The College of Emergency Medicine

HALF A DOZEN THINKS TO KNOW ABOUT URINARY TRACT INFECTION IN CHILDREN

NICE CLINICAL GUIDELINE 54

http://guidance.nice.org.uk/CG54

1. The most common presentation of UTI in infants is an undiagnosed fever. Infants and children presenting with unexplained fever of 38°C or higher should have a urine sample tested after 24 hours at the latest.

2. **Collecting the urine sample [1.1.3.1]**
   - A clean catch urine sample is the recommended method for urine collection.
   - If a clean catch urine sample is not possible, use other non-invasive methods such as urine collection pads
   - Do not use cotton wool balls, gauze or sanitary towels.
   - If other non-invasive methods are not possible, use a catheter sample or suprapubic aspiration (SPA)
   - Before SPA is attempted, ultrasound guidance should be used to demonstrate the presence of urine in the bladder.

3. **Diagnosis/Acute Management [1.2]**
   - Urine Microscopy result
     - If Bacteriuria negative and Pyuria positive, antibiotic treatment should be started if clinically UTI.
   - Using dipstick test to diagnose UTI **[1.1.5.1]**
     - If leukocyte esterase is negative and nitrite is positive, start antibiotic treatment if fresh sample was tested
     - If leukocyte esterase is positive and nitrite is negative, only start antibiotic treatment if there is good clinical evidence of UTI
   - Treat with a different antibiotic, not a higher dose of the same antibiotic, if an infant or child is receiving prophylactic medication and develops an infection **[1.2.1.7].**

4. **Imaging Tests [1.3]**
   - Infants younger than 6 months should have ultrasound during the acute infection if they:
     - Do not respond well to treatment within 48 hours.
     - Have atypical UTI
     - Have recurrent UTI
   - In infants and children 6 months or older but younger than 3 years, MCUG should not be performed routinely. It should be considered if the following features are present:
     - dilatation on ultrasound
     - poor urine flow
     - non-*E. coli*-infection
     - family history of VUR.
   - When a micturating cystourethrogram (MCUG) is performed, give oral prophylactic antibiotics for 3 days with MCUG taking place on the second day **[1.3.1.8].**

5. **Prophylaxis**
   - Antibiotic prophylaxis should not be routinely recommended in infants and children following first-time UTI (consider after recurrent UTI) **[1.2.3.2].**

6. **Follow-up {1,5}**
   - Arrange follow up for infants and children with recurrent UTI, risk factors, atypical illness and abnormal imaging.
   - Assessment of infants and children with renal parenchymal defects should include height, weight, blood pressure and routine testing for proteinuria **[1.5.1.5].**
   - Infants and children with a minor, unilateral renal parenchymal defect do not need long-term follow-up unless they have recurrent UTI or family history or lifestyle risk factors for hypertension **[1.5.1.6].**