

Picture Story

Complete ureteral replacement using an untapered isoperistaltic ileal loop: A solution for extensive ureteric stricture.

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A 48-year-old diabetic woman was admitted to the urology ward with urosepsis and acute kidney injury. She had a history of recurrent stones and multiple endourological interventions. Her creatinine level was 7 mg/dL on admission. A computed tomography scan revealed bilateral hydronephrosis and hydroureter (Figure 1). Initially, she underwent bilateral stenting but left-side retrograde stenting failed. Retrograde ureteroscopy (URS) demonstrated a complete distal stricture approximately 4 cm from the vesicoureteric junction. She later underwent a left-side nephrostomy. Subsequently, an antegrade pyelogram demonstrated a complete stricture at the proximal ureter (Figure 2). Her case was discussed at a multidisciplinary meeting, and the patient was prepared for left ureteric exploration with or without replacement using an ileal loop.



Fig 1. NCCT KUB revealed bilateral hydronephrosis with more prominent obstruction in the left side.



Fig 2. Antegrade pyelogram shows complete cutoff of contrast excretion at the proximal ureter.

She underwent a midline laparotomy and left ureteric exploration, where a sclerosed, thin ureter was found from the proximal ureter up to the vesicoureteral junction. A 20 cm length of the distal ileal loop was mobilized, and an ileal-ileal end-to-end anastomosis was performed. The left ureter was replaced with an isoperistaltic ileal loop; the upper end was anastomosed with the left renal pelvis, and the distal end with the bladder using 3-0 polyglactin over two 6 Fr ureteric stents (Figure 3). She stayed in the intensive care unit for 48 hours, developed paralytic ileus, and slowly improved over a week. Her creatinine dropped to 1.3 mg/dL from 2.7 mg/dL. Her nephrostomy tube was clamped, and she was discharged on day 10. A left side

antegrade pyelogram was done in 3 weeks, confirming patency of the tract, and the nephrostomy tube was removed (figure 4) and stents removed in three months and no complications for the last twelve months of follow up at clinic.



Fig 3. Post operative X-ray KUB shows the Bilateral stents and Nephrostomy tube.



Fig 4. post op antegrade pyelogram shows the patency of the tract in three weeks

Complete ureteral replacement presents a significant challenge for urologists due to

its complexity and associated long-term complications. When less complex reconstructive options, such as uretero-ureterostomy, psoas hitch, and Boari flap, fail, ileal ureter replacement becomes the last viable option for certain patients (1). Most of these patients have long, complex ureteral injuries, often following endourological stone surgeries. Shoemaker performed the first successful ileal ureter replacement in a renal tuberculosis patient in 1906, but Goodwin et al in 1959 who popularized the technique with a successful case series (2, 3, 4). Since then, many studies have highlighted the procedure's favourable outcomes. We also got the good outcome following this surgery and prevented all the repeated intervention related to the ureteric long strictures

References

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