Ureteral fibroepithelial polyp: a clinical case

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ABSTRACT

Objective: To report a case of fibroepithelial polyp of the ureter. The presence of polyps in the urinary tract is rare. They are benign lesions with no malignant potential. They consist of a cone of fibrovascular stroma emerging from the mucosa and covered by normal transitional epithelium.

Clinical case: The patient is a 59-year-old female with a long progression of dysuria and occasional suprapubic pain. At times she presented with intermittent urination. Ultrasound of the bladder produced hyperechoic image with no acoustic shadowing. Excretory urography showed no signs of pyelocaliceal ectasia but revealed a bladder filling defect. Cystoscopy showed growth on right ureteral meatus protruding toward the bladder. The mass was completely resected using endoscopic laser and ureteral fibroepithelial polyp was reported.

Discussion: The majority of fibroepithelial polyps occur in the ureter. They appear to be slow growing congenital lesions or anomalies that develop due to chronic exposure to urothelial irritants such as infection, inflammation or obstruction. Diagnosis is complicated. Treatment should be individualized. Nephroureterectomy

RESUMEN

Objetivo: Informar un caso de pólipo fibroepitelial de uréter. La presencia de pólips en el tracto urinario es rara, son lesiones benignas sin potencial maligno. Se componen de un cono de estroma fibrovascular que emerge de la submucosa y se recubre con epitelio transicional normal.

Caso clínico: Paciente femenino de 59 años con disuria de larga evolución y dolor suprapúbico eventual. En ocasiones presenta intermitencia a la micción. El ultrasonido vesical muestra una imagen hiperecoica sin sombra sónica. La urografía excretora no revela datos de ectasia pielocaliceal, pero sí un defecto de llenado vesical. La cistoscopia delinea una tumoración del meato ureteral derecha que protruye hacia la vejiga. Se realiza una resección completa con láser de la malformación por vía endoscópica y se confirma un pólipo fibroepitelialureteral.

Discusión: La mayor parte de los pólips fibroepiteliales se desarrolla en el uréter. Se trata al parecer de lesiones congénitas de crecimiento lento o anomalías que surgen como resultado de la exposición crónica de irritantes uroteliales, como infección, inflamación u obstrucción. El diagnóstico es complicado. El tratamiento debe individualizarse, ya que las opciones terapéuticas son diversas, incluida la nefroureterectomía; sin embargo, hoy día se recomiendan los
is one of many treatment options. However, currently endoscopic treatments are recommended when the lesion is small and its base has been identified.

**Key words:** fibroepithelial polyp, ureter, endoscopic resection, Mexico.

### INTRODUCTION

Ureteral fibroepithelial polyps are rare benign lesions. An internet search through www.pubmed.com, a service of the United States National Library of Medicine and the National Institute of Health, produced only 143 articles on this pathology, published between September 1961 and August 2008. No reports were found in Mexican publications. Histologically these polyps are made up of stroma that is derived from the mesoderm and covered by a layer of normal transitional epithelial cells. Macroscopically, they are usually sessile and cylindrical. Other benign ureteral neoplasms include leiomyoma, papilloma, hemangioma, lymphangioma, granuloma and fibroma. They have traditionally been treated by means of exploratory surgery resecting segments of the lesion. Stuppler et al³ state that diagnosis differentiating malignant or benign lesions is difficult and so all ureteral tumors, except those whose benign origin can be assured, should be treated aggressively with procedures such as nephrectomy and nephroureterectomy. However, great advances have been made in this area of surgery and with the advent of new technology more precise diagnostic methods and less invasive and more curative laparoscopic and endoscopic treatment can be offered to the patient.

### CLINICAL CASE

The patient is a 59-year-old woman who sought urological out-patient medical attention for long-progression dysuria accompanied with occasional suprapubic pain but with no hematuria, lithuria or fever. She complained of occasional intermittent urination and day and night urination cycle was 7 x 3. Previous administration of antibiotic and anti-inflammatory medication initially resulted in symptomatology improvement but then produced symptom exacerbation. Physical examination revealed no signs of pathology.

Patient arrived at out-patient consultation with initial bladder ultrasonogram that showed a hyperechoic image with no acoustic shadowing. Excretory urography was ordered and results showed adequate pyelographic and nephrographic phases and no bilateral pyelocaliceal ectasia. However, a filling defect at the right side of the bladder and dependent on the right ureteral meatus was identified. Computed tomography of the lower bladder showed an image protruding into the bladder opening at the right side (Image 1). Cystoscopy revealed a tumor extending toward the bladder through the right ureteral meatus (Image 2). Complete resection of ureteral tumor was performed endoscopically with Holmium laser, extracting a 3 x 2 cm surgical specimen. The hospital pathology service reported ureteral fibroepithelial polyp (Image 3).
DISCUSSION

Fibroepithelial polyp origin remains unclear and different hypotheses as to congenital etiology factors have been proposed. It is a tumor of slow growth and is secondary to chronic exposure to infectious, inflammatory, obstructive or traumatic agents. Other causal factors that have been described in the literature are allergy, exogenous carcinogen or hormonal imbalance. Urinary lithiasis and infections that can be a source of chronic irritation have been reported in a few cases. These polyps are histologically classified as benign hamartoma. Only one case of malignant degeneration to transitional cell carcinoma has been reported in the literature.

It is important to distinguish fibroepithelial polyp and benign ureteral tumor from urinary tract carcinoma, because management and prognosis are significantly different. It had been customary procedure to obtain histopathological diagnosis through biopsy before definitive treatment as suggested by Lam et al. However, the current tendency is resection at the moment of diagnosis under direct vision, but only when typical macroscopic characteristics of the polyp are recognized. If polyp is atypical, intraoperative histopathological study can be carried out. Radical surgery is not affected if histopathological result indicates malignancy after endoscopic resection has been done, as has recently been proposed by Sun et al.

The most common symptom of fibroepithelial polyp is kidney colic in 76% of patients, hematuria in 65%, as well as symptoms of urinary intermittency, intermittent flank pain as well as suprapubic pain in 33% of patients. Suprapubic pain is dependent on the location of the lesion and is attributed to twisting of the polyp that provokes ischemia, infarct or urinary tract obstruction. According to reports in the literature, frequency, dysuria and pyuria are less common urinary symptoms. However, in the present case these were the main symptoms, and there was no hematuria.

Fibroureteral polyp is difficult to diagnose. Imaging studies such as excretory urography generally reveal filling defects at tumor site. Ultrasonography can identify polypoid hypoechoic structure with projections into the tumor site and with no acoustic shadow in it. Tomography does not really have an important place in ureteral polyp diagnosis. However, it is useful in ruling out differential diagnoses such as lithiasis, clots and infectious processes. Cytology study is negative. The best diagnostic method is the use of either cystoscopy or ureteroscopy under direct vision. Hydronephrosis secondary to an obstructive mechanism that can provoke tumor is a common finding in all imaging studies mentioned above.

Ureteral fibroepithelial polyp is more common in men and in the left ureter. It is generally localized in the proximal portion of the ureteropyelic junction in 62% of cases. This does not occur in fibroepithelial polyps reported in kidney, where it is prevalent both in women and on the right side in 79% of cases.

Treatment should be individualized. Many techniques and approaches are described in the literature, the majority of which describe open surgery for fibroepithelial polyp resection. However, it can be said that today the only justification for open surgery is in cases of patients presenting with a single kidney. The principal objective of open, laparoscopic or endoscopic surgery is to adequately visualize the base of the lesion.
in order to completely extract the surgical specimen. Percutaneous treatments have been described in which tumor is localized in the upper urinary tract, principally in the renal cavity or ureteropyelic junction. Successful laparoscopic treatment has been described in patients with large, long polyps as well as with multiple polyps. Even though this technique requires three incisions, it has the advantage of extracting the specimen at its base, thus avoiding recurrence. However, this procedure is not recommended for small lesions due to the difficulty in finding and visualizing them. Carey et al have described endoscopic management of 10 different types of fibroepithelial polyp in a single ureter using flexible ureteroscope and Holmium laser.

The patient discussed here presented with one fibroepithelial polyp in the distal portion of the ureter at the right ureteral meatus plane that was endoscopically managed. In the published series of more than 23 cases by Kumar et al, only 2 had tumor localization in the distal portion of the ureter. At present the patient described in this article is almost completely asymptomatic with a significant reduction in dysuria, her principal complaint. Computed axial tomography has shown no lesion recurrence.

BIBLIOGRAPHY