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Case Report

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A Case Report of a Rare Huge Ureteral Fibroepithelial Polyp: Challenges and Clinical Management

Alireza Akhavan Rezayat[1], Amir Yarahmadi[2,3], Atena Aghaee[4], Farid Zeynali[5], Salman Soltani [5,*]

1. Department of Urology, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.
2. Department of Clinical Biochemistry, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.
3. Transplant Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
4. Nuclear Medicine Research Center, Mashhad University of Medical Sciences, Mashhad, Iran.
5. Kidney Transplantation Complications Research Center, Mashhad University of Medical Sciences, Mashhad, Iran.

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ABSTRACT

Ureteral fibroepithelial polyps (UFPs) are rare abnormality that may cause ureteral obstruction. Herein, we report a 35- year- old woman with flank pain, dysuria, frequency and transient total gross hematuria. A mass in the right ureter was reported on imaging and in endoscopic evaluation, small polypoid mass protruding from the right ureteral orifice in the bladder, and a huge ureteral mass originating from proximal ureter was observed. A right subcostal flank incision was done, a huge polypoid mass with a segment of ureteral was excised, and end-to-end anastomosis of the ureter was done. Histopathological examination showed a UFP without malignancy.

Introduction

Ureteral fibroepithelial polyps (UFPs) are the rarest form of the urinary tract's benign tumors, which originate from the mesoderm [1]. Fibroepithelial polyps include less than 1% of all urinary tumors. The exact etiology of these types of tumors is still unknown. Their clinical symptoms are ambiguous and make the diagnosis difficult. The most frequent symptoms of fibroepithelial polyps are hematuria and dysuria [2]. Recent studies showed that the mean size of UFPs is about 4.0 cm, but polyps larger than 10 cm have also been reported. Giant polyps are usually found in the proximal ureter [3]. To confirm the diagnosis, a histological examination should be performed. Because of its rarity, there is still not any standard treatment for these polyps except complete excision. In this study, we present a case of a 35- year- old woman with a huge ureteral polyp and discuss the diagnostic and the treatment protocol and a literature review on this type of polyps.

*** Corresponding Author:**
Dr. Salman Soltani
Address: *Kidney Transplantation Complication Research Center, Mashhad University of Medical Sciences, Mashhad, Iran.*
E-mail: *soltaniS@mums.ac.ir*

Case presentation

A 35- year- old woman was admitted to the Urology Clinic of Ghaem Hospital of Mashhad (Mashhad, Razavi Province, Iran) with flank pain, dysuria, frequency and transient total gross hematuria for more than one year. An intravenous urography (IVU) and endoscopic evaluation revealed a filling defect in the right ureter and a small polypoid mass protruding from the right ureteral orifice in the bladder, and a huge ureteral mass was also observed (Fig. 1). A right subcostal flank incision was done, a huge polypoid mass with a segment of ureteral was excised, and end-to-end anastomosis of the ureter was done (Fig. 2). The polyp was cut thoroughly and removed from the ureter (Fig. 3). Histopathological examination of bioptic specimens reported a UFP without malignancy.

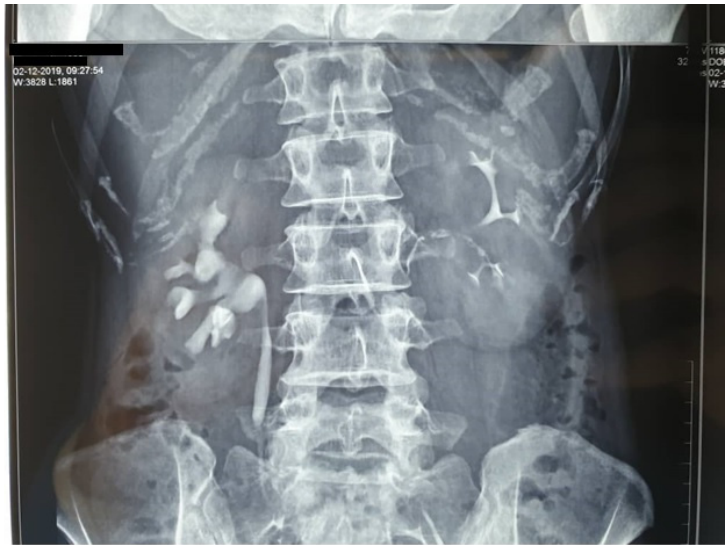

Fig. 1. Preoperative intravenous urography (IVU) shows a huge polyp in the lower part of the right ureter.

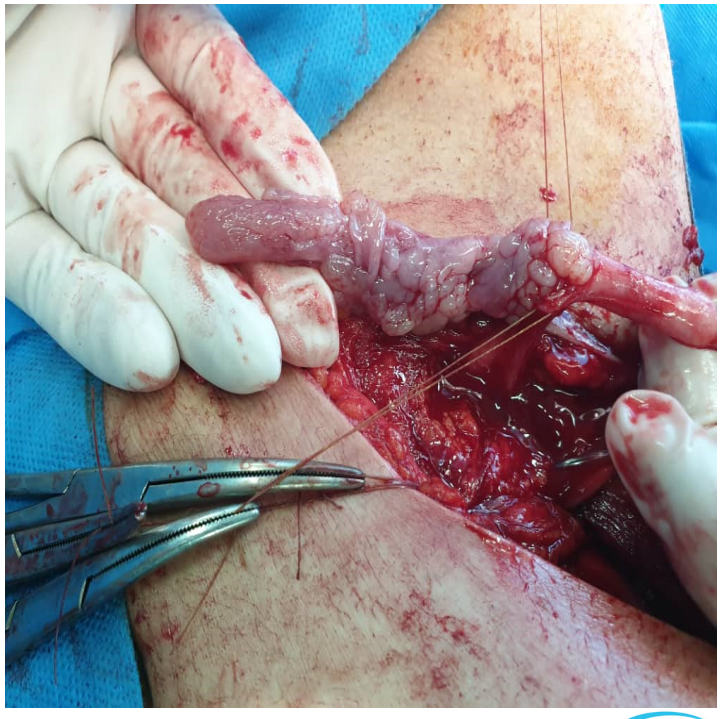

Fig. 2. The excised ureteral polyp with a smooth surface, and shaped similar to a long grape brunch.

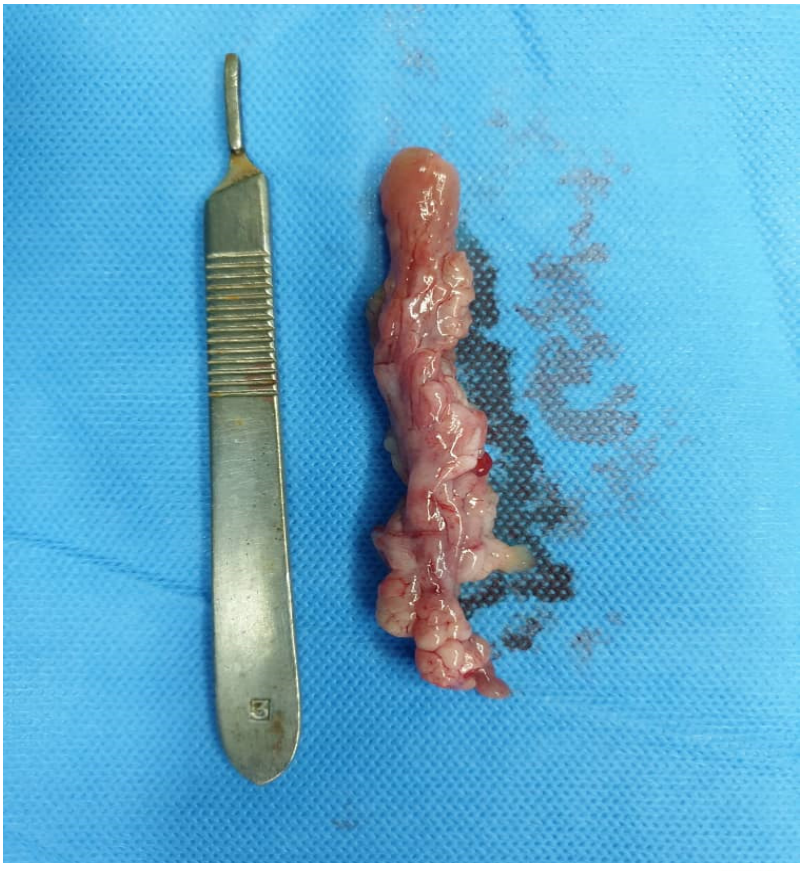

Fig. 3. The huge ureteral fibroepithelial polyp removed by open surgery from the right ureter regarding the length and diameter.

Discussion

Primary ureteral tumors are considered the rarest genitourinary tumors and are often malignant [4]. Only 20% of these tumors are benign, and, among them, UFPs are the most common form of benign tumors. UFPs are either epithelial or non-epithelial lesions. Non- epithelial tumors are mainly of mesodermal origin and include benign fibromas and fibroepithelial polyps. Moreover, UFPs are the most common benign non-epithelial ureteral tumors, despite less than 200 reported cases worldwide [5]. The etiology of UFPs is still unclear and thought to be multifactorial. Proposed causes include congenital anomaly, trauma, chronic irritation from infection or stones, obstruction, exogenous or endogenous carcinogens, infection and hormonal imbalances [3].

The most frequent clinical presentation of UFPs includes abdominal pain, gross hematuria, frequency of urination and dysuria [6]. Most of UFPs is found to be a single and small polypoid tumor. Previous reports of multiple and bilateral UFPs are extremely rare. They are often found in men than women and have been reported in all ages ranging from newborns to older adults. They have been diagnosed mainly between the second and fifth decades of life [7]. The mean diameter of UFPs was reported to be about 4.0 cm, whereas larger polyps may expand into the bladder, which makes it difficult to be distinguished from bladder tumors [8].

UFPs usually originate from the left ureter, but in our case presented in the current, the polyp occurred in the right ureter in a 35-year-old woman. Furthermore, it was a huge polyp with a total length of more than 10 cm that was removed by open surgery. Imaging examination is helpful in UFPs diagnosis, but it may be challenging to differentiate UFPs from transitional cell carcinoma based only on imaging findings, which make the histopathological examination of the removed polyp as the gold standard for differential diagnosis. Li et al. reported that none of the UFPs in their study were detected before surgery because of difficulty in the preoperative diagnosis of this type of tumors [9]. It should be noted that the wrong diagnosis of these types of tumors from transitional cell carcinomas may result in unnecessary nephroureterectomy. Today, various treatment options are available for UFPs, including open surgery, endoscopic mass resection

and laser ablation [10]. The selection of an appropriate UFPs treatment method depends on the polyp site, size, and clinical expertise. Small polyps may be handled by the endoscopic method, while larger polyps require complete surgical excision [10, 11]. In addition, the use of new technologies, such as minimally invasive techniques, has become popular in treating UFPs [12]. Previous reports have described successful and complete polypectomy via the use of ureteroscopy and endoscopic procedures. However, resection with these methods may be difficult in patients with long and large polypoid tumors because of poor visualization of the base of the stalk and limited working space, which may lead to incomplete resection or ureteral perforation [11]. Complete resection via open surgery is considered the optimal method for avoiding incomplete resection and recurrence of UFPs.

Conclusion

UFPs are rare benign tumors that their etiology is still unknown. The preoperative diagnosis of UFPs is often tricky because they can be presented with a wide variety of findings. Histopathological examination is needed to confirm the diagnosis. Among different management methods, open surgery is still the best method, which probably is due to the technical difficulty in achieving adequate endoscopic exposure of the polyp in the proximal ureter.

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Ethical Considerations

Compliance with ethical guidelines

There were no ethical considerations to be considered in this research.

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Authors' contributions

All authors equally contributed in preparing this article.

Conflict of interest

Authors declare that there is no conflict of interest.

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