International Journal of Advances in Medicine
Sengupta S et al. Int J Adv Med. 2020 Oct;7(10):1585-1587
http://www.ijmedicine.com
pISSN 2349-3925 | eISSN 2349-3933
DOI: http://dx.doi.org/10.18203/2349-3933.ijam20204078

Case Report

Transitional cell carcinoma of the upper urinary tract: a puzzle

Soumish Sengupta[1]*, Supriya Basu[1], Kadambari Ghosh[2]

[1]Department of Urology, R. G. Kar Medical College and Hospital, Kolkata, West Bengal, India
[2]Department of Radiology, Basu's Clinic Healthcare Private Limited, Siliguri, West Bengal, India

Received: 07 August 2020
Accepted: 08 September 2020

***Correspondence:**
Dr. Soumish Sengupta,
E-mail: soumishuro@gmail.com

ABSTRACT

Transitional cell carcinoma (TCC) of the upper urinary tract has a puzzling presentation. This is a case report of a 44 year old male with history for smoking 20 pack years presenting with cough, haemoptysis and microscopic haematuria. His sputum was positive for acid fast bacilli. He was treated as pulmonary tuberculosis (PTB) but had gross haematuria a month after initiation of anti-tubercular drugs (ATD). He was investigated with computed tomography (CT) imaging and was found to have thickened renal pelvis and ureter. It was initially thought as a case of genito-urinary tuberculosis (GUTB). Expectant management for gross haematuria failed. The patient was stabilised and taken up for open nephroureterectomy under general anaesthesia (GA). Histopathological report suggested it to be high grade TCC of the left renal pelvis extending to upper ureter. He did well with completion of ATD. He was not started on adjuvant chemotherapy for fear of exacerbation of PTB. He is under regular and uneventful follow up in the outpatient department (OPD).

Keywords: Kidney, Renal pelvis, Haematuria, Transitional cell carcinoma

INTRODUCTION

Upper urinary tract carcinoma is a relatively rare disease, comprising 5% to 10% of all urothelial tumours with highest incidence in Balkan countries.[1] Peak incidence is in individuals in their 70s and 80s.[2] They are usually associated with poor prognosis with 19% having metastatic disease on initial presentation. Male to female ratio is 4:1. Commonest presentation is haematuria either gross or microscopic and flank pain. Many endoscopic managements are illustrated in text but the most common mode of treatment is nephroureterectomy either open or laparoscopic.

CASE REPORT

Case history

A 44 year old male patient presented to the outpatient department (OPD) with complaints of cough and haemoptysis. He had undergone urine analysis as advised by his general practitioner, which revealed 7-8 red blood cells per high power field (RBCs/HPF). He has history of smoking 20 packs years of cigarette. He has no history of diabetes, hypertension or any previous surgery. His family history is unremarkable and he is a teacher by profession.

He was advised urine for culture sensitivity and ultrasonography of abdomen. A chest consultation was asked for cough and haemoptysis. His sputum for acid fast bacilli (AFB) was positive. He was started on anti-tubercular drugs (ATD) category I.

His condition deteriorated and he had two episodes of gross haematuria. He presented to the emergency. He was admitted and stabilized. His condition was ultrasonography showed hydronephrosis of the left kidney with echogenic debris and normal ureter and bladder. The urine was sent for cartridge based nucleic acid

amplification test (CBNAAT) for *Mycobacterium tuberculosis*.

The haematuria was not responding to any expectant management. Blood picture showed lymphocytosis and urine culture showed no growth of microorganisms. His coagulation profile and liver function tests (LFT) were within normal range. He was advised Contrast enhanced computed tomography scan (CECT) of the abdomen which revealed hydronephrosis of left kidney with thickened renal pelvis and dilatation of the proximal ureter.

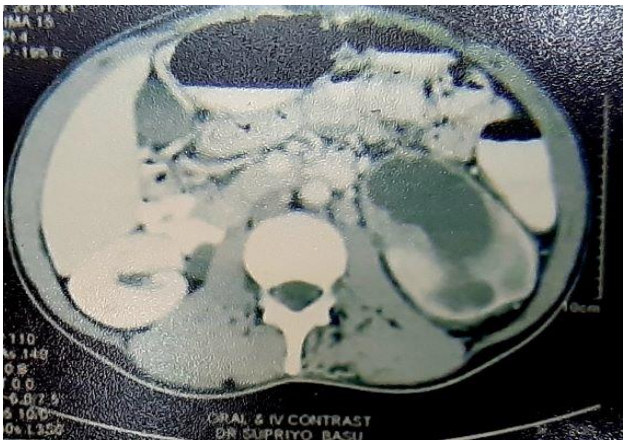

Figure 1: CT scan showing the left hydronephrosis with thickened renal pelvis.

Management

As he had refractory haematuria requiring regular blood transfusion, he was taken up for left nephroureterectomy under general anaesthesia in supine position with left sub coastal incision. Intraoperative findings showed gross desmoplastic reaction in the left pararenal space with loss of fat planes. There was no visible lymphadenopathy.

Bladder cuff (portion of the urinary bladder 2 cm around the left ureteric orifice) was also excised with an additional left Gibson's incision.

Figure 2: The operative specimen with left kidney, ureter and bladder cuff.

Cut surface revealed mass inside the renal pelvis and upper ureter.

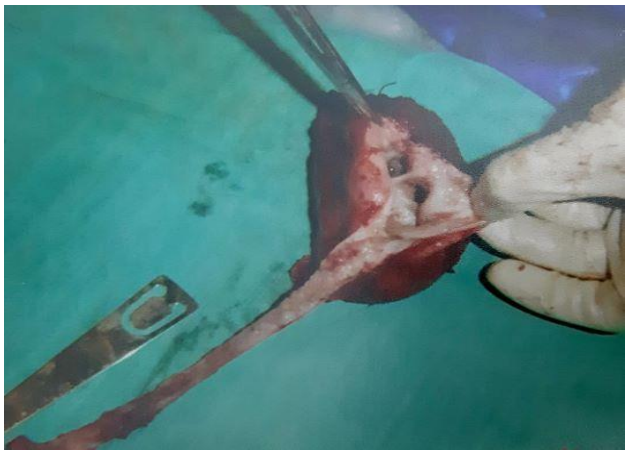

Figure 3: Cut section of the renal pelvis showing mass.

Histopathological examination revealed high grade transitional cell carcinoma of the left renal pelvis and upper ureter. There was involvement up to the muscularis propria. Margins were also free from tumour. Three hyperplastic lymph nodes were seen with no tumour deposits. The patient was continued on ATD. He is on regular follow up every 3 months with physical examination, urine cytology for malignant cells, cystoscopy, chest x- ray and LFT. He undergoes CECT of the abdomen and pelvis every 6 months and has shown no signs of recurrence.

DISCUSSION

TCC of the upper urinary tract has a poor prognosis. In a situation like this, it was very difficult initially to divert our attention from genito-urinary tuberculosis (GUTB). So, we were reluctant to go for surgical options. We planned for ureteroscopic assessment and brush biopsy but gross haematuria did not respond to any conservative management and deteriorating haematocrit compelled us to go for nephrectomy. TCC was in our differential diagnosis. He had history of smoking but we were biased as he was being treated for PTB. It was only the intraoperative findings which engrossed our thoughts with this pathology. Many studies have shown adjuvant chemotherapy with platinum effective against TCC.[3,4] To the contrary, there is lack of controlled trials that establish the efficacy of either neoadjuvant chemotherapy (NACT) or adjuvant chemotherapy (ACT) in upper tract TCC. The focus is shifting towards a neo-adjuvant approach, with several trials underway. In our case as the patient was under treatment for pulmonary tuberculosis, we did not opt for any adjuvant chemotherapy fearing the flaring up of tuberculosis.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Siegel R, Naishadham D, Jemal A. Cancer statistics, 2013. CA Cancer J Clin. 2013;63:11-30.
2. Roupret M, Zigeuner R, Palou J, Boehle A, Kaasinen E, Sylvester R, et al. European guidelines for the diagnosis and management of upper urinary tract urothelial cell carcinomas: 2011 update. Eur Urol. 2011;59:584-94.
3. Hellenthal NJ, Shariat SF, Margulis V, Karakiewicz PI, Roscigno M, Bolenz C, et al. Adjuvant chemotherapy for high risk upper tract urothelial carcinoma: results from the Upper Tract Urothelial Carcinoma Collaboration. J Urol. 2009;182:900-6.
4. Kwak C, Lee SE, Jeong IG, Ku JH. Adjuvant systemic chemotherapy in the treatment of patients with invasive transitional cell carcinoma of the upper urinary tract. Urology. 2006;68:53-7.

Cite this article as: Sengupta S, Basu S, Ghosh K. Transitional cell carcinoma of the upper urinary tract: a puzzle. Int J Adv Med 2020;7:1585-7.