



## Resection of Fibroepithelial Polyps of the Ureter by Holmium Laser in a Female Patient

Mohammad Rahimi Mohsen, Dadashkarimi Hamed\*, Dadashkarimi Mojtaba

University Hospital, Tabriz Medical Science, Iran

\*Corresponding Author: Dadashkarimi Hamed, University Hospital, Tabriz Medical Science, Iran, E-mail: [dadashkarimihamed@gmail.com](mailto:dadashkarimihamed@gmail.com)

---

### Abstract

**Introduction:** Fibroepithelial Polyps (PEP) are rare and benign lesions of the ureter. Several methods have reported for treatment of these lesions like pyeloplasty (robotic or laparoscopic, Ultrasonography (USG), contrast-enhanced CT, and contrast-enhanced MRI can be used to detect fibroepithelial polyps in the urothelial system.

**Case Presentation:** A 41 year old female referred to my hospital by left renal pain. She had done sonography and intravenouspyelography formerly. Sonography detected grade 2 hydronephrosis in the left kidney and IVP detected filling a defect in the upper tract of left ureter; these findings suggested presence of a ureteral polyp. In the patient's ureteroscopy, we encountered many FEP ranging from 5 mm to 20 mm in length that occupied the left proximal ureter which was resected by performing holmium laser. In following up patient by ureteroscopy and imaging one month after surgery we didn't detect any problem in imaging and patient.

**Conclusion:** Using ureteroscopic resection of Fibroepithelial Polyps by holmium laser in patients is a safe method, that can be considered instead of open surgery in the patients with these lesions

**Keywords:** Fibroepithelial polyps (PEP); Ultrasonography; Urothelial system

---

### Introduction

Fibroepithelial Polyps of the ureter are benign lesions that their occurrence in the urinary tract system is 2% to 6% [1]. These polyps are benign tumors and originate from the mesoderm [2]. Although fibroepithelial polyps are rare, they are the most common benign tumors of the ureter [3]. Ureteral fibroepithelial polyps are rare benign non-epithelial tumors that are composed of stroma derived from the mesoderm and covered by a layer of normal transitional epithelial cells. It is important to differentiate between PEP and malignant lesions because our approach to malignant lesions has differences with PEP [4]. This group of tumors includes also angiomatous polyps, leiomyomas, hemangiomas, neurofibromas, lymphangiomas, granulomas, and endometriomas [4]. Fibroepithelial polyps are more commonly found in the ureteropelvic junction or upper ureter [3,4] but may occur in the renal pelvis in children, fibroepithelial polyps are commonly located in the posterior urethra [4]. Most of the lesions are solitary, but there has been a report of multiple fibroepithelial polyps affecting the pelvis and ureter [2]. The etiologic factors of these tumors are still unknown [1]. Such factors as allergy, trauma, exogenous carcinogens and hormonal imbalance have been proposed as causative agents [5]. Some authors believe they have a congenital origin due to their anomalous development [1] or irritation due to calculous disease [4].

Presenting symptoms are hematuria and/or nonspecific flank pain [3,4]. Pain may be intermittent because of partial obstruction and may sometimes be associated with symptoms suggesting urinary tract infection preoperative

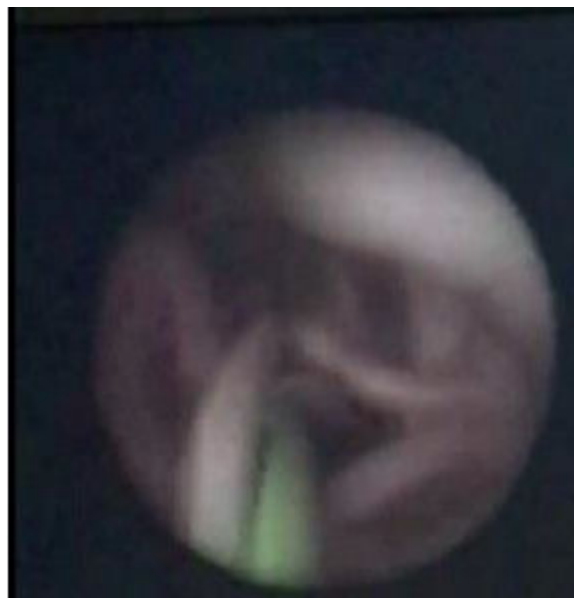
radiologic diagnosis of fibroepithelial polyp is difficult [4]. The first imaging method should be a CT scan. In the 1990s, the commonly used IVP also showed the typical smooth filling defect [3]. Ultrasonography and computed tomography can rule out radiolucent calculi.

### Methods

Several methods are recommended for treatment of these lesions including open or robotic pyeloplasty [2]. These methods are invasive and have more complications for patients [2]. In this study, we reported case of a patient with a fibroepithelial polyps in the proximal ureter that was treated by performing resection with laser ureterorenoscopy. A 30-year-old female was referred to us with left renal pain for 6 months. She was examined by sonography and CT and IVP. Sonography and CT detected grade 2 hydronephrosis in the left kidney and IVP reported filling defect in the proximal of left ureter (Figure1). In the first step, after the imaging evaluations, We did ureteroscopy for her, ureteroscopy showed 8 lesions of length 1-3 cm in the left UPJO (Figure 2) one of this lesions sent for pathology. To differentiate from malignant lesions (Figure 3). Pathology reported FEP. In the second step we resected whole of these lesions with holmium laser by ureteroscope (Figure 4). We identified stalk of the FEP, and by holmium laser resected the stalk of polyp and with grasper removed of the polyps and at the end of the procedure we insert double J in the ureter.



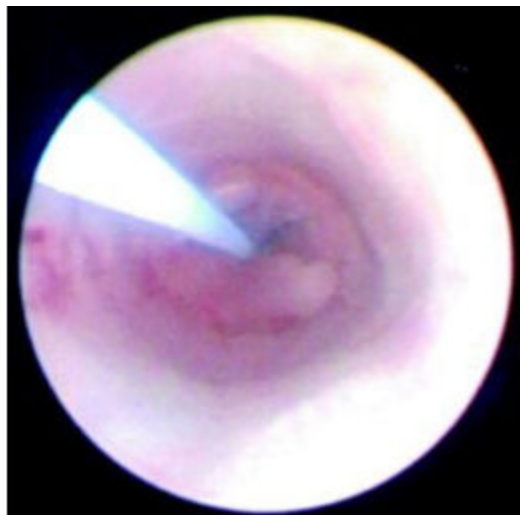
**Figure 1:** Filling defect in the proximal of left ureter



**Figure 2:** Multiple PEP in the ureter



**Figure 3:** A sample of the PEP



**Figure 4:** Ureter after resection of polyps (a month later)

### Results

One month after the surgery there wasn't any stricture in the ureter. The mucosa of the ureter was healed. Then we did IVP and there wasn't extravasation of contrast anymore. Surgery region didn't have any problem and patient didn't report any renal pain.

### Conclusion

Resection of the FEP with holmium laser is a safe method, but if the endourologist is expertise in it. And its result is for long period as compared with open surgery.

### References

- [1] Williams, T.R., et al., Fibroepithelial polyps of the urinary tract. *Abdom Imaging*, **2001**. 27(2): p. 217-221.
- [2] Fraile, AG., et al., Pyelic benign fibroepithelial polyp in childhood: A case report. *J Pediatr Surg*, **1993**. 28(7): p. 948-949.
- [3] Hong Truong, M.D., et al., Ureteroscopic laser resection of multifocal high volume fibroepithelial polyps in the ureter of a pediatric patient a case report. *Pediatric Urology Congress*, **2018**.

- [4] Ugras, S., et al., Fibroepithelial polyp of the ureter associated with an adjacent ureteral calculus. *Int Urol Nephrol*, **1997**. 29(5): p. 543-549.
- [5] Piovesan, A.C., Ureteral fibroepithelial polyps in a pregnant woman. Faculdade de Medicina da Universidade de São Paulo (HC/FMUSP), São Paulo, Brazil, **2017**.