**Urinary Tract Infection**

**Clinical features**

Children rarely present with dysuria and frequency

- At all ages: fever, vomiting, diarrhoea, lethargy, anorexia
- In very young infants: jaundice, septicaemia and failure to thrive

**Diagnosis**

A urine dipstick MUST be done in all children with a febrile illness with no obvious cause

- **Urine specimen must be fresh when tested**
  - Mid-stream (MSU) specimen in older children
  - Use a urine bag in younger children unable to void on request, after cleaning perineum with warm water. This is a SCREENING test only

  If both nitrates and leukocytes are negative, a UTI is excluded. If either is positive, a UTI is suggested.

- If the dipstick on the bag specimen is positive then a suprapubic aspiration MUST be done (occasionally a catheter specimen will be needed). While doing the suprapubic aspiration, have a urine sample bottle ready and open in case the child urinates – if you are quick enough, you can obtain a “clean catch” MSU
- If the dipstick is positive on the suprapubic (or catheter, or “clean catch”) specimen, the urine should be sent to the laboratory for M,C&S.

Write clearly on the Laboratory Request Form what kind of urine specimen is being sent (MSU, CSU, SPU, clean catch). If you find yourself writing “bag specimen”, throw the sample and the form away, and take, then send an analysable sample. If you don’t do this you waste time and money and potentially subject the child to unnecessary invasive investigations

A urinary tract infection is confirmed when:

- Mid-stream: pure growth >10⁵
- Suprapubic and catheter specimens: pure growth, any count
- Granular casts suggest pyelonephritis
- Mixed growth requires repeat testing

Absence of leukocytes on dipstick in a NEONATE does NOT exclude a UTI

**Management**

**Home, if no systemic features and >6 weeks of age, on:**

- NALIDIXIC ACID 15mg/kg 6H PO x 5-7d

**Admit, if systemic effects or infants <6 weeks, on:**

- GENTAMICIN 7.5 mg/kg 24H IV/IM (smaller gestational age related doses in neonates)
- **OR, if renal failure present:**
  - CEFTRIAXONE 50 mg/kg 24H IV/IM
  - **OR**
  - CEFOTAXIME 25mg/kg 6H IV

**Also**

- Anti fever measures
- Extra fluids (if no renal failure)
- Blood culture, U&E, FBC and BLOOD PRESSURE

**Further investigation**

- In ALL cases of UTI, confirmed on a laboratory M,C&S, renal ultrasound must be done, irrespective of age and gender.
- In all children sick enough to be admitted or with an abnormal renal ultrasound, MCUG must be done after 6 weeks, irrespective of age and gender

When indicated, renal U/S and MCUG should be done 6 weeks after the UTI and nalidixic acid 12.5mg/kg 12H PO should be given until then. Refer to Renal / U. Urology Clinic if a renal abnormality is detected, or the child has recurrent properly diagnosed (MSU, CSU, SPU) UTI’s