



# Treating Giant Ureteral Fibroepithelial Polyp: A Case Report Using an Endoscopic Approach

Özkan Onuk<sup>1</sup>, Nusret Can Çilesiz<sup>1</sup>, Aydın İsmet Hazar<sup>1</sup>, Tuğrul Gezmiş<sup>1</sup>, Yusuf Turushan Özcanlı<sup>2</sup>, Muhammet Murat Dinçer<sup>3</sup>, Barış Nuhoğlu<sup>1</sup>

<sup>1</sup>Clinic of Urology, Gaziosmanpaşa Taksim Training and Research Hospital, İstanbul, Turkey

<sup>2</sup>Clinic of Urology, Büyükçekmece State Hospital, İstanbul, Turkey

<sup>3</sup>Clinic of Urology, Bağcılar Training and Research Hospital, İstanbul, Turkey

## ABSTRACT

Ureteral fibroepithelial polyps are rarely observed benign lesions of the ureter. Using solely clinical and radiological findings, they are almost impossible to differentiate from malign subtypes of the ureter tumors. Thus, pathological diagnosis is required. Endoscopic resection of the fibroepithelial polyps appears to be safe and efficient. In this article, we aimed to report our approach to a 60-year-old female patient presenting with a ureter tumor detected radiologically and endoscopically after macroscopic hematuria, and to herein discuss our findings in the light of the existing literature.

**Keywords:** Fibroepithelial polyp, ureter, endoscopic, laser

## INTRODUCTION

Primary urethral tumors are very rare and are responsible for less than 1% of all genitourinary neoplasms (1). When clinical and radiological findings are taken into consideration, it is not possible to differentiate them from other malignant ureter tumor subtypes. Definitive diagnosis is made through histopathological diagnosis (2). Only one-fifth of these tumors are benign, and urethral fibroepithelial polyps are benign tumors that more commonly originate from the mesoderm (3).

Here we aimed to present our approach in case of a 60-year-old female patient with a radiologically and endoscopically detected ureter tumor after macroscopic hematuria and to present the results in light of the literature.

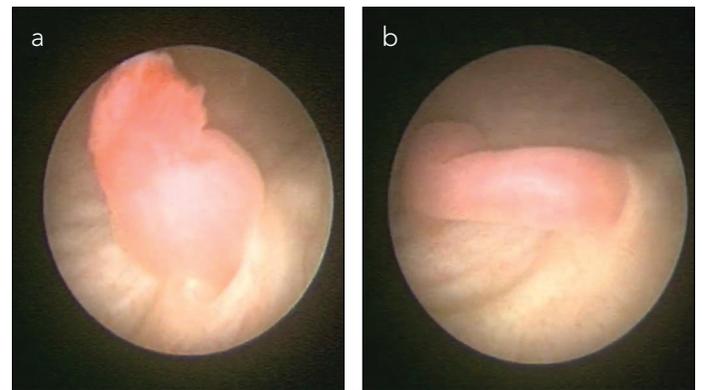
## CASE REPORT

A solid lesion protruding from the lower part of the left ureter into the bladder and moving with the passage of urine was detected in the ultrasonography (USG) of the 60-year-old female patient who was admitted to our clinic with the complaint of macroscopic hematuria. In the cystoscopy, a mass protruding from the left ureter was observed in the patient who had no pathology on the bladder walls. When the ureter was entered through the left orifice with guided ureterorenoscopy (URS), a polypoid mass that filled the urethral lumen and was attached to the urethral mucosa with the help of a pedicle at 7 mm proximal (mid-ureter) of the orifice was observed (Figure 1a, b). The pedicle of this mass was excised with holmium laser (Figure 2). The excised mass was taken out (Figure 3). The remaining urethral trace up to the kidney was observed as natural through URS. No pathology was observed in the renal pelvis through a flexible ureteroreno-

scope, and a 4.8 Fr D-J stent was placed. The excised mass was reported as a fibroepithelial polyp with a size of 6×0.5 cm and with a pedicle measuring 0.2×0.2 cm. The patient was controlled by contrast-enhanced computed tomography (CT) in the 1st-year follow-up, and no pathology was detected. The patient's D-J stent was removed after 21 days. Diagnostic URS was performed in the patient 3 months after the operation. No abnormalities were observed in the bladder and left ureter.

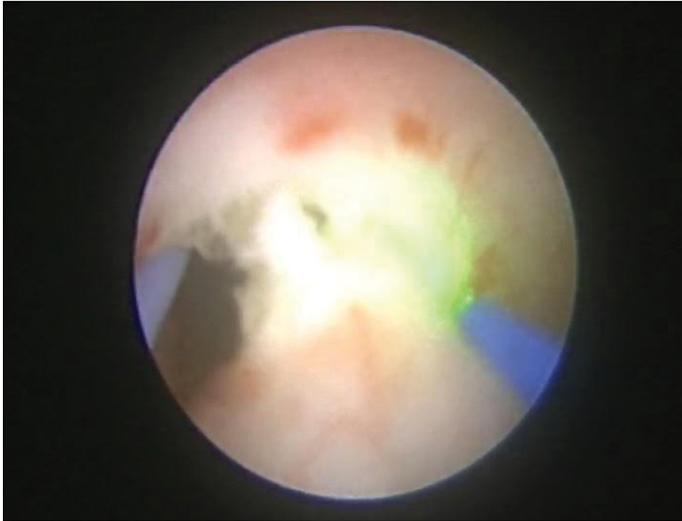
## DISCUSSION

A fibroepithelial polyp is one of the rare benign tumors of the urinary tract. Of the cases, 85% are located in the ureter, 15% are located in the renal pelvis, and a very small proportion is located in the bladder and in the posterior urethral region (4). At the



**Figure 1. a, b.** Polypoid attached to the urethral mucosa with the help of a pedicle





**Figure 2.** Excision of the pedicle by means of holmium laser



**Figure 3.** Excised mass

same time, it is the most common benign tumor of the ureter. A ureteral fibroepithelial polyp (UFP) is seen in the proximal ureter at a rate of 62% (5). Its incidence is 2-fold higher in the left ureter than in the right one (6). In our case, UFP was seen in the left mid-ureter. The cases in the literature were of the size of 0.6–12 cm (7). A 6 cm UFP was excised in our case.

Ureteral fibroepithelial polyp, which can be seen in almost all ages, is most commonly seen in the third and fourth decades. It is 1.5 times more than in women than in men (4).

Although the increase in the incidence in childhood suggests that it is a congenital pathology in terms of etiologic factors, factors such as chronic infection, inflammation, obstruction trauma, and allergic and hormonal changes are still thought to be responsible in adults (8, 9).

Most cases have solitary lesions, but there are also multiple UFP cases in the literature (10). Solitary lesions were also seen in our case.

Fibroepithelial polyps do not become symptomatic as long as they do not cause partial or complete obstruction depending on the size and localization. There may be patients with obstructive and irritative findings such as flank pain, suprapubic pain, hematuria, and dysuria (11). Our patient presented with the complaint of macroscopic hematuria.

Examinations such as intravenous pyelography (IVP), which shows the ureteral filling defect, CT, retrograde pyelography (RGP), and magnetic resonance urography are taken advantage of in the diagnosis. In our case, the polyp was seen to protrude from the lower end of the ureter into the bladder after urethral peristalsis in USG. However, diagnostic URS is the main diagnostic procedure. Simultaneous biopsy or excision can be performed with URS. By this means, the lesion can be both treated and pathologically diagnosed (12).

Urethral UFPs may be long enough to protrude into the bladder. In 4 out of 11 case series, Georgescu et al. (12) identified an ureteral UFP that was detected coming out of the urethral orifice during cystoscopy, as in our case, and was visualized with its pedicle after it became possible to enter the ureter through retrograde URS.

Neoplastic events such as transient cell carcinoma and benign mesenchymal tumors and non-neoplastic events such as hematoma, spilt papilla, and parasitic infections should be considered in the differential diagnosis of these cases (2). Particularly, the differentiation of transient cell carcinoma is very important because it significantly changes the treatment option. Prior to the discovery of endoscopic methods, unnecessary nephroureterectomy used to be performed because the diagnosis was made from nephroureterectomy pieces. De Bruyne et al. (13) reported that urethral UFP was present in 42 patients in their 112 case nephroureterectomy series.

A ureteroscopic approach in urethral UFP is an accepted treatment method because it minimizes the side effects and complications and provides early discharge. The lesion should be excised if it is a typical polyp under endoscopic vision, but if it has an atypical character, pathological help may be requested by performing biopsy during the surgery (14, 15). Under direct vision with the help of URS, the typical urethral polyp was excised with holmium laser and taken out of the body as a whole in our case.

The cases in the pelvicalyceal system, UPJ, and proximal ureter can be approached with percutaneous intervention (14). Multiple, wide, and long polyps can be successfully treated laparoscopically (16). A case in which a polyp excision was performed through robot-assisted laparoscopy has recently been published (17). Our case was treated with a semi-rigid ureterorenoscope using holmium laser, and the kidney pelvis was controlled with flexible urethrorenoscopy. With the introduction of flexible ureterorenoscopes in our current life, minimally invasive procedures have begun to be used in the diagnosis and treatment of such lesions.

## CONCLUSION

Although the risk of recurrence is low, it is recommended that these tumors should be followed closely. There is no consensus about how often and how to perform follow-up. While some sources suggested IVP control in the postoperative 3<sup>rd</sup> month and then annually, some others also added the control ureteroscopy to this approach in the postoperative 3<sup>rd</sup> month. We also performed the control ureteroscopy in the 3<sup>rd</sup> month and evaluated the tumor base and ureter as normal. The patient was controlled with contrast-enhanced CT in the 1<sup>st</sup> year follow-up. On the basis

of late complications reported in the literature, we recommend 3<sup>rd</sup> month control URS and 1<sup>st</sup> year control CT-IVP or ultrasound in order to detect possible recurrence or stenosis.

**Informed Consent:** Written informed consent was obtained from patients who participated in this case.

**Peer-review:** Externally peer-reviewed.

**Author Contributions:** Concept – Ö.O., Y.T.Ö.; Design – N.C.Ç.; Supervision – B.N., Ö.O.; Resources – N.C.Ç., A.İ.H.; Materials – Y.T.Ö., A.İ.H.; Data Collection and/or Processing – B.N., M.M.D.; Analysis and/or Interpretation – Ö.O., N.C.Ç.; Literature Search – M.M.D.; Writing Manuscript – Y.T.Ö., A.İ.H.; Critical Review – B.N., T.G.; Other – T.G., M.M.D.

**Conflict of Interest:** No conflict of interest was declared by the authors.

**Financial Disclosure:** The authors declared that this study has received no financial support.

## REFERENCES

- Piovesan A, Torricelli F, Borges L, Chambô J, Mesquita J, Srougi M. Ureteral fibroepithelial polyps in a pregnant woman: case report. *Sao Paulo Med J* 2009; 127: 238-40. [\[CrossRef\]](#)
- Wang ZJ, Meng MV, Yeh BM, Goldstein RB. Ureteral fibroepithelial polyp. *J Ultrasound Med* 2008; 27: 1647-9.
- Tato Rodriguez J, Lema Grille J, Cimadevila Garcia A, Blanco Parra M, Lamas Cedron P, Rios Tallon L, et al. A fibroepithelial polyp of the ureter. A report of 2 new cases. *Actas Urol Esp* 1997; 21: 420-5.
- Williams TR, Wagner BJ, Corse WR, Vestevich JC. Fibroepithelial polyps of the urinary tract. *Abdom Imaging* 2002; 27: 217-21. [\[CrossRef\]](#)
- Ruiz-López MJ, Ramírez-Garrido F, Noguera-Oca-a M, Muñoz-Hoyos A, Martín A. Recurrent ureteric fibroepithelial polyp in a child. *Eur J Pediatr* 2004; 163: 124-5. [\[CrossRef\]](#)
- Bhalla RS, Schulsinger DA, Wasnick RJ. Treatment of bilateral fibroepithelial polyps in a child. *J Endourol* 2002; 16: 581-2. [\[CrossRef\]](#)
- Klézl P, Stanc O, Richterová R, Gilbert Z, Zátura F. Benign fibroepithelial polyp of the ureter. *Cent European J Urol* 2013; 66: 168-71.
- Macfarlane MT, Stein A, Layfield L, deKernion JB. Preoperative endoscopic diagnosis of fibroepithelial polyp of the renal pelvis: a case report and a review of the literature. *J Urol* 1991; 145: 549-51.
- Nowak MA, Marzich CS, Scheetz KL, McElroy JB. Benign fibroepithelial polyps of the renal pelvis. *Arch Pathol Lab Med* 1999; 123: 850-2.
- Carey RI, Bird VG. Endoscopic management of 10 separate fibroepithelial polyps arising in a single ureter. *Urology* 2006; 67: 413-5. [\[CrossRef\]](#)
- Baltogiannis D, Kafetsoulis A, Giannakis D, Saito M, Miyagawa I, Sofikitis N. Fibroepithelial polyp of distal ureter with periodic prolapse into bladder. *Urol Int* 2008; 80: 338-40. [\[CrossRef\]](#)
- Georgescu D, Muțescu R, Geavlete BF, Geavlete P, Vrabie CD, Drăghici IM, et al. Fibroepithelial polyps - a rare pathology of the upper urinary tract. *Rom J Morphol Embryol* 2014; 55: 1325-30.
- Debruyne FM, Moonen WA, Daenakindt AA, Delaere KPJ. Fibroepithelial polyp of the ureter. *Urology* 1980; 16: 355-9. [\[CrossRef\]](#)
- Lam JS, Bingham JB, Gupta M. Endoscopic treatment of fibroepithelial polyps of the renal pelvis and ureter. *Urology* 2003; 62: 810-3. [\[CrossRef\]](#)
- Coloma del Peso A, Bocardo Fajardo G, Teba del Pino F, Fernández González I, Brime Menéndez R, Fernández Borrell A, et al. Endoscopic treatment of a giant fibroepithelial polyp of the ureter. *Arch Esp Urol* 2010; 63: 305-8. [\[CrossRef\]](#)
- Kijvikai K, Maynes LJ, Herrell SD. Laparoscopic management of large ureteral fibroepithelial polyp. *Urology* 2007; 70: 373-7. [\[CrossRef\]](#)
- Karmo BT, Lim K, Santucci RA, Mansour S. Robot-assisted right ureteral polypectomy: a case report. *Can Urol Assoc J* 2013; 7: E426-9. [\[CrossRef\]](#)