CASE REPORT

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The Laparoscopıc Management Of The Huge Dıstal Fıbroepıthelıal Polyp: A Case Report

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ABSTRACT

Fibroepithelial polyps are the most common benign neoplasm of ureter that originate from mesoderm. These polyps are one of the causes of hydronephrosis by obstructing the ureter. Etiology is not fully defined but there are some publications in the literature suggested that it is due to congenital, infectious, obstructive, traumatic, hormonal imbalances and irritative causes. A 36 years old male patient who admitted with left flank pain and fever. He had a history of endoscopic left ureteric stone surgery 3 years ago. In radiological evaluation with USG and CT, grade 3 hydroureteronephrosis was detected of the left kidney; however, no stone was detected. Ureterorenoscopy detected a 5x1 cm ureteral polyp in the distal ureter and punch biopsy confirmed fibroepithelial polyp. We performed laparoscopic excision of the polypoid segment and ureteroneocystostomy. Although it is rare, fibroepithelial polyp should be considered in hydronephrosis without any urinary stone or malignancy.

Keywords: fibroepithelial polyp, distal ureter, laparoscopic excision, ureteroneocystostomy

Introduction

Fibroepithelial polyps are the most common benign neoplasm of the ureter that originate from the mesoderm. These polyps are one of the causes of hydronephrosis by obstructing the ureter. Even with radiologic imaging and ureterorenoscopy, diagnosis can be difficult. Treatment options include endoscopic resection/fulguration, laparoscopic excision, or excision with open surgery. Moreover, endoscopic treatment can be inconvenient and hard with seriously long or big polyps. To the literature, only limited reports have described the laparoscopic management of large distal fibroepithelial polyps (1-3). Minimal invasive treatments such as laparoscopic excision and reconstruction can be performed only in experienced centers. Here we present treatment of a challenging case with an iatrogenic huge distal fibroepithelial ureteral polyp that we performed laparoscopic distal ureterectomy and ureteroneocystostomy.

Case Report

A-36 years old male patient was admitted to our clinic because of left pyelonephritis. Placement of ureteral stent was done under antibiotic suppression. Following obtaining a sterile urine culture, diagnostic ureterorenoscopy was performed. He had a history of endoscopic left ureteric stone surgery 3 years ago and no polyp was detected in the left ureter. Non-contrast abdominal computer tomography revealed grade 3 hydroureteronephrosis in the left side (Figure 1). We observed a well-circumcised approximately 5 cm papillary lesion that circumferentially obstructed the distal ureter, totally cover the ureteral lumen that allows the passage of ureteroscopy easily at the level of the distal ureter and intramural ureter. A retrograde pyelogram was also performed. We observed no contrast passage to the distal ureter (Figure 2). A punch biopsy was performed and confirmed a fibroepithelial polyp.

After discussion with the patient, a laparoscopic left distal ureterectomy and ureteroneocystostomy were planned. After inserting the first trocars with the fingertip technique and providing pneumoperitoneum, the left ureter was dissected through to the bladder and ligated in the bladder entrance (4). A 5 cm segment of the left distal ureter was excised and bolus urine discharge was observed. Neo-orifice was prepared posterior lateral of the bladder and a double-J stent was placed in the ureter laparoscopically. Ureteroneocystostomy was completed by providing ureterovesical anastomosis with 3/0 vicryl.

Histopathologic examination revealed a 4.5x1.5 cm fibroepithelial polyp that contains papillary structures protruding through to lumen with negative surgical

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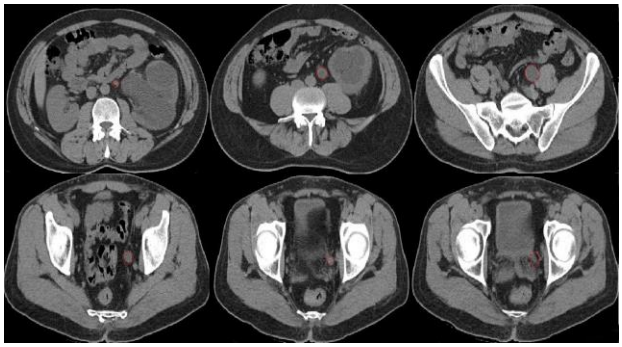

Fig. 1. Radiological Imaging of Hydronephrotic Kidney and Dilated Ureter

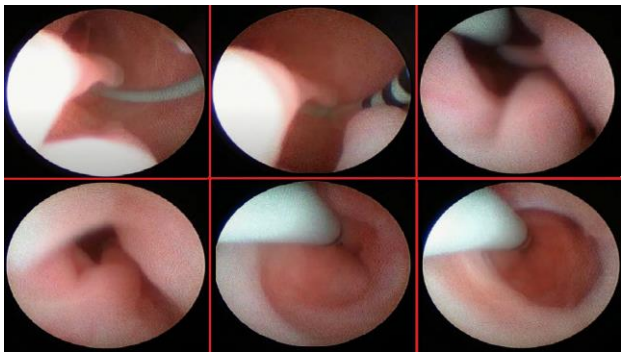

Fig. 2. Ureterorenoscopic View of The Distal Ureteral Polyp

margins (Figure 3-4). The patient was discharged on the third postoperative day. At the postoperative first month, ureteral stent was removed. At the first-year follow-up, he had no evidence of hydronephrosis.

Discussion

The ureteral fibroepithelial polyp is a rare benign tumor that originated from the mesoderm (5). It is usually seen in the proximal ureter (%63) and mostly seen on the left ureter (%60) (6). These polyps are slightly more common in women than men. Although this tumor is seen in the neonate, its' peak period is between the ages of 20-40 (5). These polyps contain mesodermal stroma that is covered by transitional epithelial cell layer (7). Fibroepithelial polyp's etiology is not fully defined but there are some publications in the literature that suggested, it is due to congenital, infectious, obstructive, traumatic, hormonal imbalances, and irritative causes (8). In our case, we think that surgical trauma was the etiology. Since his first endoscopic surgery 3 years ago, no ureteric lesions or symptoms were reported.

Patients' most common complaints are flank pain and hematuria (5). Other clinical findings are urinary frequency, dysuria, or pyuria. When the patient applies to the clinic with these symptoms, the urologists' pre-diagnosis is kidney stone. Urinary

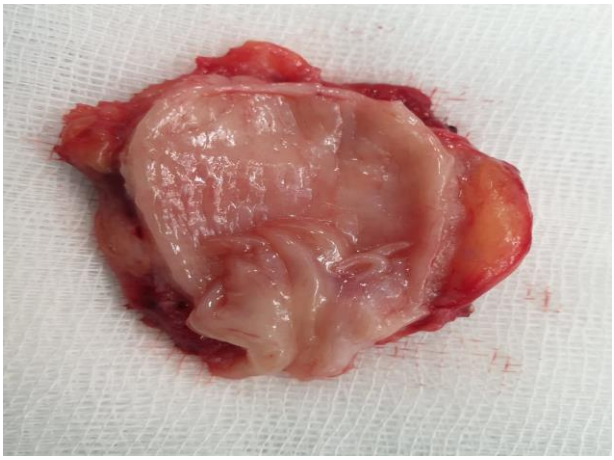

Fig. 3. Macroscopic Appearance of The Distal Ureter and The Polyp

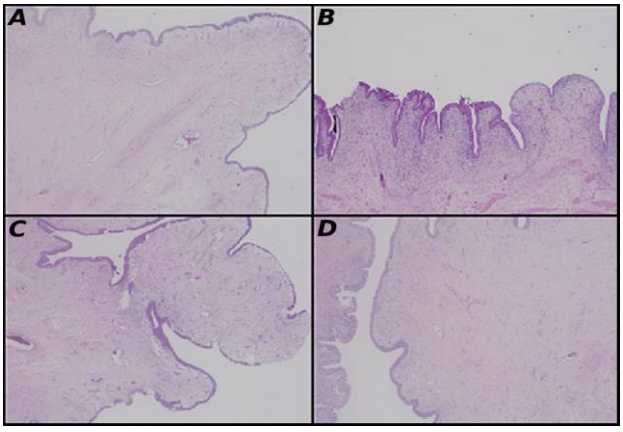

Fig. 4. Microscopic Examination of Ureteral Polyp

A: Mass invaginates into ureter lumen polyploidy, B-C-D: Polyphoid structure surrounded by regular urothelial cells, there are inflammatory cells under the epithelium

ultrasonography helps the clinicians with the diagnosis of hydronephrosis but it is usually inadequate for the evaluation of the ureter. Intravenous urogram or a CT scan may show the filling defect but does not show exact signs for diagnosis (8). When ureterorenoscopy is performed for diagnosis and treatment, tumor and origin point can be seen. If there is still doubt about the diagnosis, the diagnosis can be confirmed by histopathologic examination with punch biopsy before curative treatment (5). In a review by Debruyne et al, it was reported that 41(%37) of 108 patients underwent unnecessary nephrectomy because of non-definitive preoperative diagnosis (7).

Curative management of ureteral fibroepithelial polyp depends on the site, size, and clinicians' expertise (8). There is no standard recommendation about the treatment. Treatments ranging from endoscopic fulguration to open excision have been reported in published series. The method of treatment is determined according to the localization of the polyp

and the patient's and surgeon's preference (9). Before the development of endoscopic or laparoscopic treatments, these polyps were treated by open surgery (9). Lesions that are smaller than 1 cm can be fulgurated or resected endoscopically (9). With the increased size of the polyp, laparoscopic excision can be performed. While pyeloplasty can be performed on polyps in the proximal ureter or ureteropelvic junction, ureteroureterostomy is performed for mid-ureteral polyps. Ureteroneocystostomy can be performed for distal ureteral polyps.

With the development of laparoscopy techniques in urology, shorter recovery and hospitalization have been achieved. The first approach demonstrating the importance of laparoscopic surgery in the treatment of ureteral fibroepithelial polyp was reported by Kijvikai et al (9). On top of this study, Iwatsuki et al. published their study about the laparoscopic approach and treatment of ureteral fibroepithelial polyp in the pediatric population (10). In this study, which demonstrates the importance of microscopic residue in fibroepithelial polyp for recurrence, they reported that laparoscopic excision and removal of the ureteral segment including large polyp importantly decreased recurrence (10).

In our case, the fibroepithelial polyp's location is distal ureter and the size is approximately 5 cm circumferentially cover the distal ureter and intramural ureter. In our case, it was taken into consideration that polyp might have developed due to surgical trauma. Because the patient had multiple endoscopic procedures to the diagnosis of hydroureteronephrosis.

Ureteroneocystostomy was performed due to fibroepithelial polyp cause distal ureteral narrowing circumferentially and it could not be excised totally with endoscopic treatments. Also, the trauma in the ureter may increase after endoscopic fulguration and that may cause ureteral stricture.

After the surgery and removing of double-J ureteral stent at postoperative first month, the patient had no complaint about flank pain and there was no hydronephrosis in CT scan in the first-year follow-up.

When an obvious obstructive pathology is not seen in radiological imaging in the patients presenting with hydronephrosis and flank pain, ureteral fibroepithelial polyp should be considered. Diagnostic ureterorenoscopy should be performed to confirm the diagnosis and biopsy should be taken if necessary. Laparoscopy can be a suitable treatment option in cases that are not managed endoscopically in the experience center.

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