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Giant Ureteral Fibroepithelial Polyp with Intermittent Prolapse Reaching the Urethral Meatus: A Case Report

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ABSTRACT

Ureteral fibroepithelial polyps (UFPs) are rare non-epithelial benign tumors of the urinary tract. Treatment of such cases ranges from conservative management to surgical resection of the polyp. Hereby, we present a rare case of a 37-year-old female patient with giant 14 cm UFP of the distal left ureter, successfully resected by ureteroscopic electrocauterization. Several cases of UFPs have been previously reported in world literature describing polyps extending into the bladder; yet, our case is the first to present a giant UFP that extends beyond the bladder cavity protruding outside the urethral meatus as a red fleshy mass.

Introduction

Ureteral fibroepithelial polyps (UFPs) are rare non-epithelial benign tumors of the urinary tract. They originate from the mesoderm[1]; and unlike malignant transitional cell and squamous cell tumors which are derived from the epithelium, UFPs arise from mesenchymal tissue.[2] Females are affected slightly more than males, with median age of 38 years.[3] Patients typically present with suprapubic or flank pain and/or hematuria[3]; yet, it is not significantly symptomatic unless obstruction (partial or complete) occurs producing those obstructive or irritability symptoms.

The UFPs are commonly located in the proximal ureter, with equal distribution among the left and right ureters.[3] Intravenous urography (IVU) remains the most commonly used modality for making the diagnosis (84%); nevertheless, ultrasound, computerized tomography (CT) scan, retrograde pyelography (RPG), and retrograde ureterography (RUG) have been also used, solely or in combination.[3] The appropriate treatment in such cases is endoscopic resection of the polyp using electrocautery or Holmium: YAG laser. However, conservative management, partial ureterectomy and nephron-ureterectomy had been also reported.[3] This case report (Fig. 1) was conducted and reported in accordance with CAse REports (CARE) guidelines for reporting case reports.

Case presentation

A 37-year-old non-smoker Lebanese lady, previously healthy with unremarkable past medical or surgical history, presented to our hospital with intermittent left flank pain, suprapubic inconvenience, and aggravating voiding manifestations of about 14 days duration without symptoms of classic urinary tract infection. No dysuria, urinary urgency, nocturia, hesitancy, polyuria, urinary incontinence or fever and chills were reported. She just grumbled of a red fleshy mass protruding out from her urethral meatus post-micturition in the wake of emptying her bladder. Physical examination, routine blood tests (complete blood count, electrolytes, blood urea nitrogen and creatinine blood level), and urine analysis were done in the emergency department showing no signs of urinary tract infection but microscopic hematuria (10 RBCs per high-power microscopic field in urinary sediment from urine analysis specimen on sterile collection). The patient also stated that

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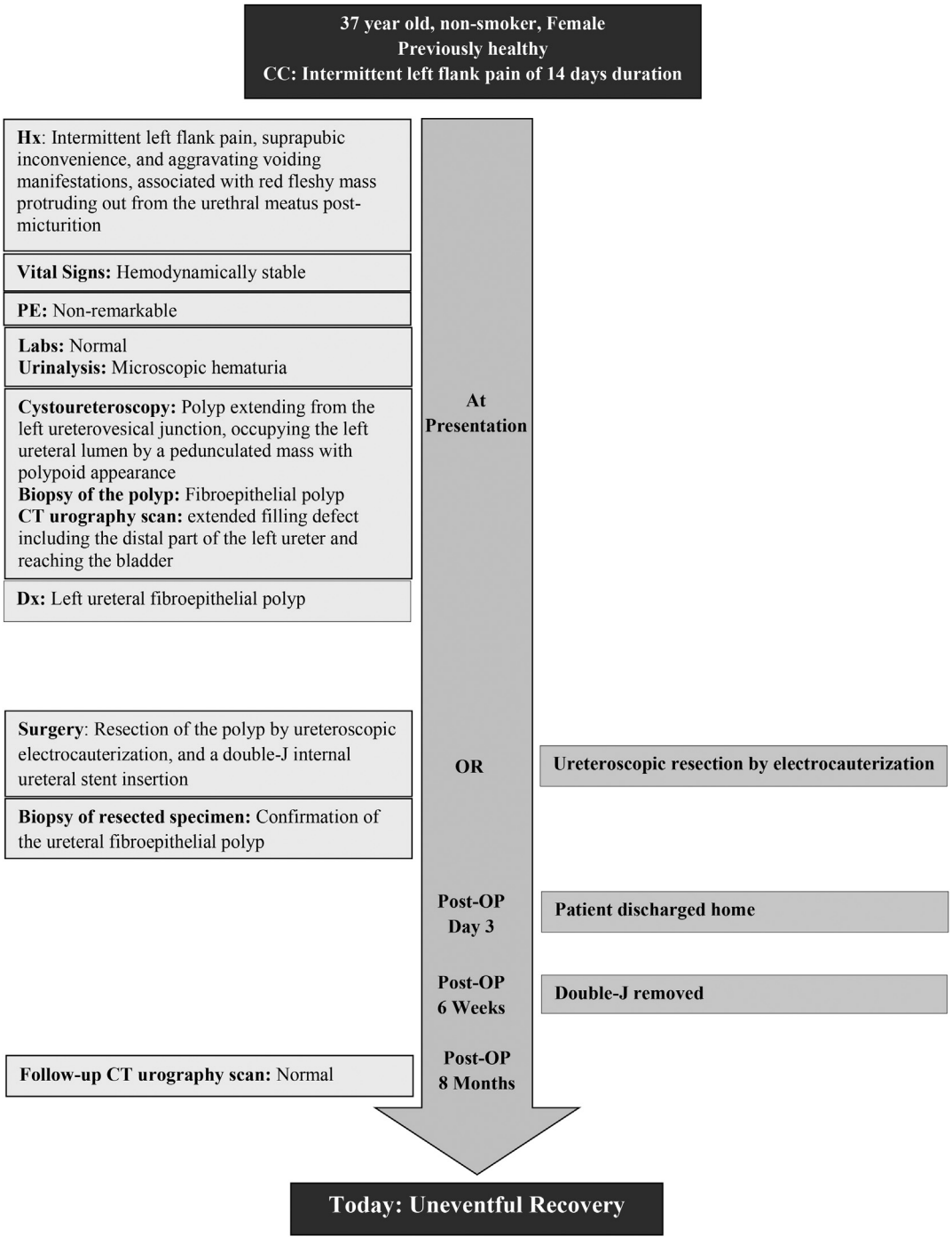

Figure 1. Timeline summarizing main events of the case.

whenever she feels the mass protruding out, she tends to withdraw it again to inside; so she was admitted for more investigations.

Cystoureteroscopy was initially performed revealing a polyp extending from the left ureterovesical junction (UVJ), occupying the left ureteral lumen by a pedunculated mass with polypoid appearance intermittently moving forward and backward through the left ureteric hole (Fig. 2). At first, the polyp was totally covered up into the left ureteric opening making a brief ureteral block, but then it began to prolapse slowly into the bladder constrained by ureteral peristalsis. A biopsy was taken from the lesion and histopathological examination revealed a fibroepithelial polyp (Fig. 3A). Standard computerized tomography (CT) urography scan assessment showed an extended filling defect including the distal part of the left ureter and reaching the bladder. Ureteroscopic resection of the polyp was successfully performed by electrocauterization, and a double-J internal ureteral stent was inserted. Histopathological analysis of the resected specimen and re-assessment of the previous biopsy confirmed a ureteral fibroepithelial polyp (UFP) (Fig. 3B). The length of the polyp was estimated to be approximately 14 cm. Hospitalization endured 3 days after which the patient was discharged home. Double-J was then removed 6 weeks after discharge, and the patient stayed

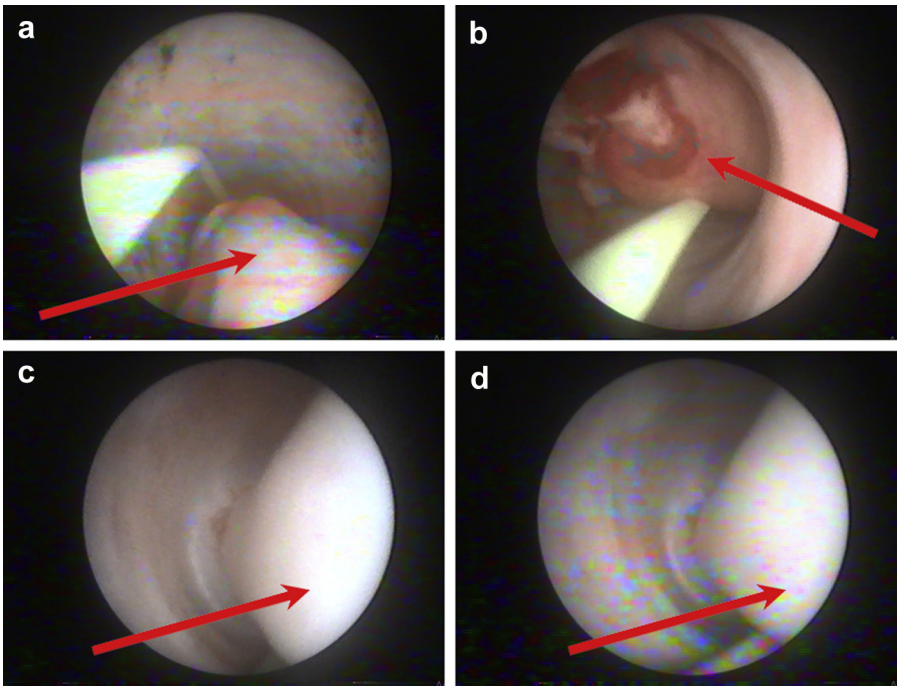

Figure 2. Cystoureteroscopy revealing polypoid mass extending from the left ureterovesical junction (UVJ), and occupying the left ureteral lumen. (a, b) Polyp extending along the distal left ureter downwards. (c, d) Base of the polypoid stalk inside the distal left ureter. Red arrows indicate the ureteral fibroepithelial polyp (UFP).

asymptomatic afterward. Follow-up CT urography was done few months later and tended to be normal.

Discussion

Ureteral tumors are very rare in adults, accounting for less than 1% of all genitourinary neoplasms. They are most commonly malignant; however, UFPs are the most common non-malignant tumors.[4] They are still rarely presented clinically and seen in females more than males.[3] The first UFP was described by Melicow et al in the year 1932.[5] It has been suggested that chronic irritation and inflammation due to extrinsic agents, such as urinary crystals or calculi, may be probable causes for the growth of UFPs. Congenital origin has been as well proposed in children and neonates.[1]

In a systematic review of literature on published cases reporting UFPs between 1980 and 2015, 75 articles were found discussing 131 cases of UFPs.[3] Flank pain and hematuria were the most presenting symptoms, and IVU was the most commonly used imaging modality to diagnose those polyps, which were found to be distributed evenly between the right and left ureters. Our patient's diagnosis was made by histological examination of the biopsied tissue taken during cystoureteroscopy. The presence of UFP had been shown to cause hydronephrosis in 41.7% of patients,[3] which was not the case in our patient. In 86.5% of cases, one polyp was reported, arising mostly from the proximal ureter; yet, up to 20 polyps were described in a single patient also. The median polyps' size had been reported to be 4 cm, but maximum length reached was 17 cm.[3]

Unfortunately, there are still no guidelines established for the management of UFPs. Nonetheless, most cases are being treated by complete excision of the tumor through ureteroscopic resection using electrocautery or Holmium: YAG laser,[3] with no reported recurrence. This surgical technique carries minimal risk of morbidity with preservation of the renal function. If malignancy is suspected or when endoscopic approach is not applicable, surgeons may go for partial ureterectomy, dismembered pyeloplasty, or even nephroureterectomy.

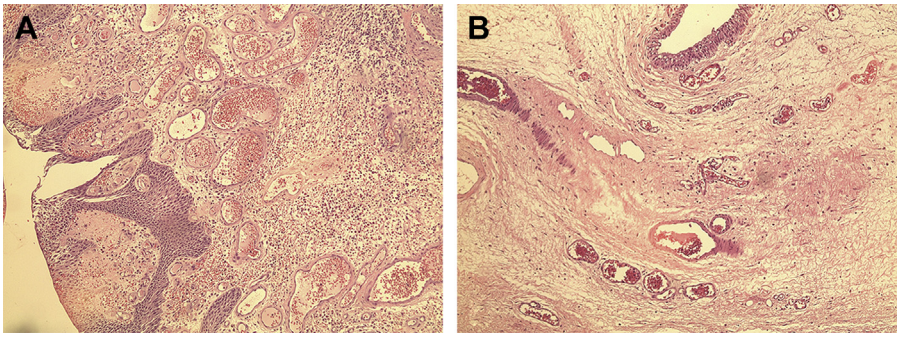

Figure 3. (A) Histopathological examination of the polypoid fragments reveals soft pink tissue measuring in aggregate 2 × 0.8 × 0.5 cm and four fragments of soft tan tissue measuring 1 × 0.5 × 0.2 cm each. H&E staining (×100) shows fibroepithelioma of the distal ureter with some erosions and inflammation, but no dysplasia or malignancy. (B) Histopathological examination of the resected left ureteral polyp shows elongated soft pink tissue measuring 12 × 1 × 0.8 cm in maximum dimensions. The cut surface is soft pink and homogenous. H&E staining (×100) confirms the previous diagnosis of fibroepithelioma of the distal left ureter with no atypia or malignant parts.

Conclusion

We report a rare case of a giant 14 cm UFP originating from the distal left ureter with intermittent prolapse reaching the urethral meatus in a 37-year-old female patient. We reviewed the literature looking for similar relevant cases. Multiple reports of UFPs were reported describing polyps elongated into the bladder cavity; however, our case is the first to report a giant UFP with finger-like projection that extends beyond the bladder cavity and protrudes outside the urethral meatus. Ureteroscopic resection of the polyp was done by electrocauterization, after which the patient was discharged home with uneventful recovery.

Consent for publication

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available upon request for review by the Editor-in-Chief of this journal.

Conflict of interest

The authors declare no conflict of interest.

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