

#1948 - Urinary tract infection in children : An epidemiological evaluation

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Body

Introduction : Urinary tract infection is common in children, and clinical manifestations depend on the age at presentation. E-coli species are the most common etiology (80-85%), other common pathogens include Klebsiella, proteus, Enterobacter and Citrobacter species respectively. Infections with gram positive pathogens are rare.

Materials and Methods: In a 14-year period (2002-2016) children < 18years referred to nephrology clinic of Dr.Sheikh children Hospital with diagnosis of urinary tract infection enrolled the study. We aimed to determine the main Clinical manifestations of urinary tract infection, age and gender distributions, frequencies of patients distribution in age sub-groups and etiologies .In addition to compare prevalence of pyelonephritis, frequency of distribution in age sub- groups and uropathogens based on gender.

Results: Totally 1245 cases, 1084(87.06%) girls and 161(12.94%) boys enrolled. Ages at first presentations were 3 days to 214 months (35.43 ±34.94).Fever was the most common presentation (55 %), most and least cases of febrile infections were reported in children 2-24 months (65%) and > 10 years (37%) respectively. The 5 most common pathogens included E-coli, Klebsiella, staphylococcus, Enterobacter, proteus associated with enterococcus species respectively. Gram positive pathogens were accounted for about 6% of infections.

In girls enterococcus species were the fifth most common etiology, in boys the frequency of pathogens was completely different. Staphylococcus, Klebsiella, proteus and

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enterococcus associated with Citrobacter species were the second to fifth the most prevalent etiologies respectively. Infections with E-coli species in girls and Staphylococcus and proteus in boys were significantly most prevalent ($P \leq 0.05$ for all). Majority and minority of infections in both genders were reported in age-sub groups of 2-24 months and > 10 years respectively. Distribution of girls in age sub-groups 3-5 and 6-10 years were significantly more common than boys ($P = 0.001$). No significant difference in age at presentation and frequency of pyelonephritis were found between genders ($P > 0.05$ for both).

Conclusion: we found that urinary tract infection is more prevalent in girls, and fever is a common presentation. Majority and minority of infection occur in age sub-groups of 2-24 months and > 10 years respectively. Five most common etiologies for infections are E-coli, Klebsiella, staphylococcus, Enterobacter, and proteus associated with enterococcus species respectively. Gender is an important factor in determining the etiologies of infections, so that infections with E-coli species in girls and staphylococcus and proteus species in boys are significantly more prevalent. Gender has no significant impact on age at presentation and also occurrence of pyelonephritis.

Key word: UTI, children, age, gender, etiologies

References

Generate date 03 November 2018 14:59