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CASE REPORT

A Rare Cause of Post-TURP Bladder Outlet Obstruction

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Abstract

Prostatic synechiae are rare fibrous adhesions within the prostatic urethra that can lead to bladder outlet obstruction (BOO) after transurethral resection of the prostate (TURP). This report presents a case of a 79-year-old male who developed recurrent lower urinary tract symptoms (LUTS) and acute urinary retention six months following an otherwise uneventful TURP. Cystoscopy revealed fibrous bands within the prostatic urethra consistent with prostatic synechiae. The adhesions were managed successfully with endoscopic resection. This case highlights the importance of considering synechiae in the differential diagnosis of recurrent BOO post-TURP and discusses the diagnostic and therapeutic approach to this uncommon complication.

Introduction

TURP is widely regarded as the gold standard surgical intervention for benign prostatic hyperplasia (BPH) in men with moderate to severe LUTS.[1] Although TURP is generally safe, it is associated with complications including urethral stricture, bladder neck contracture, and, in rare instances, prostatic synechiae.[2,3] Prostatic synechiae refer to fibrotic adhesions forming within the prostatic urethra, resulting in mechanical obstruction.[4] These adhesions typically present several months after surgery and can mimic other post-TURP complications such as strictures or contractures.[5] Due to their rarity and subtle presentation, diagnosis requires a high index of suspicion and is often confirmed via endoscopic evaluation. We present a rare case of BOO secondary to prostatic synechiae in a 79-year-old male managed successfully with endoscopic resection.

Case Presentation

A 79-year-old male presented to the urology clinic with complaints of progressive LUTS over a three-month period. His symptoms included weak urinary stream, hesitancy, intermittency, and nocturia. He also reported two episodes of acute urinary retention over the past month, both of which required emergency catheterization. Six months prior, he had undergone a TURP for symptomatic BPH with initial resolution of symptoms. The TURP procedure had been uncomplicated with minimal intraoperative bleeding and no postoperative infections. The patient's medical history included well-controlled hypertension and mild chronic kidney disease (stage 2). He had no history of diabetes, smoking, pelvic surgery, or radiation therapy. Medications included amlodipine and low-dose aspirin. Physical examination was unremarkable, and digital rectal examination revealed a small, non-tender prostate. Abdominal ultrasound showed a normal bladder wall with a post-void residual (PVR) of 220 mL. Uroflowmetry demonstrated a maximum flow rate (Qmax) of 5 mL/s. Laboratory workup revealed normal renal function (serum creatinine 1.2 mg/dL) and sterile urine. Given the recurrent LUTS and prior TURP, differential diagnoses included urethral stricture, bladder neck contracture, or residual prostatic tissue. Cystoscopy was performed under local anesthesia. This revealed a broad fibrous band spanning the prostatic urethra, obstructing the lumen at the mid-prostatic level. The bladder neck appeared open and unscarred, and no strictures were noted in the penile or bulbar urethra.

Management

The patient was scheduled for operative endoscopic intervention. Under spinal anesthesia, rigid cystoscopy confirmed the presence of 2–3 fibrous adhesions in the prostatic urethra. The synechiae were carefully divided using a monopolar resectoscope loop, and urethral patency was restored. A 16-Fr Foley catheter was inserted and left in place for 48 hours to allow healing. Histopathological examination of resected tissue confirmed fibrous connective tissue with chronic inflammation, consistent with scar formation and negative for malignancy. The postoperative course was uneventful, and the patient was discharged on postoperative day three with a short course of antibiotics.

Follow-Up

At the one-month follow-up, the patient reported significant improvement in symptoms. Uroflowmetry showed a Qmax of 19 mL/s and a PVR of 30 mL. At three months, repeat cystoscopy demonstrated a wide prostatic urethra with no recurrence of adhesions. Renal function remained stable. At 12 months post-procedure, the patient remained asymptomatic, with sustained uroflowmetry parameters and no new episodes of retention. Surveillance cystoscopy was deferred due to lack of symptoms and reassuring objective findings.

Discussion

Prostatic synechiae are a rare and underreported complication of TURP. The exact etiology remains unclear but is thought to be related to mucosal trauma, excessive electrocautery, or prolonged catheterization leading to fibrosis and adhesion formation.[2,6] In this case, there were no identifiable risk factors such as infection or traumatic instrumentation. Diagnosis can be challenging due to non-specific symptoms and overlapping presentations with other common post-TURP complications. Imaging modalities are limited in detecting intraluminal adhesions, making cystoscopy the gold standard for diagnosis.[5] Management primarily involves endoscopic resection. Adjunctive use of mitomycin-C, an antifibrotic agent, has been shown to reduce recurrence rates in urethral strictures and bladder neck contractures and may offer similar benefits in cases of synechiae.[7,8] This case emphasizes the need for clinical vigilance when evaluating patients with recurrent LUTS post-TURP. Early endoscopic evaluation and appropriate intervention can prevent further complications and restore quality of life.

Conclusion

Bladder outlet obstruction due to prostatic synechiae is a rare but significant complication following TURP. Diagnosis requires a high index of suspicion and confirmation via cystoscopy. Endoscopic resection combined with mitomycin-C application is an effective management strategy, as demonstrated in this case. Long-term follow-up is essential to monitor for recurrence and ensure sustained symptom resolution.

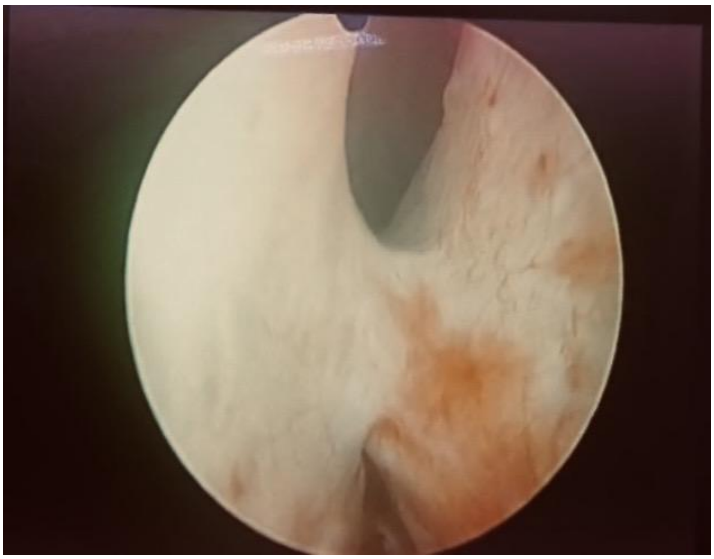

Figure 1 cystoscopy showing prostatic synechae.

Disclaimer

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Consent

None.

Ethical Approval

None.

Competing Interests

Author has declared that no competing interests exist.

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