

# Urinary tract infections in pediatrics

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## INTRODUCTION

UTI infection is most frequently tested and diagnosed bacterial infections in infants and children. Though there are well investigations and research done on UTI, it still continues to be one of the major challenges for physicians and clinicians. The seriousness towards the UTI infections has been rapidly increased in physicians and other health care providers over recent decades. Due to increasing in the technology in the investigation of UTI infections there been a lot of queries and controversies going on regarding the diagnosis and treatment of UTI infections in children [1].

## EPIDEMIOLOGY

The survey reveals that most of the children faced the problem of UTI below the age of 1 year among whom infection gradually reduced boys than girls. The investigation also revealed that 5% of children at age of 2 got the UTI infection when they have high temperatures like fever or flu. Recent studies reveal that children below the age of 7 years the incidence rate of UTI was found to be 7.8% in girls and 3% in boys [2].

## DEFINITION AND PATHOLOGY

UTI may be defined as presence of micro-organisms in the part of urinary system like kidney, urinary bladder, urethra or ureter that lead to inflammation and irritation and sometime pain. The infection is caused by bacteria, virus, or fungi. Common bacterial pathogens include gram-negative species like *Escherichia coli*, *Enterobacter*, *Pseudomonas*, and sometimes gram-positive organisms, including group B streptococci, *Enterococcus* sp., and *Staphylococcus aureus* [3].

## RISK FACTORS

The risk factors include young age, high fever, history of UTI, tenderness in suprapubic parts and presence of UTI symptoms [3].

## SYMPTOMS

The symptoms consists of dysuria, Frequency, Urgency, Suprapubic discomfort, flank pain [4].

## DIAGNOSIS

The test for UTI is done by collecting the urine sample and kept in cultures for analyzing the growth of bacteria in the cultures. There are other methods available for diagnosis of UTI infections that include an ultrasound, by

which a transducer is inserted into the abdomen of the patient abdomen that produces ultra sound waves that are passed over the urinary tract and help in getting the image of urinary tract. The other method of diagnosis is an intravenous pyelogram (IVP), that includes injecting a dye in the patient's body which travels to the urinary tract and with an X-ray of the abdomen we can get the highlighted areas of dye to scan the urinary tract. There are other methods like CT scan and cystoscopy for imaging the urinary tract to detect the infections [4].

## TREATMENT

Usually the treatment for UTI infections in children includes the usage of intravenous antibiotics. The antibiotics can also be chosen for treatment based on the local resistance patterns and few other considerations. Amoxicillin was being used as first line antibiotic drug for the treatment of infection. Drugs like cephalosporin are also being used for the treatment [5].

## CONCLUSION

UTI is one the most common problems in pediatrics and it has ability to create long lasting distress. Young children with frequent occurrence of fever and with nonspecific symptoms of UTI infections have highest possibility of infections.

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