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Original Research

Determination of cases of respiratory tract infection in children

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ABSTRACT:
Background: Respiratory tract infection is common in children. The present study was conducted to determine cases of respiratory tract infection in children. **Materials & Methods:** 104 children age ranged 3-9 years of age was recorded. In all patients, symptoms such as nasal stuffiness, throat irritation, low-grade fever, anorexia and myalgia were recorded. **Results:** Age group 3-4 years had 12 boys and 12 girls, 5-6 years had 20 boys and 16 girls, 7-8 years had 25 boys and 10 girls and 8-9 years had 3 boys and 6 girls. Nasal stuffiness was seen in 56 children, anorexia in 70, low-grade fever in 83, throat irritation in 90 and myalgia in 45. The difference was significant (P< 0.05). **Conclusion:** Common symptoms in children were nasal stuffiness, throat irritation, low-grade fever, anorexia and myalgia.
Key words: Children, Respiratory tract infection, nasal stuffiness.

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INTRODUCTION

Acute respiratory infections (ARIs) are classified as upper respiratory tract infections (URIs) or lower respiratory tract infections (LRIs). The upper respiratory tract consists of the airways from the nostrils to the vocal cords in the larynx, including the paranasal sinuses and the middle ear.[1] The lower respiratory tract covers the continuation of the airways from the trachea and bronchi to the bronchioles and the alveoli. ARIs are not confined to the respiratory tract and have systemic effects because of possible extension of infection or microbial toxins, inflammation, and reduced lung function.[2]

Childhood infectious respiratory disease was common to one in which mortality is now very low, at least in developed countries, attention is turning increasingly to the impact of more chronic infectious diseases and mechanisms underlying acute but non-life-threatening infectious diseases.[3] URIs are the most common infectious diseases.[4] They include rhinitis (common cold), sinusitis, ear infections, acute pharyngitis or tonsillopharyngitis, epiglottitis, and laryngitis—of which ear infections and pharyngitis cause the more severe complications (deafness and acute rheumatic fever, respectively).[5] The vast majority of URIs have a viral etiology. Rhinoviruses account for 25 to 30 percent of URIs; respiratory syncytial viruses (RSVs), parainfluenza and influenza viruses, human metapneumovirus, and adenoviruses for 25 to 35 percent. RTIs accounted for around 4% of all deaths in children aged 0–14 years.[6] The present study was conducted to determine cases of respiratory tract infection in children.

MATERIALS & METHODS

The present study was conducted among 104 children age ranged 3-9 years of age of both genders. All parents

were informed regarding the study and written consent was obtained.

Data such as name, age, gender etc. was recorded. In all patients, symptoms such as nasal stuffiness, throat irritation, low-grade fever, anorexia and myalgia were recorded. Results were tabulated and subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Age wise distribution of patients

Age group (Years)	Boys	Girls
3-4	12	12
5-6	20	16
7-8	25	10
8-9	3	6
Total	60	44

Table I shows that age group 3-4 years had 12 boys and 12 girls, 5-6 years had 20 boys and 16 girls, 7-8 years had 25 boys and 10 girls and 8-9 years had 3 boys and 6 girls.

Graph I Age wise distribution of patients

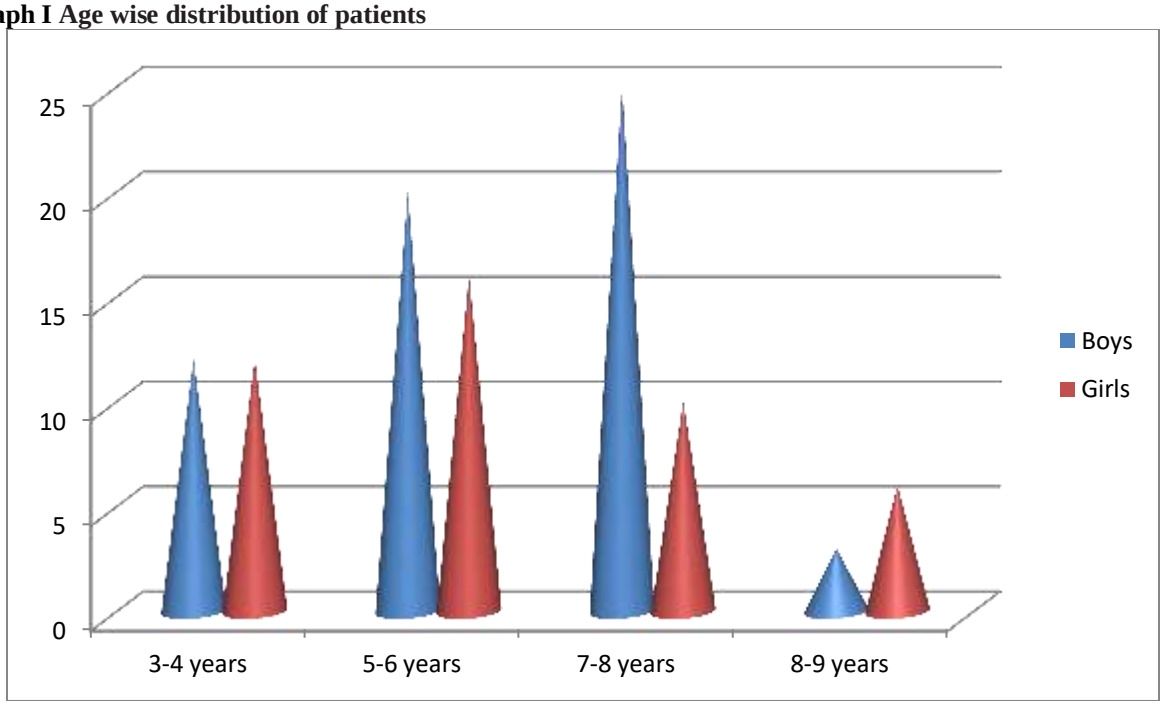
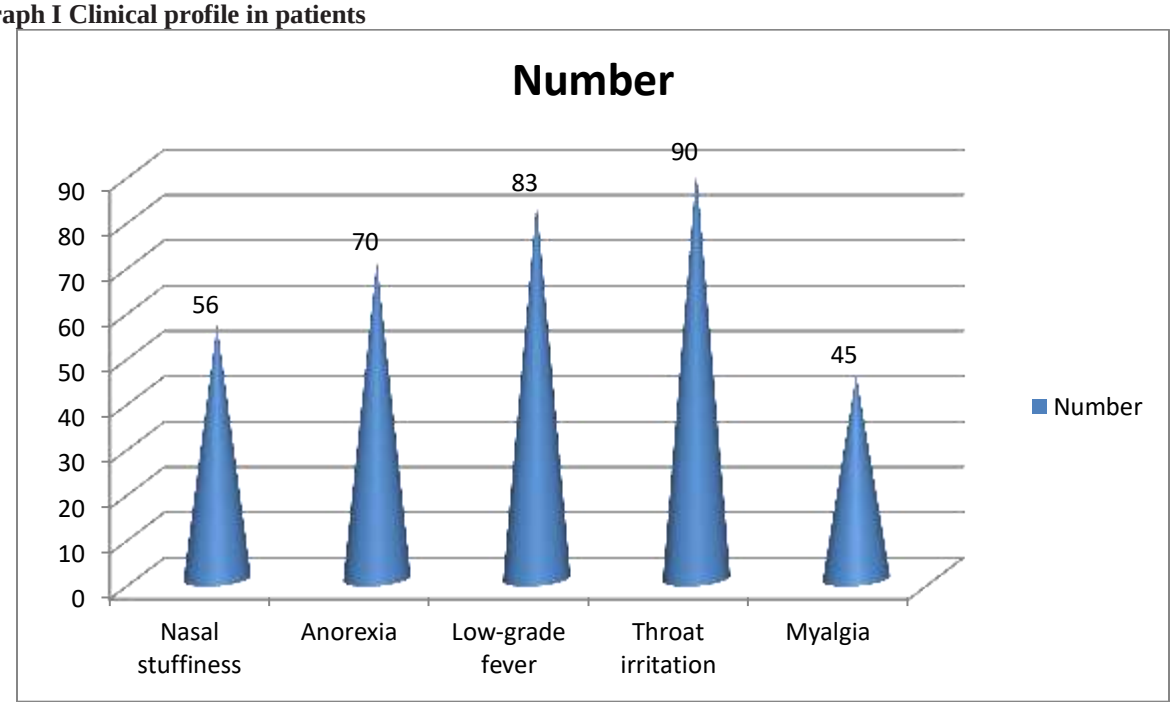


Table II Clinical profile in patients

Symptoms	Number	P value
Nasal stuffiness	56	0.01
Anorexia	70	
Low-grade fever	83	
Throat irritation	90	
Myalgia	45	

Table II shows that nasal stuffiness was seen in 56 children, anorexia in 70, low-grade fever in 83, throat irritation in 90 and myalgia in 45. The difference was significant (P< 0.05).

Graph I Clinical profile in patients



DISCUSSION

The respiratory tract starts at the nasal cavity and ends in the alveoli (in the lungs).[7] However, for easier description and understanding of pathologies, it can be divided into two parts.[8] The upper respiratory tract refers to the structures of the respiratory system that lie outside the thorax or above the sternal angle, and consists of the nasal cavity and pharynx (including tonsils) through to the larynx.[9] The lower respiratory tract begins with the trachea and also includes the bronchi and lungs. Cough and wheeze are predominantly described with a lower RTI while stridor is typically noted in an upper RTI.[10] The present study was conducted to assess respiratory tract infection in children.

We found that age group 3-4 years had 12 boys and 12 girls, 5-6 years had 20 boys and 16 girls, 7-8 years had 25 boys and 10 girls and 8-9 years had 3 boys and 6 girls. Broor et al[11] in their hospital based case control study determined risk factors associated with severe lower respiratory tract infection (LRTI) in under-five children. 512 children including 201 cases and 311 controls were enrolled in the study. On stepwise logistic regression analysis it was found that lack of breastfeeding (OR: 1.64; 95% CI: 1.23–2.17); upper respiratory infection in mother (OR: 6.53; 95% CI: 2.73–15.63); upper respiratory infection in siblings (OR: 24; 95% CI: 7.8–74.4); severe malnutrition (OR: 1.85; 95% CI: 1.14–3.0); cooking fuel other than liquid petroleum gas (OR: 2.5; 95% CI: 1.51–4.16); inappropriate immunization for age (OR: 2.85; 95% CI 1.59–5.0) and history of LRTI in the family (OR 5.15, 95% CI 3.0–8.8) were the significant contributors of ALRTI in children under five years. Sex of the child, age of the parents, education of the parents, number of children at home, anemia, inadequate caloric intake, type of housing were not documented to be significant risk factors of ALRTI.

We found that nasal stuffiness was seen in 56 children, anorexia in 70, low-grade fever in 83, throat irritation in 90 and myalgia in 45. Shi et al[12] found that the most common signs were coughing and sneezing and the most common symptoms were congestion and a runny nose. These signs and symptoms persisted for the first week. Coughing was present in 46% at onset, peaking at 69% on day one and still present in ≥ 50% at day seven. Rhinorrhoea occurred in 71% on day one and was still present in ≥ 50% by day five. Sneezing occurred in 36% at onset, peaking at 55% on day one and still noted in 35% by day five. Fever was uncommon, reported in only 15% on day one and declining even further. Headache was reported in 15% on day one and declined thereafter. Vomiting and diarrhoea were extremely uncommon.

CONCLUSION

Authors found that common symptoms in children were nasal stuffiness, throat irritation, low-grade fever, anorexia and myalgia.

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