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Ureteral Anastomotic Atresia Following Radical Cystectomy and Ileal Neobladder Reconstruction: A Case Report

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Objective: This study aimed to emphasize the significance of postoperative monitoring for hydronephrosis after radical cystectomy and ileal neobladder reconstruction, and to consider the surgical management and timing of ureteral anastomotic atresia, one of the most complex postoperative complications.

Patients & Methods: A 71-year-old male presented with a two-month history of hematuria. Transurethral resection of bladder tumor and MRI revealed high-grade papillary urothelial carcinoma of the bladder (cT3NxM0). The patient underwent neoadjuvant therapy, followed by robot-assisted laparoscopic radical cystectomy, ileal neobladder reconstruction, and appendectomy.

Results: Two weeks after surgery, bilateral single-J stents were removed. Shortly thereafter, the patient developed bilateral flank pain and anuria. CT scans showed bilateral hydronephrosis, and an emergency bilateral percutaneous nephrostomy was performed. One month later, bilateral balloon dilation of ureteral strictures was performed via antegrade percutaneous ureteroscopy with D-J stent placement. Two months later, the stents were removed. However, during the six-month follow-up, left hydronephrosis recurred, which required percutaneous nephrostomy. Intraoperative ureteroscopy showed complete atresia of the left ureteral-neobladder anastomosis. One month later, open surgery involving ileal ureter substitution and ureteroneocystostomy was performed. The one-year follow-up showed no recurrence of hydronephrosis.

Conclusion: Ureteral anastomotic atresia following radical cystectomy and ileal neobladder reconstruction is a challenging urological complication. For long-segment ureteral atresia that does not lend itself to endoscopic management, ileal ureter substitution with ureteroneocystostomy is a viable surgical option.