INTRODUCTION

The estimated annual incidence of urothelial carcinoma (UC) in Europe and North America is about two new cases per 100,000 inhabitants [1]. Primary ureteral tumors are very rare, and present less than 1% genitourinary cancers [2] and can be either of epithelial or mesodermal origin.

While the vast majority of epithelial tumors are urothelial carcinomas, the fibroepithelial ureteral polyp (FUP) represents the most common type of mesodermal tumors, followed by leiomyomas, lymphangiomas, and neurofibromas [3]. Although FUPs are benign lesions, cases of coexistent urothelial carcinomas have been reported [4].

CASE REPORT

A 48-year-old male patient, with no previous history of stone disease, no past surgical intervention of the ureters, no previous ureteral stenting, presented with gross hematuria.

A pelvic ultrasound confirmed the presence of an intravesical mass, and therefore cystoscopy was done, revealing an elongated lesion floating inside the bladder, appearing at the level of the left ureteral meatus, which was not well visualized.

Uroscan with and without contrast phases was done, confirming a proliferative intravesical lesion, extending through the left uretero-vesical junction (UVJ), presenting a left distal ureteral extension of about 30 mm above the UVJ (Fig. 1-2), with no evidence of uretero- or hydronephrosis.

Urine cytology came negative. Decision was made to undergo an endoscopic resection of the lesion (Fig. 3-4).

Pathology results showed benign FUP with no signs of malignancy.

Control ureteroscopy done after three months revealed a small left distal ureteral pedunculated, narrow-nicked lesion, which was resected using laser (Fig. 5-6).

Pathology report confirmed a benign FUP.

DISCUSSION

Primary ureteral lesions are very rare. They can be divided into malignant ones, arising from the epithelium, to which urothelial carcinomas represent more than 95% of cases [1], or can be benign arising from the mesoderm, with FUP being the most common type.

In a review by Williams et al. [3], among 41 pathologically documented cases of fibroepithelial polyps of the urinary tract, 73% of them involved the ureter, of which 63% involved the ureteropelvic junction (UPJ). There is a predominance of about 70% for FUP lesions to appear on the left ureter. Mean diameter of the polyp is around 5 cm; however, larger polyps protruding into the bladder have been reported.
FIGURE 1. Arrow showing ureteral lesion protruding into the bladder.

FIGURE 2. Filling defect showing the lesion at the level of left UVJ (arrows).

FIGURE 3. Endoscopic resection. a-b) Ureteral meatus (1) and lesion (2-3) protruding into the bladder. c) Resection of the lesion and the ureteral meatus. d) Ureteral meatus wide open after resection.

FIGURE 4. Resected lesion.

FIGURE 5. Uteroscopy showing a recurrent pedunculated distal ureteral lesion.

FIGURE 6. Resected lesion using laser.
Typically, patients are young adults in their third to fifth decades, presenting with gross painless hematuria with or without recurrent flank pain, with a male-to-female ratio of 3 to 2. FUP is often a solitary presentation, but several cases of multiple, bilateral FUP lesions have been reported in literature [5].

It can be extremely challenging to distinguish between UC and FUP lesions based on imaging studies and presenting symptoms, as FUP tends to almost exactly mimics UC in both. Since the FUPs are covered by urothelium, urine cytology has a limited benefit and can’t be decisive.

Surgical resection for final diagnosis and treatment is the most common practice. In one series, this approach resulted in unnecessary nephro-ureterectomy in 37% of the cases treated [6].

CONCLUSION

Up till now, there are no evidence-based guidelines for the treatment for FUP. Complete lesion resection with the lowest possible rates of comorbidities and maximal renal function preservation should be highly considered. Endoscopic laser resection of these polyps presents a more desirable and effective treatment, with minimal morbidities, no external scars, and the clear advantage of sparing the patient an unnecessary nephro-ureterectomy, putting in mind the absolute need of regular follow-ups imaging and ureteroscopy studies, as recurrence is a concern.

REFERENCES