NEOPLASMS OF THE KIDNEY

Benign neoplasms

1. Adenoma:

Discovered incidentally during radiological imaging. Asymptomatic.

2. Angioma:

May cause haematuria, in young adult's .dx. By renal angiography.

3. Angiomyolipoma:

May associate with tuberous sclerosis. Contain high fat, has typical appearance on CT scan.

Malignant neoplasms:

1. Renal neoplasm in children:

Wilms tumor (nephroblastoma):

Mixed tumor containing blastemal, stromal and epithelial element arising from embryonic nephrogenic tissue, in first 5 year of life, May bilateral.

Clinical features:

It is rapidly growing, deterioration of general condition, may fever, abdominal pain, may hypertension, haematuria.

DX.

Ultrasound, CTscan, MRI.

Metastases to lung early, liver, bone. Brain rare.

Treatment:

Unilateral: chemotherapy followed by nephrectomy.

Partial nephrectomy may need in bilateral disease.

Renal neoplasms in adult:

HYPERNEPHROMA (renal cell carinoma, or adenocarcinoma.):

Most common neoplasm of the kidney arises from renal tubular cells.

Occupy the pole mostly upper pole. Pathologically: polyhedral or cubical clear cell

Or granular (dark) cell, may both dark and clear cell may present.

Spreads into renal vein. lung (cannonball secondary deposits),also to bone, my through lymphatics to lymph node in the hilum of the kidney or para-aortic L.N.

Clinical features:

Common in men, haematuria, clot colic, may drag pain, may loin mass, and in man may rapidly developing varicocele.

May symptom of secondary bone, lung, and metastases.

Occasionally persistent pyrexia, May constitutional symptom and anemia.

In some patient may present with paraneoplastic symptoms: non metastatic elevated liver enzyms, polycythemia, hypercalcaemia, and anemia.

Nephrotic syndrome rare.

Investigation:

IVU: distortion of the renal outline, the calyces may be stretched and distorted calcification by KUB.

CTscan with enhancement: for the extent of the lesion.

Renal angiography (with preoperative embolisation).

Chest radiograph is essential to detect lung secondaries.

TREATMENT:

If the tumor is confined to the kidney, nephrectomy with removal of the perinephric fat.

Adenocarcinoma is poorly responding to radiotherapy or conventional chemotherapy.

There has been early promising result for clinical trials of the cytokine interleukin-2 in this condition.

Papillary Transitional cell tumor of renal pelvis:

Resemble those of bladder, less common. May invade the renal parenchyma, tendency to be multifocal and to distant spread. Multiple ureteric tumors, because it render the whole urolthilium liable to metaplasia rather than seeding.

Clinical features:

Haematuria, presonce of malignant cells in urine.

DX.

IVU, retrograd pyelography, CT scan with contrast. It is useful to obtain cells from the tumor by sampling using brush or catheter pass up to the ureter under radiological control, MRI also helpful for staging.

TREATMENT:

Nephrouretroectomy is the conventional surgical treatment (excision of the kidney ureter and cuff from the bladder).

Squamous cell carcinoma of the renal pelvis:

Rare, associated with chronic inflammation and leucoplakia resulting from stone. Radio sensitive but metastases early and poor prognosis.

Treatment nephroureteroectomy.

Transitional cell carcinoma of the ureter:

Rare behave like tumor of the renal pelvis, trearment by nephrouretroectomy.

About half of patient with tumor of upper urinary tract will have tumor in the bladder at some stage.

By: Dr. Mohammad redah Judi

Assist. Professor urology

2015