

A Case Report of Rare Case of Carcinoma Ureter (Middle Part)

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Abstract: We report a case of carcinoma ureter (mid-portion of ureter), which is a uncommon disease entity. This 60 year old male suffered from Rt sided flank pain, hematuria and difficulty in passing urine. Ultrasound abdomen was showing lower ureteric calculi of 9×6mm about 2.5cm away from bladder. CT abdomen was showing a 2×2 cm mass involving lower part of ureter with gross hydronephrosis. Cystoscopy with ureteroscopy was done and biopsy was taken from the growth which was showing transitional cell carcinoma of ureter. The patient then underwent right total nephroureterectomy through transperitoneal approach through midline incision. The pathology was compatible with transitional cell carcinoma of ureter. Postoperative period was uneventful.

Keywords: Carcinoma ureter, Hematuria, Nephroureterectomy, Transitional cell carcinoma.

INTRODUCTION

Hematuria is one of the common problems encountered in urological practice. Most often it is caused by renal stones but painless hematuria can also be caused by ureteric cancer, an uncommon disease entity [1]. Transitional cell carcinoma (TCC) of ureter is least common of all urinary tract malignancies and 100 times less common than TCC of the bladder. It accounts only 1% of all urinary tract malignancies [2]. CT abdomen is the investigation of choice for diagnosing these cancers and differentiating it from stones. Nephroureterectomy followed by chemotherapy is the conventional treatment. We report this case since carcinoma ureter involving middle part of ureter is one of the rare cause of hematuria with incidence less than 1%.

CASE REPORT

A 60 year old male came with complaints of hematuria, difficulty in passing urine and right sided loin pain which was progressively increasing in nature. An ultrasound of abdomen was done which was showing around 9×6mm calculi about 2.5cm away from the bladder. Patient was started on conservative management for ureteric stone. Since the patient continued to complain of gross hematuria CT abdomen was done and was showing a 2×2 cm mass involving lower part of ureter with gross hydronephrosis. A cystoscopy with ureteroscopy was done and biopsy was taken from the growth and sent for histopathological examination which revealed transitional cell carcinoma (TCC). An elective right nephroureterectomy was planned. Through a midline incision, through a

transperitoneal approach a growth of size 4×2cm was seen involving the middle portion of ureter intraoperatively (Fig. 1). Right kidney was grossly dilated, ureter was traced upto right ureterovesical junction and after ligating the renal vein and renal artery right nephroureterectomy was done. Postoperatively patient was uneventful.



Fig. 1: Intra operative picture of carcinoma ureter



Fig. 2: Resected specimen of grossly dilated kidney with carcinoma ureter

DISCUSSION

Ureteral tumour occurs more commonly in the lower ureter than in the upper. About 70% of ureteral tumours occur in the distal ureter, 25% in the midureter, and 5% in the proximal ureter. This phenomenon may be a reflection of downstream implantation. Upper tract cancers before the age of 40 years are rare. The mean age at presentation is 65 years. They are twice more likely to occur in men than in women [3].

Transitional cell carcinoma of the renal pelvis accounts for 7% of all kidney tumours, while that of the ureter, accounts for only 1 of every 25 upper tract tumours. They are curable in more than 90% of patients if they are superficial and confined to the renal pelvis or ureter. Patients that have deeply invasive tumours, still confined to the renal pelvis or ureter have 10-15% likelihood of cure [4]. Incidence of bladder cancer ranges between 30-50% after upper urinary tract transitional cell cancer [5].

Two main morphological patterns are papillary and non-papillary. Papillary type accounts for 60% of tumours and they tend to be low grade tumours with invasion as a late feature. Non-papillary type tends to be high grade and invasion is an early feature [6]. Patients with tumours with urothelial wall penetration or with distant metastases usually cannot be cured with currently available forms of treatment [4].

The most common presenting symptom of upper tract urothelial tumours is hematuria, either gross or microscopic. This occurs in 56% to 98% of patients. Flank pain is the second most common symptom, secondary to a gradual onset of obstruction and hydronephrotic distention [7]. Ultrasound has a little role in the diagnosis transitional cell carcinoma of ureter [6]. CT urography is the investigation of choice

and is increasingly performed today for diagnosing upper urinary tract tumours [8].

The standard treatment for upper urinary tract tumours is total nephroureterectomy with the removal of the cuff of bladder [9]. Segmental resection of the bladder can be done only if the tumour is superficial and is involving the distal part of ureter [10]. Newer techniques such as electroresection and laser fulguration can be done transureterally or percutaneously which destroys primary cancer [11]. Additionally chemotherapy is required in case of advanced tumours and tumours with lymph node involvement.

Upper tract urothelial cancers are often found to be associated with a poor prognosis. It is reported that up to 19% of patients with upper tract TCC present initially with metastatic disease. Studies have reported that renal pelvic tumors have a better overall prognosis and 5-year disease-specific and recurrence-free survival than the ureteral tumours. The overall prognosis of upper tract tumours seems to be principally related to tumour stage but lesser extent to tumour grade [12]. Hence early diagnosis and prompt treatment of these tumours.

CONCLUSION

Ureteral cancers are uncommon disease entity which presents as hematuria, which is a common clinical symptom in urological practice. It often mimics ureteral stone in ultrasonography which misleads diagnosis and increases morbidity. Hence early diagnosis and prompt treatment helps in better survival of these patients as they have got poor prognosis and early metastatic spread.

REFERENCES

1. Flanigan RC; Urothelial tumours of upper urinary tract. In Wein AJ, Kavoussi LR, Novick AC, Partin AW, Peters CA editors; Campbell-Walsh Urology. 9th edition, Chapter 48, Saunders, St. Louis, 2007.
2. Leder RA, Dunnick NR; Transitional cell carcinoma of pelvicalyces and ureter. AJR Am J Roentgenol., 1990; 155(4): 713-722
3. Sagalowsky AI, Jarrett TW, Flanigan RC; Urothelial tumors of the upper urinary tract and ureter. In Wein AJ, Kavoussi LR, Novick AC, Partin AW, Peters CA; Campbell-Walsh urology. 10th edition, Chapter 53, Elsevier Health Sciences, 2011: 1516, 1517, 1518.
4. National Cancer Institute; Transitional Cell Cancer of the Renal Pelvis and Ureter Treatment (PDQ®). General information about transitional cell cancer of the renal pelvis and ureter. Available from <http://www.cancer.gov/cancertopics/pdq/treatment/transitionalcell/HealthProfessional/page1>

5. Krogh J, Kvist E, Rye B; Transitional cell carcinoma of the upper urinary tract: prognostic variables and post-operative recurrences. 1991; Br J Urol., 67(1): 32-36.
6. Abd Rabou A, Gaillard F; Transitional cell carcinoma of the ureter. Radiopaedia.org. Available from <http://radiopaedia.org/articles/transitional-cell-carcinoma-of-the-ureter>
7. Sagalowsky AI, Jarrett TW, Flanigan RC; Urothelial tumors of the upper urinary tract and ureter. In Wein AJ, Kavoussi LR, Novick AC, Partin AW, Peters CA; Campbell-Walsh urology. 10th edition, Chapter 53, Elsevier Health Sciences, 2011: 1522.
8. Browne RFJ, Meehan CP, Colville J, Power R, Torreggiani WC; Transitional cell carcinoma of the upper urinary tract: Spectrum of imaging findings. RadioGraphics, 2005; 25(6): 1609–1627.
9. Latchamsetty KC, Porter CR; treatment of upper tract urothelial carcinoma: A review of surgical and adjuvant therapy. Rev Urol., 2006; 8(2): 61–70.
10. Transitional Cell Cancer of the Renal Pelvis and Ureter Treatment (PDQ®). Available from <http://www.cancer.gov/cancertopics/pdq/treatment/transitionalcell/HealthProfessional/page9/AllPages/Print>
11. National Cancer Institute; Transitional Cell Cancer of the Renal Pelvis and Ureter Treatment (PDQ®. General information about transitional cell cancer of the renal pelvis and ureter. Available from <http://www.cancer.gov/cancertopics/pdq/treatment/transitionalcell/HealthProfessional/page5>
12. Sagalowsky AI, Jarrett TW, Flanigan RC; Urothelial tumors of the upper urinary tract and ureter. In Wein AJ, Kavoussi LR, Novick AC, Partin AW, Peters CA; Campbell-Walsh urology. 10th edition, Chapter 53, Elsevier Health Sciences, 2011: 1518.