.3%, with RARC having higher UES incidence rates compared to open radical cystectomy. To minimize the incidence of UES after RARC, groups has standardized the procedure and technique for intracorporeal urinary diversion by applying certain strategies and proposing standardized surgical procedures to minimize its incidence after RARC [8]. Surgical experience affects perioperative and oncological outcomes after Robot-Assisted Radical Cystectomy (RARC) with Intracorporeal Urinary Diversion (ICUD) in a linear fashion, and its beneficial effect does not reach a plateau. Conversely, no further improvement was observed for Operative Time (OT). Robot-assisted radical cystectomy with intracorporeal urinary diversion is a complex surgical procedure with a relatively long learning curve [9].

A recent study showed again that robotic reimplantation of ureteroenteric strictures following radical cystectomy is safe and feasible in experienced centers with high success rates. In a

nine-year study, the majority of strictures were benign. Overall, 49 (84.5%) ureters underwent primary re-implantation, while 9 (15.5%) required Boari-like advancement flaps prior to re-implantation [10].

Uretero-ileal anastomosis strictures occur in 3 to 11% of patients who undergo ileal conduit urinary diversion after cystectomy. Technically preoperative placement of a ureteral stent is required for guidance and urinary diversion. Port placement should be tailored according to the previous surgical site; in addition to maximal ureteral dissection facilitates , and frozen section from the stricture which is mandatory to rule out malignancy. Repair is feasible and reproducible using a minimally invasive robotic approach [11].

Florence Robotic Intracorporeal Neobladder (FloRIN) reconfiguration technique was introduced in 2016 according to the IDEAL Collaboration Guidelines, with the attempt to conjugate the advantages of both intracorporeal neobladder and robotic assistance. The technique involves many surgical steps including isolation of 50 cm of ileum; bowel anastomosis; urethro-ileal anastomosis creating an asymmetrical 'U'-shape (30 cm distally and 20 cm proximally to anastomosis), ileum detubularisation; posterior wall reconfiguration as an 'L'; bladder neck reconstruction; anterior folding of the posterior plate to reach the 12 o'clock position; and uretero-enteral 'orthotopic' bilateral anastomosis [12].

In conclusion, Ureteroileal anastomosis stricture is a frequent complication after radical cystectomy and ileal conduit or orthotopic neobladder formation. Robotic correction is safe and feasible in experienced centers with high success rates

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