



**TO DETERMINE THE MORBIDITY PROFILE OF CHILDREN ADMITTED FOR RTI IN
PAEDIATRICS DEPARTMENT OF MIMS, MANDYA**

Athul Raj*¹, Blessy David², Binu Francis³ and A. Vikneswari⁴

^{1,2,3}5th Year Pharm D Students, Bharathi College of Pharmacy, Mandya, Karnataka, India.

⁴Associate professor, Department of Pharmacy, Bharathi College of Pharmacy, Mandya, Karnataka, India.

***Corresponding Author: A. Vikneswari**

Associate Professor, Dept. of Pharmacy Practice, Bharathi College of Pharmacy, Mandya, Karnataka, India.

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ABSTRACT

Background: Respiratory tract infections are the main cause of children's morbidity and mortality both in the developing and developed countries. Respiratory Tract Infection (RTI) refers to any of a number of infectious diseases involving the respiratory tract. An infection of this type is normally further classified as an upper respiratory tract infection (URTI) and a lower respiratory tract infection (LRTI). **Objectives:** This was a record based prospective study with the aim to determine morbidity profile of children diagnosed as Respiratory Tract Infection **Method:** The study has been conducted on male and female patients who were satisfying the inclusion criteria. A suitably designed patient profile was used to collect required information **Result:** A total of 150 patients were analyzed in our study. Out of that 88 were males and 62 were females. The mean age of all patients was found to be 1.46 ± 1.44 years being 2.060 ± 2.22 and 1.132 ± 1.40 years in males and females. And according to disease condition, male LRTI was found to be the highest in proportion **Conclusion:** The majority people belong to the age group of 0-2 years. Most of pediatric population in the study was male. And in LRTI, males were the highest in proportion.

INTRODUCTION

Respiratory tract infection (RTI) refers to any of a number of infectious diseases involving the respiratory tract. An infection of this type is normally further classified as an upper respiratory tract infection (URTI) and a lower respiratory tract infection (LRTI). Lower respiratory infections, such as pneumonia, tend to be far more serious conditions than upper respiratory infections, such as the common cold^[1]. Respiratory tract infections (RTI) represent a major public health problem because of their world-wide occurrence, ease of transmission and considerable morbidity and mortality effecting people of all ages. Children are on average infected two to three times more frequently than adults, with acute RTIs being the most common infection in childhood^[2]. Among children, Acute Respiratory Infections (ARI) constitutes a leading cause of morbidity and mortality. ARI accounts for 4 million of the 15 million child deaths in the world, annually. Globally, 3060% of paediatric outpatient attendance and 20-30% of hospital admissions are due to ARI.^[3]

Although some disagreement exists on the exact boundary between the upper and lower respiratory tracts, the upper respiratory tract is generally considered to be the airway above the glottis or vocal cords. This includes the nose, sinuses, pharynx, and larynx. Typical infections of the upper respiratory tract include tonsillitis, pharyngitis, laryngitis, sinusitis, otitis media, certain

types of influenza, and the common cold.^[1] Symptoms of URIs can include cough, sore throat, runny nose, nasal congestion, headache, low grade fever, facial pressure and sneezing.

The lower respiratory tract consists of the trachea (windpipe), bronchial tubes, the bronchioles, and the lungs. Lower respiratory tract infections are generally more serious than upper respiratory infections. LRIs are the leading cause of death among all infectious diseases.^[6] The two most common LRIs are bronchitis and pneumonia.^[7] Influenza affects both the upper and lower respiratory tracts, but more dangerous strains such as the highly pernicious H5N1 tend to bind to receptors deep in the lungs^[8]

According to World Health Organization, Pneumonia is the single largest infectious cause of death in children worldwide. Pneumonia killed 9 lakh under 5 children in 2015, accounting for 16% of all deaths of children under five years old^[4]. Most often, LRTI is accompanied by fever and may be preceded by a typical viral URTI. It is important to assess all children with a fever accurately. National Institute for Health and Care Excellence guidance on the management of feverish illness in children has been produced. Bacterial pneumonia should be considered in children when there is persistent or

repetitive fever above 38.5°C together with chest recession and a raised respiratory rate.^[5]

This present study was planning to determine the morbidity profile of children admitted for RTI in paediatrics department of a tertiary care teaching hospital.

METHODOLOGY

This prospective study was conducted at Mandya Institute of Medical Science and Teaching Hospital (MIMS Teaching Hospital). It is a 550 bedded tertiary care teaching hospital having different specialties like medicine, surgery, orthopaedics, paediatrics, obstetrics and gynaecology etc. The hospital provides health care services to people in and around Mandya and nearby villages. The study on morbidity profile children admitted for RTI was done in paediatric department of MIMS, Mandya. This study was initiated after getting ethical clearance from Institutional Ethics Committee, MIMS, Mandya. Details from 150 RTI patients were collected using specially designed case report form to evaluate it. This study has been conducted on male and female patients who were satisfying the inclusion criteria. The subjects included in this study were patients of either sex aged 14 years or below, who have been diagnosed as RTI and admitted in the paediatrics department during the study period. We have excluded the children admitted to Intensive care unit and records of patients with incomplete data availability. A suitably designed Case Record Form was prepared and used to record all the necessary and relevant data from the medical records of patients which mainly included admission sheets, patient history notes, progress sheets, nurses' records. After acquiring the details, we have performed various analysis in the collected data. The analysis was based on patient age, gender, and morbidity profile of diseases

RESULTS AND DISCUSSION

Patient Distribution Based on Gender

Distribution of gender in patients observed in our study: Out of 150 patients, 88 (58.66%) patients were males and 62(41.33%) patients were females, the number of male patients were highly increased by 17.33%.

Table 2: Patient distribution based on age and gender.

| GENDER | NO. OF PATIENT, N (%) | MEAN AGE+ SD (YEARS) |
|--------|-----------------------|----------------------|
| Total | 150 | 1.46±1.44 |
| Male | 88 (58.66%) | 2.060±2.22 |
| Female | 62 (41.33%) | 1.132±1.40 |

PATIENT DISTRIBUTION BASED ON AGE GROUP

All RTI patients were divided into 2 groups based on their age. Among these 110(73.33%) came under 0-2 years category and 40(26.66%) in 2-14 years. In 0-2 years; 61 were males and 49 were females. In 2-14years; 27 were males and 13 were females.

Table 1: Gender distribution of patients observed in our study (n=150).

| Gender | Number of patients | Percentage (%) |
|--------|--------------------|----------------|
| Male | 88 | 58.66% |
| Female | 62 | 41.33% |

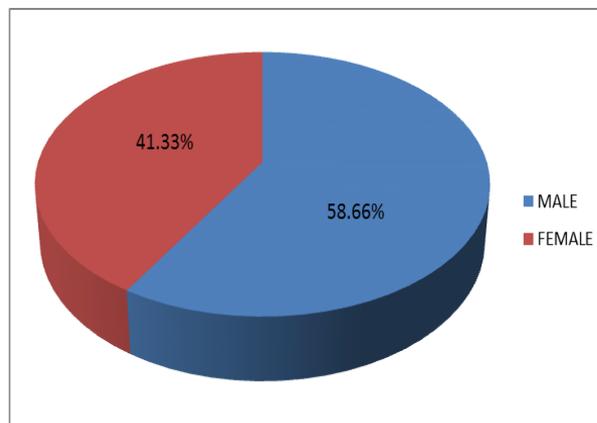


Figure 1: Gender distribution of patients observed in our study.

PATIENT DISTRIBUTION BASED ON AGE AND GENDER

The case sheet data of 150 patients were analyzed in the current study, out of which 88 were males (58.66%) and 62 were females (41.33%). The mean age of all patients was found to be 1.46±1.44 years being 2.060±2.22 and 1.132±1.40 years in males and females respectively. The male to female ratio was found to be 1.4 from the study.

Table 3: Age distribution of patients observed on our study.

| GENDER | 0-2 YEARS | 2-14 YEARS |
|--------|-----------|------------|
| Male | 61 | 27 |
| Female | 49 | 13 |

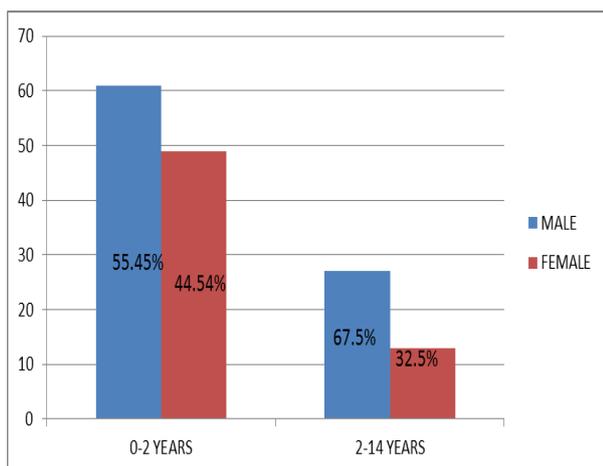


Figure 2: Age distribution of patients observed on our study.

Patient Distribution Based On Disease Condition

While analyzing the disease condition of all patients admitted with RTI, 16(10.66%) had Bronchiolitis,

11(7.33%) had URTI, 35(23.33%) had WALRI, 36(24%) had Bronchopneumonia, 11(7.33%) had Pnuemonia and 41(27.33%) had LRTI.

Table 4: Patient distribution based on disease condition.

| Disease condition | TOTAL | PERCENTAGE(%) |
|-------------------|-------|---------------|
| Bronchiolitis | 16 | 10.66% |
| Urti | 11 | 7.33% |
| Walri | 35 | 23.33% |
| Bronchopnuemonia | 36 | 24% |
| Pnuemonia | 11 | 7.33% |
| Lrti | 41 | 27.33% |

WALRI – Wheezing Associated Lower Respiratory Tract Infection.

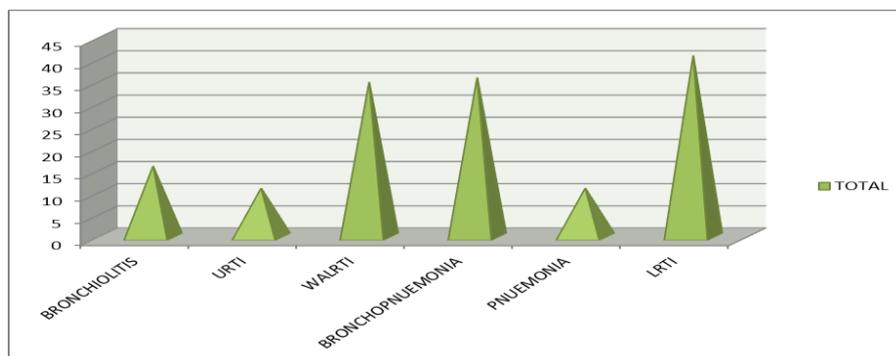


Figure 3: Patient distribution based on disease condition.

Patient Distribution Based On Disease Condition According To Gender

While analyzing the disease condition of all male and female patients admitted with RTI, 6 males and 16 females had Bronchiolitis, 6 males and 5 females had URTI, 23 males and 12 females had WALRI, 20 males and 16 females had Bronhopneumonia, 3 males and 8 females had Pnuemonia and last 25 males and 16 females had LRTI.

Table 5: Patient distribution based on disease condition according to gender.

| Disease condition | Males | Females | Percentage (%) |
|-------------------|-------|---------|----------------|
| Bronchiolitis | 6 | 16 | 10.66% |
| Urti | 6 | 5 | 7.33% |
| Walri | 23 | 12 | 23.33% |
| Bronchopnuemonia | 20 | 16 | 24% |
| Pnuemonia | 3 | 8 | 7.33% |
| Lrti | 25 | 16 | 27.33% |

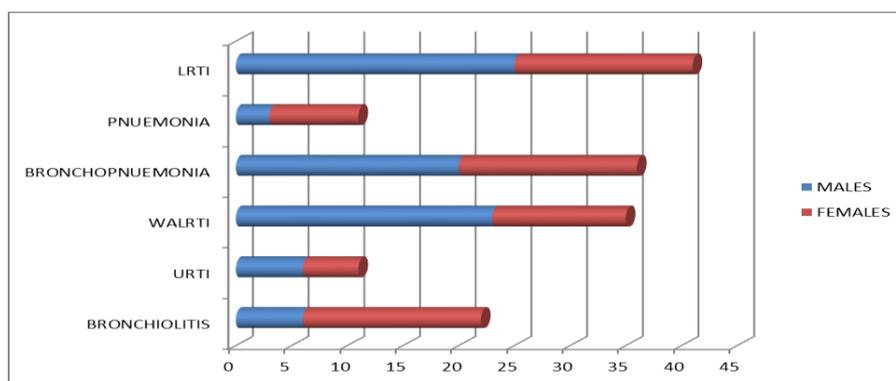


Figure 4: Patient distribution based on disease condition according to gender.

DISCUSSION

The morbidity profile of RTI in pediatrics conducted in MIMS Teaching Hospital, Mandya was record based prospective study. A suitably designed data collection form will be used to record all the necessary data including patient's name, age, sex, and disease condition. A total number of 150 case sheets of RTI pediatrics patients were collected. With regard to gender, male showed the highest population and also the mean age of male patients show the highest. Found that majority of people belong to age group 0-2 years. With regard to disease condition, LRTI was found to be the most common disease. And according to gender, male LRTI was found to be the highest in proportion. A study done by Vinod. K. Ramani *et al*, shows that males are more, that is similar to our results (males). Another similar study conducted by Pratima Devil and Surekha Srigiri² reported that males are suffering more from respiratory tract infection

The present study aimed at assessing the socio-demographic data, morbidity profile and treatment pattern of RTI patients. With regard to gender, males with 88 (58.66%) showed the highest population. The mean age of all patients was found to be 1.46 ± 1.44 years being 2.060 ± 2.22 and 1.132 ± 1.40 years in males and females. We found that majority of people belong to the age group 0-2 years. According to disease condition, LRTI was found to be the most common disease. And according to gender, male LRTI was found to be the highest in proportion.

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