

Study of Acute Respiratory Tract Infections in Children

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Abstract: *Acute respiratory tract infection (ARI) is one of the leading causes of morbidity and mortality in paediatric age group. Acute respiratory tract infection is infection of any part of respiratory tract. According to WHO it can be graded as mild, moderate and severe. In the present study an attempt was made to retrospectively profile the cases of acute respiratory infections which presented to our hospital. 57.3% of cases belonged to male sex, 39% of cases belonged to age group 1-5 years, 55.3% of cases belonged to low socio economic status. Majority of cases presented with mild grade acute respiratory tract infections.*

Keywords: ARI, WHO, Male, Low socioeconomic status, Mild grade

1. Introduction

Respiratory tract infections are one of the most common disorders in humans responsible for a great morbidity. Acute respiratory tract Infections (ARI) are also a commonest cause of mortality as well as morbidity in children of developing countries. The mortality figure is an estimated 3.9 million throughout the world majority of which is caused by Pneumonia that effects the lower respiratory tract [1, 2]

ARI accounts to 19% of death in children under five years. Asian countries like India, Bangladesh, Bhutan and Indonesia account for 40% of it with 90% of ARI deaths due to pneumonia of bacterial origin. Streptococcus pneumoniae is the major culprit responsible among the microbial organisms.

In India hospital data of those states suffering from high infant mortality rates reflect that approximately 13% of inpatient deaths reported in paediatric wards are seen due to acute lower respiratory tract infections (ALRTI) especially due to pneumonia. ARI and prevention of deaths due to pneumonia has been take up by the government and is incorporated into Reproductive and child health programme. [2, 3]

World Health organization (WHO) has suggested some clinical signs that would be helpful in recognising the development of pneumonia in early stage thereby aid in immediate treatment for better outcome. Rapid breathing, indrawing of chest these are some of the clinical signs that are easily identifiable which are diagnostic signs as well. Pneumonia is an acute respiratory tract infection which affects the lungs. Here the alveoli which normally contains air is filled by fluid and pus impairing the gaseous exchange making it difficult to thrive. According to WHO in a setting of cough and cold if a child has rapid breathing then it is termed as pneumonia, if the child has chest indrawing along with signs of pneumonia then its termed as severe pneumonia. Severe pneumonia also has other signs like nasal flaring, grunting and cyanosis. These clinical signs can not only be identified by doctors but also by other healthcare

providers and even family members which will help in better management of the case.[3, 4, 5]

According to severity, ARI can be graded as, Mild ARI where there is presence of cough or cold (No pneumonia) , moderate ARI where there is fast breathing without chest indrawing and severe ARI where there is presence of chest indrawing (severe pneumonia) and signs of very severe disease like convulsions, abnormal sleep, severe malnutrition, wheezing, grunting and nasal flaring.[6]

Globally empirical treatment with antibiotics is generally started for pneumonia in children without wasting much of time initially as aetiology is difficult to establish. Other investigations like chest x ray are corroborative in the initial stage especially in children. [7]

ARI's are curable and preventable to a large extent but there are major hurdles to achieve it. The socio-economic factors, lack of awareness among people are few of them along with lack of epidemiological data. The present study is conducted to retrospectively profile the cases of ARI in children in our centre.

2. Material and Methods

The study was conducted in the Department of Paediatrics, Travancore Medical College, Kollam. The study was done from April 2015 to October 2015. 300 cases were identified and were chosen for the study. Cases aged less than 10 years were chosen for the study. History and clinical examination details recorded in the opd records and case sheets were utilised.

3. Result

Table 1: Showing gender distribution

Gender	Frequency
Male	172(57.3%)
Female	128(42.7%)

Table 2: Showing age distribution

Age group	Frequency
0-1 years	71(23.7%)
1-5 years	117 (39%)
5-10 years	112(37.3%)

Table 3: Showing socio economic status of the family of child

Socio economic status	Frequency
Low	166(55.3%)
Middle	111(37%)
High	23(7.7%)

Table 4: Showing frequency based on grading of ARI

Grade	Frequency
Mild	247
Moderate	48
Severe	5

4. Discussion

In the present study, 172 cases belonged to male sex and 128 cases belonged to female sex.

Age group 1-5 years had maximum number of cases which amounted to 117 cases followed by age group 5-10 years which amounted to 112 cases followed by age group 0-1 years which amounted to 71 cases.

166 cases belonged to low socio economic class, 111 cases belonged to middle class and 23 cases belonged to high socioeconomic class.

Based on severity of illness, 247 cases had mild grade ARI, 48 cases had moderate grade ARI and 5 cases had severe grade ARI.

The gender distribution and age group prevalence was similar in previous studies conducted by others. [8] [9]

Prevalence of ARI was higher in low socio economic class which was similar to study conducted by Bipin Prajapati, Nitiben Talsania, and Sonaliya K N. [9]

The findings regarding frequency of ARI with relation to grade was also similar to conducted by Bipin Prajapati, Nitiben Talsania, and Sonaliya K N. [9]

5. Conclusion

ARI is a major contributor of morbidity in children under 10 years of age. As seen in the present study, children from low socio economic status are affected more in number. Prompt seeking of medical advice can help in decrease of morbidity. The present study also showed that most of the children who presented with symptoms of ARI had mild ARI which suggests that irrespective of severity parents sought medical help.

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