

Evaluation of Common Paediatric Infections: An Annual Survey

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ABSTRACT

Background: Pediatric patients are the most frequent population visiting the out patient department with various illnesses round the year. Infections are among the most common reason for illness in this population.

Aim: To evaluate the different paediatric infections

Study design: Cross-sectional study

Place and duration of study: Department of Pediatric, Muhammad Medical College, Mirpur Khas Sindh from 1st January 2018 to 31st December 2018.

Methodology: Five hundred and ninety five pediatric patients were enrolled.

Results: The male proportion of patients dominated over female proportion with 370(62.18%) and 225(37.82%) respectively. Most cases were of age under 1 year 335(56.30%) followed by age between 1-5 years 134(22.52%) and age group above 5 years was the least affected group 125(21%). Gastroenteritis cases were most common followed by respiratory tract infections and non-infectious diseases.

Conclusion: Gastrointestinal infections (gastroenteritis, dysentery and typhoid) were found to be more common in pediatric patients followed by respiratory infections

Keywords: Respiratory tract infections (RTIs), Urinary tract infections (UTIs), Meningitis

INTRODUCTION

Infectious diseases constitute the dominant part of illness specially respiratory tract infections (RTIs) are the major causes for morbidity and mortality¹. Acute infections account for 1/3rd paediatric deaths under 5 years age in under developing countries². Respiratory tract infections are the only cause of hospitalization in >12 million children below the age of 5 year yearly³.

Factors like malnutrition, underweight children, poorly breast fed children, children under the influence of polluted air, children living in crowded houses and population lack of immunization, parental smoking, deficiency of zinc and vitamin A, concomitant diseases, low or un-educated mothers and cooled climate and winter season contribute for the infections. These infections are of viral infection or bacterial etiology resulting into mild, moderate and severe illness⁴. Infection of the respiratory tract are responsible for an estimated 4-5 million child deaths in developing nations per year⁵. Typhoid or enteric fever caused by a gram negative bacillus salmonella typhi, affects all age groups with gastrointestinal manifestations⁶. The transmission of typhoid infection is accomplished with water and food contamination along with poor personal and public hygiene^{7,8}. The paediatric population with an age between 1-5 years is on more risk due to poor immune system. Malaria and meningitis both has worse impact on paediatric life if poorly treated and consequently on the overall society.

This study addressed few common and important infections observed in paediatric patients which hopefully add some knowledge scientific community and stimulus for concerned authorities that will ultimately help our children.

MATERIALS AND METHODS

This cross-sectional study was conducted at Department of Paediatrics, Muhammad Medical College, Mirpur Khas, Sindh, Pakistan from 1st January 2018 to 31st December 2018. All paediatric indoor and outdoor cases irrespective of age and gender were included while paediatric emergencies were excluded. Permission was granted by the Institutional Ethical Review Board.

RESULTS

There were 595 admitted patients evaluated in this study, the male proportion of patients was 370(62.18%) and the female proportion was 225(37.82%). Most cases were of age under 1 year 335(56.30%) followed by age between 1-5 years 134(22.52%) and age group above 5 years was the least affected group 125(21%) [Table 1]. Gastroenteritis cases were most common 247(41.51%) followed by RTIs 146(24.54%), UTIs 26(4.37%), dysentery 28(4.71%), typhoid 22(3.70%), malaria 12(2.02%), meningitis 25(4.20%), non-infectious diseases were 89 (14.96%) [Table 2].

Table 1: Frequency of age and gender of the patients (n=595)

Variable	No.	%
Age (years)		
Under 1	335	56.38
Between 1-5	134	22.52
Above 5	125	21.10
Gender		
Male	370	62.18
Female	225	37.82

Table 2: Distribution of diseases

Type of infection	No.	%
Gastroenteritis	247	41.51
RTIs	146	24.54
UTIs	26	4.37
Dysentery	28	4.71
Typhoid	22	3.70
Malaria	12	2.02
Meningitis	25	4.20
Non-infectious diseases	89	14.96

DISCUSSION

Study by Rama et al⁹ on 400 children reported RTI as 109(19.25%) cases that is in accordance with our results. The study results by Tazinya et al¹⁰ showed 42.58% females and 57.62% males involvement which is consistent with our findings but they reported 280 (54.7%) cases suffering from acute respiratory infection (ARIs) that was inconsistent with our observation of gastroenteritis as most common paediatric infection. An Indian study by Mathew et al¹¹ reported RTIs as 19% which is consistent with our study results. Kumar et al¹² reported paediatric respiratory infections 59.1% while we found it as 24% so the results of two studies are

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inconsistent with each other. Gopalakrishnan¹³ reported the prevalence of ARI among children < 5 years old as 41.6% which is inconsistent with our results however the gender 50.6% as males and 33.5% as female are consistent finding. Typhoid fever is very common in Pakistan due lack of standard facilities for health care, unhygienic conditions, poor quality drinking water.¹⁴ The annual incidence for typhoid in India is reported to be 980/100,000 population¹⁵. Although there is a list of antimicrobial drugs but azithromycin is the drug of choice now due to increasing MDR¹⁶. Habte et al¹⁷ reported 5.0% typhoid fever while we found it as 3% in our study. Andualem et al¹⁸ reported prevalence of typhoid fever as 4.1% that is also consistent to our results. Whereas an Egyptian research showed 13.64% prevalence for typhoid by Hamdy et al¹⁹ which is inconsistent with our results. There were many weaknesses and limitations in our current study but we the current study will guide the other workers in the field to work on broader range of parameters.

CONCLUSION

Gastrointestinal infections (gastroenteritis, dysentery and typhoid) were found to be more common in paediatric patients followed by respiratory infections.

Conflict of interest: Nil

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