Abstract:
Upper urinary tract urothelial malignancy accounts for 5-10 percentage of urothelial carcinoma. Synchronous bladder carcinoma occurs in 2-4 percentage of patients with upper urinary tract tumours. Urothelial malignancy involving the entire upper urinary tract is extremely rare entity. Most upper urinary tract malignancy are transitional cell carcinoma(TCC) of which sarcomatoid variant is very rare. These tumours are of aggressive nature and divergent treatment modalities may be used. We herein report a case of transitional cell carcinoma(TCC) involving the entire collecting system of left kidney, extending down along the ureter and projecting as a mass in the bladder - The Creeping Tumour and its management
Keyword : TCC, Creeping Tumour, Sarcomatoid variant, Upper Urinary tract-Urothelial carcinoma

Introduction:
It is a well-known fact that transitional cell carcinoma spreads along the urothelial cellular lining. However, presentation of TCC involving the entire upper urinary tract is extremely rare and to our best of our knowledge this is the first case reported [1]. Most upper urinary tract malignancy are transitional cell carcinoma and in our case Sarcomatoid variant of TCC [2] is a very rare entity. Less than 20 such cases have been reported so far worldwide. Experiences with management of these tumours are limited in literature and the need for the urologist and oncologist to share the experiences with the behaviour and responses of these tumours to the various treatment modalities available.

Case History:
A 42 year male was admitted with history of painless haematuria and left loin pain for 4 months. Clinical examination revealed ill-defined hard mass palpable in left lumbar region. Radiological studies
revealed a growth in left renal pelvis with perinephric urinoma, tumour occupying the entire left ureter and projecting as mass in bladder (Fig 1). Cystoscopy TURBT biopsy from bladder growth was done and HPE report was transitional cell carcinoma-high grade.

Figure 1: MRI - "The Creeping Tumour"- tumour extending from left renal pelvis, whole of left ureter and projecting into the bladder Management: Neoadjuvant chemotherapy: Cisplatin/Gemcitabine-3 cycles were given. Clinically and radiological imaging wise mass decreased in size (Fig.2, 3).

Figure 2,3: Response to Neoadjuvant chemotherapy- Tumour has considerably reduced in size in left kidney and the growth in bladder has also regressed in size following a course of Neoadjuvant Chemotherapy

Open Left Nephroureterectomy with bladder cuff excision (Fig.4) was done. The nephrectomy specimen measured 13 x 10 x 4 cms with ureter measuring 13 cms long. kidney covered with perinephric pad of fat. kidney was entirely replaced by a cystic cavity enclosing a nodular growth with papillary formations in the pelvic region measuring 10 x 7 cms extending upto perinephric pad of fat. It involved the ureter to its entire length with multiple irregularities in the ureter. Histopathology revealed Sarcomatoid variant of transitional cell carcinoma pT4 N0 M0. Immunohistochemistry was done and CK7, CK20, Vimentin were positive. Patient received adjuvant chemotherapy 2 cycles so far and is on follow up.

Figure 4: Radical nephroureterectomy with bladder cuff excision
An upper urinary tract tumour can be defined as any neoplastic growth that affects the lining of the urinary tract from the calyces to the distal ureter. Unlike bladder Urothelial tumours they are relatively less common and they may have a different prognosis. Unusual imaging features of Urothelial carcinoma of upper urinary tract can be challenging for any radiologist. For staging purpose CT or MRI is most useful in determining the extent of invasion and metastasis. TCC are more often invasive and epithelial spread may occur in both antegrade and retrograde manner. Involvement of the entire upper urinary tract is a very rare entity. Most of the Upper urinary tract tumours are TCC and other variants are very rarely encountered. The relatively low frequency of these lesions and lack of prospective randomized trials do not permit absolute conclusions about treatment impact on outcomes. The treatment of large invasive tumours of the renal pelvis and proximal ureter is radical nephrectomy and removal of the bladder cuff. Only limited data on response rates of upper urinary tract tumours to chemotherapy are available because of rarity of these lesions. However the need for effective use of perioperative chemotherapy for patients with locally advanced and metastatic upper urinary tract tumour remains great. The decline in renal function after Nephroureterectomy may compromise the ability to administer effective postoperative chemotherapy and is yet another reason to consider Neoadjuvant chemotherapy [3] for these patients. The toxicity is high with conventional MVAC (methotrexate/Vinblastine/Adriamycin/Cisplatin) regimen and has called for newer agents like gemcitabine, paclitaxel, ifosfamide in various combinations.

Upper urinary tract transitional cell carcinoma Sarcomatoid variant are very rare and aggressive tumours. Experiences with treatment of such tumour are limited. In our case, patient responded well to Neoadjuvant chemotherapy, down staging the tumour, and highlighting the role of perioperative chemotherapy with newer agents like gemcitabine in the management of upper urinary tract Urothelial malignancy.

References:


3 Incidence of down staging and complete remission after Neoadjuvant chemotherapy for high-risk upper tract transitional cell ca - Matin et al, Department of Urology, The University of Texas M. D. Anderson Cancer Center, Houston