

Lec 6

Renal tumors of Adults

* lower urinary tract tumors are twice as common as kidney tumors in Adults

- Renal Cell Carcinoma → most common in Kidney
- urothelial carcinoma → most common in lower urinary tract

Renal Cell Carcinoma (RCC)

- originate from tubular epithelium in the cortex
- more common in elderly ; M:F 2:1
- predisposing factors: smoking, hypertension, obesity, cadmium exposure, chronic dialysis
- can all be sporadic or familial

Clear Cell Carcinoma

- most common
- clear or granular cytoplasm
- VHL gene mutation* ≠ associated w/ von hippel-Lindau disease

Papillary Renal Cell Carcinoma

- multifocal or bilateral papillary growth pattern
- activation / overdosing of MET proto-oncogene on ch 7

Chromophobe Renal Carcinoma (less clear)

- least common
- from intercalated discs

- from extreme hypodiploidy (multiple loss of entire chromosomes) → good prognosis

Morphology of all 3 RCC

- yellow spherical neoplasm
- tumor in thrombosed renal vein
- * tend to grow inside veins

Clinical Presentation

- Painless hematuria, polycythemia (b/c of erythropoietin)
- fever, palpable mass, dull flank pain

Paraneoplastic Syndromes

- these tumors secrete substances that cause:
hypercalcemia, hypertension, Cushing Syndrome,
feminization or masculinization
- metastasis most commonly to lungs & bones

Urothelial Tumors

(transitional cell carcinoma)

- can be benign (rare), low grade (most common), or high grade

Low grade

- don't usually invade underlying muscle (rarely invasive)
- finger-like exophytic growth, can recur after removal

Squamous Cell Carcinoma

- associated w/ Schistosomiasis infection, stone formation,
& chronic inflammation

Clinical Course

- Painless hematuria
- 50-70 years ; M:F 3:1
- prognosis depends on invasiveness

Predisposing factors

* not familial

- paints or cigarette toxins
- Chronic cystitis
- Schistosomiasis
- Cyclophosphamide drug

Treatment

- resection in cystoscopy
- BCG injections for immune response against cancer
- Advanced cases → radical cystectomy & chemo
- follow up w/ cystoscopy

Child Renal Tumors

Wilms Tumor

- 3rd most common solid cancer from mesoderm
- sporadic or familial (autosomal dominant) mutation in WT 1 / WT 2 genes
- Small blue cell primitive glomerular or tubular structure
- treat w/ surgery & chemo