IMAGES IN CLINICAL UROLOGY
General Urology

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Prostatic Urethral and Vesical Synechiae Secondary to Recurrent Urinary Tract Infection and Bladder Outlet Obstruction: An Intraoperative Surprise for the Urologist

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Abstract

Synechiae are intracavitary adhesions rarely reported in the urological literature. To date, very few cases of ureteral and vesical synerchiag (after urological surgery) have been reported. We report a rare case of prostatic urethral and vesical synechiae secondary to recurrent urinary tract infection (UTI). This was incidentally diagnosed on cystoscopy. A patient with known case of diabetes mellitus and ischemic heart disease presented with storage and voiding lower urinary tract symptoms. He had left epididymoorchitis and recurrent UTI. Investigations showed a left solitary functioning kidney with hydronephrosis and small capacity bladder. He had leucocytosis, raised serum creatinine, and positive urine culture. Under antibiotic cover, he was planned for cytoscopy left Double J (DJ) stenting. During cytoscopy, the patient had a short segment bulbar urethral stricture, which was managed with optical internal urethrotomy. Multiple bladder and prostatic urethral synechiae were found along with bladder diverticula and small bladder capacity. The left ureteric orifice was identified at 1-o'clock. Retrograde pyelography showed an upper ureteric kink and DJ stenting was difficult. The patient improved clinically and is under follow-up. Till date, retained suture material due to urological surgery has been identified as the cause of synechiae. However, our patient didn't have a history of surgery. No foreign material was identified during cystoscopy. Hence, we postulate that recurrent UTI and bladder outlet obstruction (stricture urethra) contributed to the development of synechiae. Laser incision of synechiae is recommended as the treatment.

Keywords: Urology, synechiae, urinary tract infection

Introduction

A 76-year-old gentleman presented with fever with voiding and storage lower urinary tract symptoms. He was a known case of diabetes mellitus and ischemic heart disease. He had a history of recurrent urinary tract infection (UTI). On local examination, he had left epididymoorchitis. Blood investigations showed leukocytosis (20.000/cu.mm) and raised serum creatinine levels (3.0 mg/dL). Urine routine microscopy showed loaded pus cells. Urine culture was positive and the patient was started on 3rd generation cephalosporins. Non-contrast computed tomography scan findings were: Left solitary functioning kidney with hydronephrosis, right poor functioning kidney, and trabeculated small capacity bladder. Under antibiotic cover, the patient was planned for cytoscopy and left Double J (DJ) stenting.

During cytourethroscopy, the patient had a short segment bulbar urethral stricture. This was managed with optical internal urethrotomy (1). Cystoscopy showed multiple prostatic urethra and bladder synechiae, bladder diverticula, and small bladder capacity (Images 1, 2). A stalagnate like pillar, classical of vesical synechiae, was identified (Image 3) (2). With difficulty, the left ureteric orifice was identified at 1-o'clock. Retrograde pyelography showed an upper ureteric kink and DJ stenting was performed. Bladder biopsy was avoided as the patient was on antiplatelets. The patient improved clinically and serum creatinine declined. He was discharged 2 days later and is under follow-up. He is being planned for laser incision for synechiae after clinical optimization.

Synechiae are intracavitary adhesions rarely reported in the urological literature. To date, very few cases of ureteral synechiae

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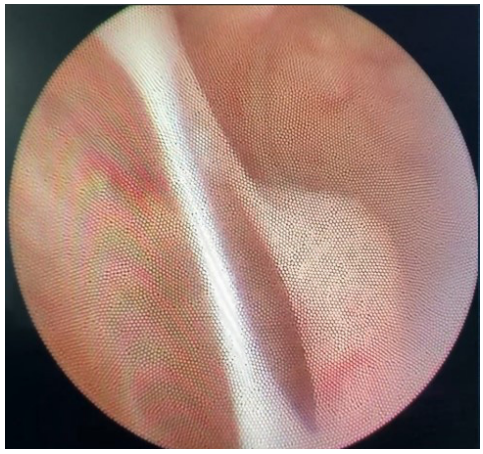

Image 1. Cystoscopy view of prostatic urethral synechiae

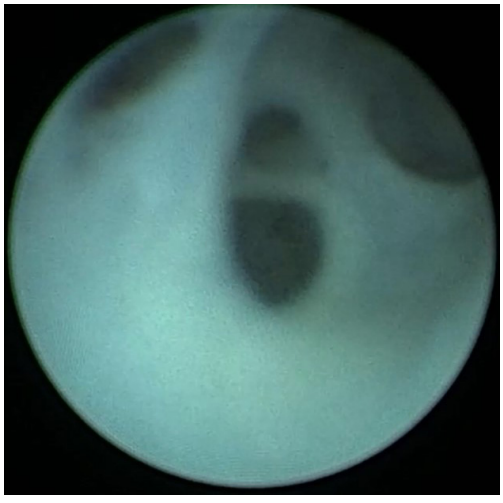

Image 2. Cystoscopy view of vesical synechiae

Image 3. Cystoscopy view of stalagnate like pillar, classical of vesical synechiae

(after ureteric reimplantation) and bladder synechiae (after ureteroneocystostomy during cadaveric renal transplantation) have been reported (1). Two cases of bladder synechiae (after anti-incontinence surgery in females) have been reported (2). We report a rare case of prostatic urethral and vesical synechiae secondary to recurrent UTI and bladder outlet obstruction (BOO). This was incidentally diagnosed on cystoscopy. To date, urological synechiae have been identified after the history of any urological surgery. Retained foreign body-like suture material can cause inflammation and synechia formation. The index patient did not have a history of any surgery to cause synechiae. Also, we could not identify any foreign body that caused urological synechiae. Hence, we postulate that recurrent UTI and BOO (Stricture Urethra) caused synechiae. When bacteria invade the bladder mucosal wall, an inflammatory reaction called cystitis are produced (3). Recurrent episodes of UTI can contribute to the development of urethral and vesical synechiae. The stalagnate like pillar formation would have drifted the ureteric orifice to 1-o'clock position. Synechiae are diagnosed on cystoscopy and cannot be diagnosed preoperatively on radiological imaging. Hence, knowledge of such a rare finding can avoid intraoperative surprises. These synechiae can be managed with a Holmium laser incision. Management of BOO and UTI is integral to the management of urological synechiae.

Ethics

Informed Consent: Informed consent was obtained from the patient.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: J.R.J., M.K., K.G., Concept: J.R.J., M.K., K.G., Design: J.R.J., M.K., K.G., Data Collection or Processing: J.R.J., M.K., K.G., Analysis or Interpretation: J.R.J., M.K., K.G., Literature Search: J.R.J., M.K., K.G., Writing: J.R.J., M.K., K.G.

Conflict of Interest: No conflict of interest was declared by the authors.

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References

1. Berrondo C, Wason S, Pais VM Jr. Urologic synechiae. J Endourol 2012;26:461-462.
2. Nayyar R, Nayyar BU. "Stalagnate in Bladder": Synechiae Post Anti-Incontinence Surgery in Women. J Endourol Case Rep 2020;6:86-88.
3. Bono MJ, Leslie SW, Reygaert WC. Urinary Tract Infection. [Updated 2022 Jun 15]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK470195/