

Original Article

A giant ureteral polyp mimicking as a bladder mass resected ureteroscopically by diode laser: a case report and literature review

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Abstract: We presented a rare case with giant ureteral polyp that mimics bladder tumor in adult women, originating from the middle segment of the left ureter. The patient was a 42-year-old woman, with a 2.1×1.3 cm bladder mass detected incidentally on a health screening ultrasound. Computerized tomography (CT) of the pelvis revealed a solid tumor situated near to trigon. Cystoscopy demonstrated a tumor that periodically prolapsed into the bladder. After the tumor was identified as a ureteral polyp by ureteroscopy, an ureteroscopic resection by diode laser was performed. The tumor measured 9.0×0.5 cm, and the final pathological diagnosis was ureteral fibroepithelial polyp. No recurrence was observed at the 5-month follow-up.

Keywords: Ureteral polyp, bladder, ureteroscopy, diode laser

Introduction

Primary ureteral tumors are very rare, which can be classified as epithelial or mesodermal origin. The epithelial tumors are mainly urothelial carcinoma, and the mesodermal tumor such as ureteral fibroepithelial polyp (UFP) is more common [1]. The symptoms of UFP depend on polyp size and situation; typical symptoms are hematuria, flank pain, frequency and dysuria [2]. Ureteroscopic excision is widely used to treat UFP, which is less invasive compared to open surgery [3, 4]. Here we report a giant ureteral fibroepithelial polyp in adult woman representing a bladder mass which was resected ureteroscopically by diode laser.

Case report

A 42-year-old woman presented with a mass in the bladder that was detected during a routine checkup. No remarkable abnormalities were found on physical examination. There was no history of gross or microscopic hematuria and flank pain. Blood tests were all in normal range. Ultrasonographic examination revealed a 2.1×1.3 cm slightly hyperechoic mass in the bladder (**Figure 1A**). Computerized tomography

(CT) of the pelvis demonstrated a solid tumor situated near to trigon (**Figure 1B**). On cystoscopy, a polypoid mass protruding into bladder from the left ureteral orifice with periodic movement was observed. In the same session, ureteroscopy was performed which showed a pedunculated tumor arising from the middle segment of the left ureter with a smooth surface and then the lesion was resected completely by diode laser (**Figure 2**). Double-J stent was resided to prevent the ureteral stricture and was removed 4 weeks later. The tumor measured 9.0×0.5 cm, and had a smooth surface (**Figure 3**). Tumor tissue blocks were fixed in 10% buffered formalin and embedded in paraffin. Four-micrometer sections were cut and stained with hematoxylin and eosin. Histological examination confirmed a ureteral fibroepithelial polyp (**Figure 4**). During the last 5 months, the patient was asymptomatic, and there were no evidences of polyp recurrence or ureteral stenosis.

Discussion

Primary ureteral neoplasms are very rare in adults, and they are commonly malignant. Only one-fifth of them are benign, and the UFP is the

A giant ureteral polyp mimicking as a bladder mass

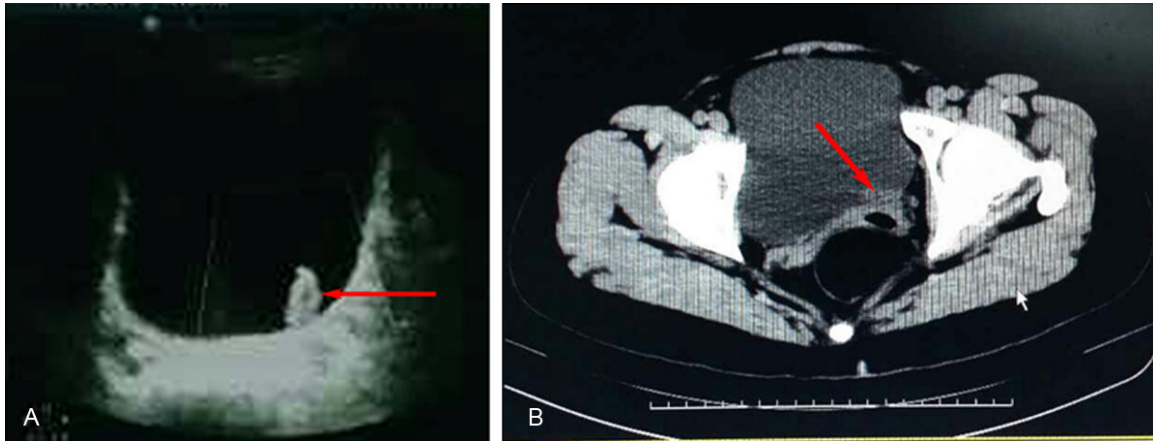


Figure 1. A 42-year-old woman with a solid tumor in her bladder. A. Ultrasonographic examination revealed a 2.1×1.3 cm slightly hyperechoic mass in the bladder (red arrow). B. CT scan without IV contrast material showed a tumor near to trigon (red arrow).



Figure 2. Ureteroscopy showed a pedunculated tumor arising from the middle segment of the left ureter with a smooth surface.

most common non-malignant neoplasm [1]. They are primarily seen in males and most UFP occur in the left ureter [5]. Sometimes there may be multiple polyps or they can be bilateral. Kim et al. described a patient with even more than 20 small polyps in the mid-upper ureter [6]. Most cases occur in the third to fourth decades of life, and with a predilection for the proximal segment of the left ureter. In a previous study of 27 cases reported by M. A. Childs et al, the mean age at diagnosis was 40 years and 59% polyps were proximal, 18% were in

middle segment while 18% were at distal part [7]. The clinical symptoms are different which depending on lesion location in the ureter. The most common presenting symptoms are flank pain and hematuria. Some cases are presented with hydronephrosis secondary to partial or complete ureteral obstruction. When the polyps locate at the distal part of the ureter, patients may present with Lower Urinary Tract Symptoms (LUTs) such as frequency and dysuria. The mean diameter of UFP is reported with less than 5 cm, however, larger polyps may extend into the bladder cavity and they are difficult to distinguish with bladder tumor [8-10]. In our case, the polyp measured about 9.0×0.5 cm, which was detected as a bladder mass by ultrasonographic examination.

The etiology of UFP is unclear. It is thought to be congenital due to developmental anomaly or as a result of chronic urothelial irritants such as stones, infection, obstruction, and trauma [11, 12]. Histologically, UFPs are composed of stroma derived from the mesoderm and covered by normal transitional epithelial cells [13]. Urothelial cell carcinomas arising from UFPs are rare conditions, only a few cases have been reported [14-16]. Although the risk of malignant transformation of UFPs is very low, pathological evaluation is essential.

As its rarity, there is no standard treatment for this disease; however, complete excision is one of the most optimal methods to avoid recurrence and priority should be the surgery with minimal risk of complications. The traditional

A giant ureteral polyp mimicking as a bladder mass



Figure 3. Gross appearance of the tumor: The outer surface of the tumor was smooth and measured 9×0.5 cm in size. The terminal of the lesion (red arrow) located in the bladder.

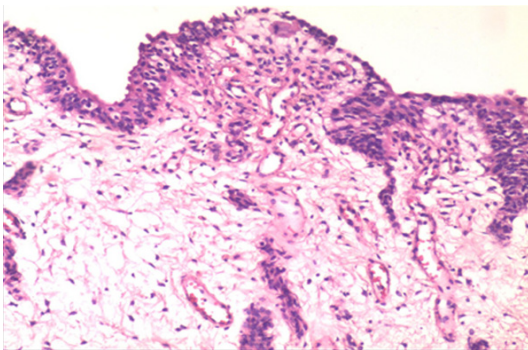


Figure 4. Hematoxylin and eosin stains (100×) of the tumor revealed a ureteral fibroepithelial polyp.

treatment of UFPs is segmental resection. If patients have severe hydronephrosis, stones, decreased renal function, or the polyp elongated into the bladder, open surgery can be considered. Laparoscopic surgery is a minimal invasive technique which can provide satisfactory outcomes in patients with polyps localized at ureter or ureteropelvic junction [17-19]. Endoscopic plans including percutaneous or ureteroscopic approach excisions are acceptable treatment options for large fibroepithelial polyps [20-22], which mean no dermal scars, less hospital stays, and reduced burdens for the patients.

Currently, laser coagulation via ureteroscopy is the most widely used method for the polyps. In our case, the polyp was resected ureteroscopically, to the best of our knowledge; this is the first patient accepted diode laser surgery for UFP reported in the literature.

Conclusion

We have reported an uncommon case of UFP presenting a bladder mass excised uretero-

scopically. It is difficult to distinguish from bladder tumor preoperatively, and necessary to confirm the diagnosis by pathology. Our patient has had no subsequent clinical problems 5 months after surgery. Therefore, we believe that diode laser therapy is safe and effective, but periodically review is necessary.

Disclosure of conflict of interest

None.

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A giant ureteral polyp mimicking as a bladder mass

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