

Kidney

Renal cell carcinoma

This tumour rarely occurs under the age of 10 years

Definition

A cancer arising in the kidney

Etiology

Unknown

Signs and Symptoms

- Visible abdominal mass (pain is unusual)
- Blood in the urine (hematuria)
- High blood pressure

Diagnostic Evaluation – at BCCH

- Abdominal ultrasound
- Abdominal and chest CT scan

Staging

The adult TNM system is used for staging (size of tumour, nodal status and presence of metastases)

Treatment

Surgery is the only currently curative treatment. The response to chemotherapy is poor. There is some benefit from the use of biological response modifiers (Interleukin-2)

Prognosis

Tumours confined to the kidney and completely removed have a 50-90% chance of cure

Kidney

Wilms Tumour

Definition:

This is the commonest type of cancer in the kidney in children. Usually occurs between 1-5 yrs of age. 20-25% are hereditary and these are usually associated with congenital abnormalities e.g hemihypertrophy (one side of the body larger than the other); aniridia (absence of the iris).

Signs and Symptoms

- Visible abdominal mass (pain is unusual)
- Blood in the urine (hematuria)
- High blood pressure

Diagnostic Evaluation – at BCCH

- Abdominal ultrasound
- Abdominal and chest CT scan
- Biopsy is not generally advocated if the tumour can be readily removed by nephrectomy (removal of the kidney)

Staging

Stage I - Limited to the kidney and completely excised

Stage II - Extending beyond the kidney but excised

Stage III - Residual tumour in abdomen

Stage IV - Hematogenous metastases - most commonly to lungs and liver

Stage V - Bilateral renal involvement at diagnosis

Histology

Wilms tumour is divided into “Favourable”, “Unfavourable” and “Clear Cell Sarcoma of Kidney” (CCSK). The “Rhabdoid” tumour of the kidney is no longer recognized as a Wilms tumour and is treated in a similar fashion to rhabdoid tumours arising in other organs

Treatment

1 Surgery:

It is usually necessary to remove the entire kidney along with the tumour. This is usually performed at presentation.

2 Radiotherapy:

For Stage III and IV disease

3 Chemotherapy:

All patients require chemotherapy. This has significantly improved the survival from Wilms tumour. Most commonly used drugs: vincristine, dactinomycin, doxorubicin.

Prognosis

Overall approximately 90% of children are cured.