



RENAL CELL CARCINOMA WITH URETERIC DROP METASTASIS : A RARE CASE REPORT

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ABSTRACT Aggressive local behaviour is not uncommon with Renal Cell Carcinoma, and can be expressed in a variety of ways. The local renal tumour growth and extension could be to involve peri renal fat, adrenal glands, renal vein, inferior vena cava, urinary collecting system or retroperitoneal structures but not in renal pelvis or the ureter. Invasion of tumour in renal pelvis and/or ureter is very rare. The case in present report is very rare presenting as RCC with involvement of pelvis, ureter and renal vein. Very few theories explaining the renal pelvic invasion and direct growth down the ureter have been postulated.

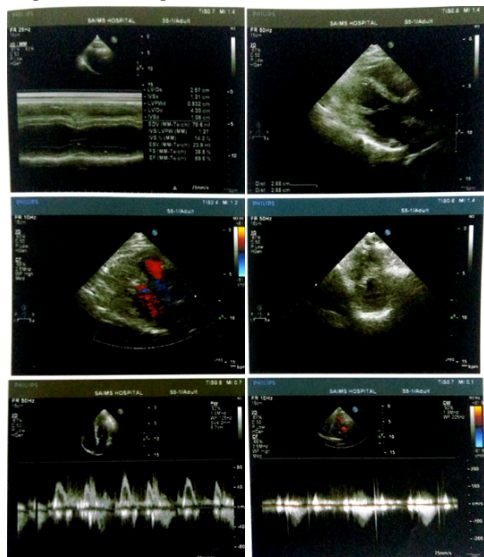
KEYWORDS : Renal cell carcinoma, drop metastasis, tumor thrombus, pelvic invasion

INTRODUCTION:

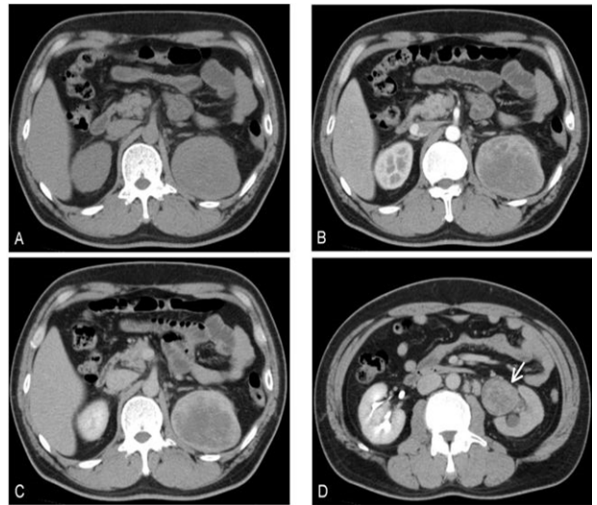
Renal Cell carcinoma the most common malignancy of the kidney accounting for 2 to 3% of all malignant neoplasms. Aggressive local behaviour is not uncommon with RCC and can be expressed in a variety of ways. One unique feature of RCC is its predilection for involvement of the venous system, which is found in 10% of RCCs, more often than in any other tumour type. This is most commonly manifested in the form of a contiguous tumour thrombus that can extend into the inferior vena cava (IVC) as high as the right atrium. Many such tumour thrombi are highly vascularized by arterial blood flow. The local renal tumour growth and extension could be to involve peri renal fat, adrenal glands, renal vein, inferior vena cava, urinary collecting system or retroperitoneal structures but not in renal pelvis or the ureter. Invasion of tumour thrombus in renal pelvis and/or ureter is very rare. The case in present report is very rare presenting as RCC with involvement of pelvis, ureter and renal vein.

Case history: A 69year old patient came with complaints of worsening left flank pain, gross hematuria with passage of blood clots in urine since last 20 days. The laboratory work was unremarkable.

USG Whole Abdomen was suggestive of 5.6X5.9X5.8cm exophytic soft tissue lesion in lower pole of Left kidney with encroaching of lesion to ipsilateral renal pelvis with local invasion of renal vein.



MDCT Abdomen suggestive of 8.1X7.9X 8.8cm exophytic mass lesion arising from lower pole of left kidney with extension upto PUJ. Also tumour thrombosis seen in Left renal vein. Drop metastasis/ neoplastic tissue seen in Left VUJ region.



Diagnostic Cystoscopy s/o tumor thrombus in Lt ureter, protruding through Vesico-Ureteric J/n, rest of bladder seems normal, Lt VUJ/n –normal.

Patient underwent Left Radical Nephroureterectomy with Left sided bladder cuff excision.

Intra-operative findings were consistent with finding of tumour arising from Left lower pole of kidney along with tumour thrombus present in Left renal vein, Left ureter and left VUJ. Since no enlargement of lymph nodes was found preoperatively on radiological imaging and no enlarged lymph nodes were detected when palpated intraoperatively.

The patient had an uneventful postoperative course and was discharged on 4th postoperative day.

Post Op HPE : suggestive of Renal cell carcinoma(clear cell)- Left kidney(WHO GradeIII)

- Renal vein with dilated lumen contains tumor emboli
- Ureter and cut margin of ureter with bladder cuff are involved with tumor
- section from perinephric fat is free of tumor.

DISCUSSION:

The case report is a rare case of RCC extending into the pelvicalyceal system along with proximal ureter. RCC may extend into the major veins or perinephric tissues (pT3) or invade beyond Gerota's fascia (pT4). Venous invasion of the RCC is a poor prognostic sign. Earlier AJCC included the involvement of the collecting system as part of the classification. However in later editions it was considered as a separate entity. However AJCC 8th edition takes into account, the invasion of the pelvicalyceal system as (pT3a) in the classification. Gulati and colleagues¹ in 2007 and Katukani and coworkers² in 2013 presented cases of RCC invading the collecting system with direct extension down the ureter and protruding from the ureteral orifice in the bladder. Tumour involving the collecting system appears to be a poor prognostic factor in RCC patients. Often patients with venous involvement already have distant metastatic spread. In the absence of metastatic spread, the long-term survival rates are less than 60%. Very few theories explaining the renal pelvic invasion and direct growth down the ureter have been postulated. These include the dissemination of tumour cells by lymphatic spread or due to venous thrombus into the urinary tract^{1,3,4}. However, on microscopic analysis, there was no evidence of malignancy in the renal pelvic or ureteric mucosa, no renal vein involvement, and no lymphovascular invasion, and so it must have extended down the ureter by direct extension.

CONCLUSIONS:

We report a rare case of RCC directly invading from the renal pelvis and down the ureter as a thrombus mass, with no microscopic, individual tumour implants in the ureter wall, invasion of the renal vein, or invasion of adjacent organs. With no obvious microscopic involvement of ureter, the presence of RCC in ureter points towards the possibility of drop metastasis in ureter. The case having a poor prognosis, needs to be followed up thoroughly and also look up for metastasis and further management.

Conflict of Interest: no conflict of interest to be declared.

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