CASE REPORT

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Unexpected Cause of Renal Colic: Ectopic Prostatic Tissue in Bladder

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ABSTRACT Ectopic prostatic tissue (EPT) within the urinary tract is a rare anomaly. Fewer than 50 cases involving the bladder have been reported, typically localized in areas like the trigone and bladder neck. Symptoms often include hematuria and dysuria, with incidental detection through imaging or cystoscopy. Here, we present a unique case of EPT associated with renal colic in a 22-year-old male, representing one of the youngest cases documented. The patient presented with renal colic, initially suspected to be urinary stone-related. Diagnostic imaging revealed a 1-cm mass lesion near the right ureteric orifice, confirmed by cystoscopy and subsequent transurethral resection. Histopathological examination confirmed benign EPT in the bladder wall. Postoperative follow-up at 6 and 18 months showed no recurrence. EPT, although rare, should be considered in the differential diagnosis of renal colic, particularly in young patients presenting with atypical symptoms.

Keywords: Ectopic tissues; renal colic; prostate

Ectopic prostatic tissue (EPT) found within the urinary tract is an uncommon and infrequent occurrence. The first reported cases date back to 1894.[1] Since then, such cases have predominantly been documented in male lower urinary tract and extra-urinary areas.[2] However, there have also been reported instances in female patients.[3] Although fewer than 50 cases involving the bladder have been reported in the literature, these are typically localized in the trigone, bladder neck, and interureteral area.[4] Symptoms often include hematuria and dysuria, with some cases incidentally detected through imaging or cystoscopy.[4] In this study, we present a unique case of EPT in the bladder associated with renal colic. Notably, this patient represents one of the youngest cases documented in the relevant literature.

CASE REPORT

A 22 year-old male patient was admitted to the emergency room with severe pain in the right flank, dysuria and macro-hematuria. Physical examination revealed costovertebral angle tenderness. The presence of renal colic and young age had led to differential urinary stone diagnosis. Abdominal ultrasonography ruled out the initial diagnosis. However, an approximately 1-cm mass lesion was detected in bladder near right ureteric orifice.

Cystoscopy revealed a tumoral mass 1 cm cranially away from right orifice. Subsequently, transurethral tumor resection was performed. The pathologic diagnosis was benign prostate tissue in bladder wall (Figure 1).

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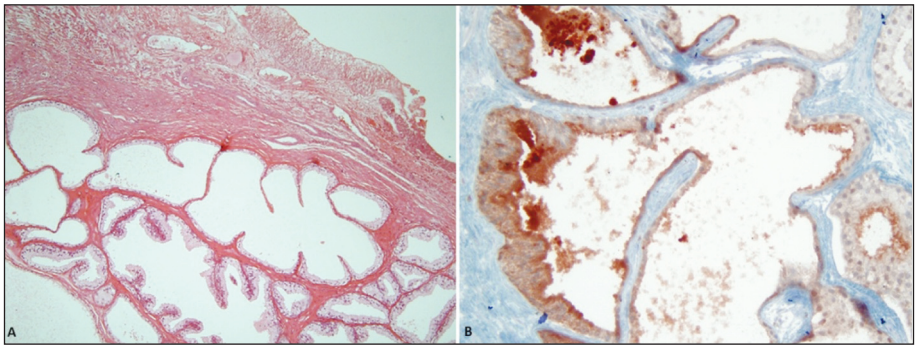

FIGURE 1: A: Prostatic glands in the bladder wall (note superficial urothelial epithelium at the right upper corner) (HE, x100); **B:** Prostate-specific antigen is positive in prostatic glands (Anti-PSA, immunohistochemistry, x200).

The patient had no renal colic or hematuria after the operation. A urinary ultrasonography and cystoscopy were performed postoperatively. These were performed after 6 and 18 months, respectively. No evidence of recurrence was found. Informed consent was obtained from the patient to publish this case report.

DISCUSSION

EPTs are a rare phenomenon predominantly observed in the posterior urethra.[5] However, instances have been documented in various other anatomical locations such as the bladder, epididymis, testicles, pericolic fat, anal submucosa, spleen, and uterine cervix.[6] Notably, bladder lesions tend to manifest primarily in the trigone and bladder neck, with only 9 cases documented in the retrotrigonal region or near the ureteral orifices, a characteristic also observed in our case.[5]

In reported cases of bladder lesions, the mean ages of affected patients were documented as 60, 54, and 50 years by Halat, Butterick, and Remick-Kumar, respectively.[4,7,8] The ectopic tissue identified in our case measured 15 mm in diameter, larger than previously reported bladder lesions which typically range from 2.6 mm to 7.3 mm.[4,5]

Symptoms associated with EPTs are generally mild or absent, with reported manifestations such as hematuria (35%), increased urinary frequency (10%), and nocturia (5%). Approximately 10% of patients present with unspecified symptoms, sometimes leading to suspicion of bladder tumors.[5,9] This clinical silence is attributed to the small size and benign nature of these tissues, contributing to their underreporting.

Several hypotheses have been proposed to elucidate the occurrence of EPTs, including embryologic misplacement, metaplasia of transitional epithelium secondary to chronic inflammation, and persistence of embryonic prostatic gland remnants.[10-12] An iatrogenic etiology has also been documented, such as in a case where prostatic tissue was discovered in the ureter following ureterosigmoidostomy, likely due to inadvertent implantation during surgery.[4]

Although malignant transformation of EPTs is rare, isolated cases have been reported.[13,14] Treatment typically involves transurethral resection of the lesion, with low rates of recurrence observed in most cases.[15]

This 22-year-old patient is among the youngest cases reported in the literature. EPT is exceedingly rare. However, despite its rarity in medical literature, EPT could be considered in the differential diagnosis of renal colic.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise,

working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: *Ömer Barış Yücel;* ***Design:*** *Ömer Barış Yücel;* ***Control/Supervision:*** *Yasemin Özlük, Işın Kılıçaslan, Murat Tunç;* ***Data Collection and/or Processing:*** *Yasemin Özlük, Işın Kılıçaslan;* ***Analysis and/or Interpretation:*** *Ömer Barış Yücel;* ***Literature Review:*** *Ömer Barış Yücel;* ***Writing the Article:*** *Ömer Barış Yücel;* ***Critical Review:*** *Yasemin Özlük;* ***References and Fundings:*** *Ömer Barış Yücel;* ***Materials:*** *Yasemin Özlük, Işın Kılıçaslan.*

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