Case Report:

A Case of Fibroepithelial Polyp in Right Lower Ureter

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Abstract
Fibroepithelial Polyps (FEPs) are rare tumors of the urinary tract. Here, we describe an adult case of FEP developing in the lower ureter. A 38-year-old man consulted our hospital because of macrohematuria. Computed Tomography (CT) scan and retrograde urethrocystoscopy revealed a tumor in the lower ureter. The tumor was transurethrally resected and was histologically diagnosed as an FEP. Urothelial carcinoma is the most commonly found tumor in the ureter. However, we also have to take benign tumors, such as FEPs, into account, when we find tumor(s) in the ureter.

Keywords: Fibroepithelial Polyps; Ureter

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Introduction

Ureteral Fibroepithelial Polyps (FEPs) are rare benign tumors. A few hundred cases of urethral FEP(s) have been reported in the literature [1]. FEP is histologically composed of fibrous stroma covered with a transitional urothelium [2]. FEPs are commonly presented in adults in the third to fifth decades, while FEPs rarely develop in children [2]. The male-to-female ratio is 3:2 for developing FEPs. In adult patients, most FEPs in the urinary system develop in the ureter. Sixty-two percent of them are located in the upper ureter or uretero-pelvic junction, while 15% of them are located in the pelvis. The left ureter is involved more commonly than the right, with a ratio of 2:1 [3]. FEPs are usually found as a solitary polyp but rarely multiple FEPs have been reported [4]. Clinical main symptoms of FEPs are hematuria and flank pain [2]. Urinary frequency, dysuria and pyuria are also reported as symptoms of urinary tract FEPs. Here, we present a case of FEP arising in the right lower ureter in a 38-year old man.

Case Report

A 38-year-old man consulted our hospital because of macrohematuria. The patient had hypertension, type 2 diabetes mellitus, and hyperlipidemia. An abdominal Computed Tomography (CT) scan revealed wall thickness and dilatation in the lower part of the right ureter (Figure 1A and 1B). A retrograde urethropyelography revealed a filling defect in the same place, suggesting a ureteral tumor Figure (1C). Cytological examination of his urine did not show abnormal cells or tumor cells. An examination using rigid ureteroscopy revealed the tumor in the lower part of the right ureter Figure (2A). The tumor was resected transurethrally. The resected tumor was about 40x3mm in size. After resection, his macrohematuria disappeared. A histological examination of the tumor, showed a core of loose fibrovascular stroma with dilated blood vessels covered by a layer of urothelial cells, associated with congestion, edema, and mild infiltration of inflammatory cells. There was no cellular atypia, suggesting that the tumor was an FEP.

Discussion

It has been reposted that FEPs in the urological area mainly develop in the left upper ureter in middle-aged male patients [5]. In our case, age, gender, and
Macrohematuria are consistent with previous reports. The tumor origin site of our case is the right lower ureter, which is a relatively rare origin site.

Although the etiology of FEPs is not well known, several causes of FEPs have been proposed, such as, chronic stimulations, infection, hormonal imbalance, allergic factors, and developmental defects [6]. The most presumable cause could be chronic stimulations, including physical stimulations and infections, resulting in induction of chronic inflammation. Actually, stone(s) has been found in the pelvis or ureter in some patients with FEPs [6]. In our case, there was no stone in the pelvis or ureter, no evidence of infection or allergy. Therefore, we cannot elucidate or suggest the cause of FEP in our case.

Main symptoms of FEPs are hematuria and flank pain, and most patients present with flank pain (66.4%) and/or hematuria (43.1%) [7]. Debruyne et al. described that the pain could be associated with periodic episodes of distention of the renal pelvis and ureter [8]. Twenty percent of patients with FEP(s) have urolithiasis [7]. Moreover, other urological abnormalities have also been reported in patients with FEP(s). Therefore, these factors could be associated with the flank pain. In our case, the patient did not complain of any flank pain, although a dilated ureter was observed.

Macrohematuria has been sometimes observed in patients with FEPs. Some other complications have been reported, such as urolithiasis or urological abnormalities, as described previously. In our case, there was no urolithiasis or urological abnormality. The FEP in our case was histologically rich in dilated blood vessels. Therefore, if erosion was induced, bleeding could easily occur from the FEP.

For treating FEP, endoscopic resection was mainly carried out (43.4%) [7]. Ureterotomy (23.9%) and partial ureterectomy (23.0%) were also performed. The recurrence rate of the FEP was 1.8%. These results suggest that simple resection would be enough for treating FEPs. In our case, the endoscopic resection of the polyp was carried out and there has been no recurrence of the polyp 5 years since the operation.

In this report, we have presented a case of FEP arising in the right lower ureter in a 38-year-old man. When we find a ureteral tumor, we have to consider not only urothelial carcinoma but also benign tumors, and avoid unnecessary treatment.

References