INTRODUCTION

Urinary Tract Infection (UTI) is a common pediatric infection. It occurs in 3 to 5 percent of girls and 1 percent of boys. Urinary tract infections in children are associated with high morbidity and long standing complications like renal scarring, hypertension and chronic renal failure. Early diagnosis and prompt treatment can prevent these complications.

It is very difficult to diagnose urinary tract infection in paediatric age group especially in young infants. Infants and children with unexplained fever of > 38°C or with symptoms and signs suggestive of UTI should have a urine sample tested for infection. There are invasive and noninvasive methods of urine collection. The noninvasive methods are clean catch of midstream urine in toilet trained children and in infants the application of a sterile sealed adhesive urine collecting bag after disinfection of skin of genital region. The invasive methods are urethral catheterization and suprapubic aspiration.

The gold standard for diagnosis of urinary tract infection is culture rather than urinanalysis. Culture positive UTI is defined as >100,000 colonies of a single pathogen or 10,000 colonies in symptomatic children.

The most common organism in both males and females is Escherichia coli followed by klebsiella and proteus. Proteus is more common in males older than 1 year. Staphylococcus saprophyticus and enterococcus are pathogens of both sexes. Viral infections particularly adenovirus also occur, especially is a cause of cystitis.

MATERIAL AND METHODS

This observational, cross-sectional study was conducted in Department of Child Health in Khyber Teaching Hospital, Peshawar, Pakistan from December 2009 to December 2010. All children presenting with symptoms suggestive of UTI were included in the study. Non-invasive methods were used for urine collection and all cases suggestive of UTI were included in the sample. Urine samples of all the cases were collected by non invasive methods i.e. clean catch in toilet trained and by infant urine collecting bag in infants and untrained children. The samples were sent immediately to laboratory for culture sensitivity. Study variables included culture result and sensitivity to a wide range of antibiotics. Results were entered in SPSS 17. Frequency counts were used to analyze the result.
sick patients suprapubic aspirate or urethral catheterization is acceptable.

In this study Escherichia coli was found to be the most common organism causing UTI in females as well as males\textsuperscript{9,10,12}. The same was found in most studies\textsuperscript{10,11 and 12,13,14,15}. In males enterobacteriaceae was next common organism\textsuperscript{16}. In males amikacine followed by ceftazidime were culture sensitive against E-coli. The same is true in other studies where amikacine was the antibiotic found to be most effective\textsuperscript{19,20,21,24}. In females meropenim and amikacin were the antibiotics most effective followed by quinolones against E-coli as in other studies\textsuperscript{22,23}. In this study E-coli was found to be the most common organism in both males and females. the same was found in a study in gambia where 53% of the cultures turned out to be E-coli\textsuperscript{16}. Similarly in a study by Sumin A et al E-coli was the most common organism\textsuperscript{2}. In a local study E-coli was isolated in 65.9% of children followed by Klebsiella\textsuperscript{16}.

CONCLUSION

E-coli is the most common organism causing urinary tract infection and amikacine is the most effective antibiotic.

REFERENCES


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http://www.who.int/EMRJorList/details.aspx?docn=4468