TUMOURS OF THE KIDNEYS AND URETERS Upper tract uro

TUMOURS OF THE KIDNEYS AND URETERS Upper tract urothelial cancer

Primary urothelial neoplasms of the renal pelvis and ureter are rare. They account for less than 10% of all urothelial tumours. They are more common in adult men. Important risk factors are tobacco consumption, occupations in the dye, petrochem - icals and rubber industries, analgesic abuse, high arsenic content in drinking water, exposure to cyclophosphamide and the presence of chronic infl ammation. Chronic infl ammator y conditions are also associated with squamous cell carcinoma.

ureteral mobilisation, taking spatulate freshened ends approximate with interrupted care to preserve periureteral on opposite sides; place /f_i ne absorbable sutures without adventitial tissue double ‘J’ stent Step 2: excise unhealthy devascularised ends Figure 82.13 Technique for upper ureteric injury repair. Steps 1 and 2: freshen the devascularised edges. Step 3: spatulate both ends and place an internal double J stent. Step 4: approximate both ends with interrupted absorbable sutures (courtesy of Nivedita Kekre and Dr Madhuri Sadanala). (a) U-shaped bladder /f_l ap (c) Double ‘J’ stent Suture the bladder incision with continuous or interrupted absorbable sutures Figure 82.14 Steps of Boari /f_l ap creation. (a) U-shaped bladder /f_l ap. internal DJ stent is placed in the ureter with a distal loop in the bladder. Nivedita Kekre and Dr Madhuri Sadanala). tension (b) Apex of the bladder /f_l ap is sutured to the end of the ureter; place double ‘J’ stent (d) (b, c) The apex of the bladder /f_l ap is sutured to the ureteric end and an (d) Suture the bladder incision with absorbable sutures (courtesy of

Patients commonly present with gross haematuria, with or without flank pain and occasionally clot colic. Passage of long, slender, worm-like clots is suggestive of upper tract involvement. Patients with known bladder tumours should always be screened for upper tract tumours. V ery few present with advanced constitutional symptoms and a palpable mass. Microscopic haematuria should be evaluated to exclude urothelial malignancy in the high-risk adult (chronic smokers, occupational exposure, older age) population. Pathology Both the PCS and the ureter have a thinner muscular layer than the bladder. Therefore, aggressive tumours of the upper tract can easily invade the muscle layers; hence, the prognosis is poor. Most of these tumours are caused by a field change; hence, tumours tend to be multifocal and may be associated with carcinoma in situ (CIS) in normal-looking urothelium. This also explains the higher incidence of recurrence of tumours in the bladder after successful treatment of upper tract disease. Therefore, long-term bladder follow-up with cytology and cystoscopy is necessary . Histological grading is of great prognostic significance. Low-

grade tumours follow a relatively benign course with mul tiple recurrences. High-grade tumour s are potentially invasive with a poor prognosis. Histological variants, such as micropap illary , neuroendocrine, sarcomatoid and squamous tumours, hav e a worse prognosis. Urothelial tumours can invade surrounding tissues, metas tasise to regional lymph nodes and spread haematogenously to lungs, liver and bones. Squamous cell and adenocarcinoma are rare non-urothelial malignancies involving the upper tract. They usually present at an advanced state and hav e a very poor prognosis. Squamous cell carcinoma occurs pr edominantly in the renal pelvis. Diagnosis Urinalysis may reveal numerous RBCs and white blood cells. Urine cytology should be obtained. The presence of atypical or malignant cells in a freshly voided sample has a high speci ficity for urothelial malignancies. CTU, cystoscopy , retrograde pyelogram and flexible ureterorenoscopy are required for diagnosis. CTU is the investig ation of choice. Findings suggestive of urothelial carcinoma are radiolucent filling defects, incomplete visualisation of calyces and the presence of hydronephrosis. CT also provides important staging information about local spread and lymph node involvement. Flexible ureterorenos copy may be used to visualise the ureter, renal pelvis and col lecting system and to biopsy suspicious lesions. URS biopsies can determine tumour grade and help in planning treatment. Incorporation of narrow-band imaging and blue light have improved the diagnostic capability of ureterorenoscopy . Staging Staging of upper tract urothelial cancer is similar to that for urothelial bladder cancer by the TNM system. Unifocal, small (<1 /uni00A0 cm), low-grade disease with no evidence of invasion on CTU is characterised as a low-risk tumour. Upper tract urothelial cancers that invade the muscle wall usually have poor prognosis. The 5-year survival is <50% and <10% for pathologically proven T2/T3 and T4 tumours, respectively . Management The management depends upon the stage, grade and risk stratification. Low-risk localised tumours may be managed with endo - scopic ablation or segmental excision. Kidney-sparing surgery is important in patients with solitary kidney , renal insu ffi ciency and synchronous bilateral tumours. High-risk tumours warrant radical nephroureterectom y with bladder cu ff resection with or without lymphadenectomy . Locally advanced disease is usually treated with cisplatinum-based neoadjuvant chemotherapy to downstage the disease prior to surgical ablation. Adjuv ant chemotherapy has been shown to improve surviv al.

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