



CODEN [USA]: IAJPBB

ISSN: 2349-7750

INDO AMERICAN JOURNAL OF  
**PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.3935991>Available online at: <http://www.iajps.com>

Research Article

**CLINICAL PRESENTATION OF ACUTE RESPIRATORY TRACT INFECTION AMONG CHILDREN BELOW FIVE YEARS OF AGE**<sup>1</sup>Manal Rehmani, <sup>2</sup>Sadaf Nazir, <sup>3</sup>Maryam Tariq<sup>1</sup>Ex house officer Bahawal Victoria Hospital Bahawalpur,  
Email: manalrahmani23@gmail.com<sup>2</sup>Ex house officer Sir Ganga Ram Hospital Lahore, Email: sadafnazir53@yahoo.com<sup>3</sup>Ex house officer Sir Ganga Ram Hospital Lahore, Email: maryamtariq.16oct@gmail.com**Article Received:** May 2020**Accepted:** June 2020**Published:** July 2020**Abstract:****Objective:** To determine clinical presentation of children below 5 years of age with acute respiratory tract infection**Design & duration:** This is across sectional study completed in six months of duration**Setting:** Study was conducted in Pediatric out-patient door of Bahawal Victoria Hospital Bahawalpur.**Patients and methods:** Children below five years of age presenting with acute respiratory tract infection in out-patient door of study hospital were included in this study. Consecutive sampling technique used. Inclusion and exclusion criteria applied in selection of patients. Patients having co-morbidities other than RTI, chronic respiratory disease, congenital disease, critically ill or mentally retarded were excluded from study. All data was documented on a Performa. Data was analyzed using SPSS software version 21. Results were calculated in the form of frequencies, percentages, means and standard deviation. Consent was taken from parents of children for including data of their children in the study. Permission was taken from ethical committee of the study hospital as well.**Results:** Total 380 cases were studied. Average age was  $2.5 \pm 1.4$  years. Mostly children were between 13-24 months of age. Most common presenting complaint was shortness of breath and cough in 38.4% and 24.5% cases. Majority of cases (75.3%) were treated by clinicians.**Conclusion:** Acute respiratory tract infection is most common disease among children below five years of age which usually present in the form of shortness of breath and cough. Self-treatment is not sufficient; hence doctor advice is required.**Key words:** Acute respiratory tract infection, shortness of breath, cough, pneumonia**Corresponding author:****Manal Rehmani,**Ex house officer Bahawal Victoria Hospital Bahawalpur, Email:  
manalrahmani23@gmail.com

QR code

Please cite this article in press Manal Rehmani et al, *Clinical Presentation Of Acute Respiratory Tract Infection Among Children Below Five Years Of Age.*, Indo Am. J. P. Sci, 2020; 07(07).

### INTRODUCTION:

Acute respiratory tract infection is a group of disease caused by variety of micro-organisms. It can involve any part of respiratory tract and structures like para nasal sinuses and plural cavity. In this disease local or systemic both effects may develop.<sup>1</sup> Toxins produced by microbes may cause lung dysfunction, systemic inflammatory effect or in severe cases multi organ failure. Mortality rate due to this infection is much higher in under developed or developing countries as compared to developed countries where healthcare facilities are much developed and health services are easily available on doorstep.<sup>2</sup> In developing countries mortality rate due to this infection is 2-6 times higher and contributes one-third of all death of children below five years of age. About 40% of out-patient door consultation is comprised on such patients with RTIs and it accounts 20-30% hospital admissions.<sup>3</sup> All this data reveal huge burden on health system is due to this infection.<sup>4</sup> There are various factors contributing to higher prevalence of this infection in developing countries such as high illiteracy rate, poverty, malnutrition, lack of medical infrastructure, over crowded areas and commonly practiced quackery causing injustice use of antibiotics and developing antibiotic resistance in population.<sup>5</sup> Prevalence of ARIs is 21.7% to 40% in developing countries like Thailand and Philippines.<sup>6</sup>

### PATIENTS AND METHODS:

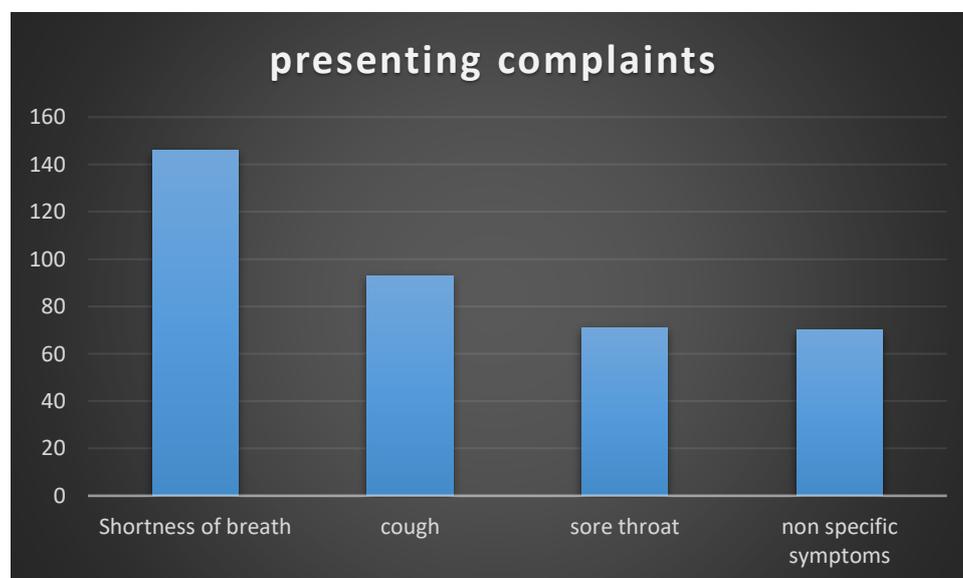
This is a cross sectional study conducted in a tertiary care hospital of south Punjab, Bahawal Victoria Hospital Bahawalpur children out-door. Study was started in January 2020 which completed after six months duration in June 2020. Children below five

years of age presenting with acute respiratory tract infection in out-patient door of study hospital were included in this study. Consecutive sampling technique used. Inclusion and exclusion criteria applied in selection of patients. Patients having co-morbidities other than RTI, chronic respiratory disease, congenital disease, critically ill or mentally retarded were excluded from study. All data was documented on a Performa. Data was analyzed using SPSS software version 21. Results were calculated in the form of frequencies, percentages, means and standard deviation. Consent was taken from parents of children for including data of their children in the study. Permission was taken from ethical committee of the study hospital as well. Sample size was calculated using WHO sample size calculator. P-value less than 0.05 was considered significant. Confidence interval was 95%. Chi square test was applied.

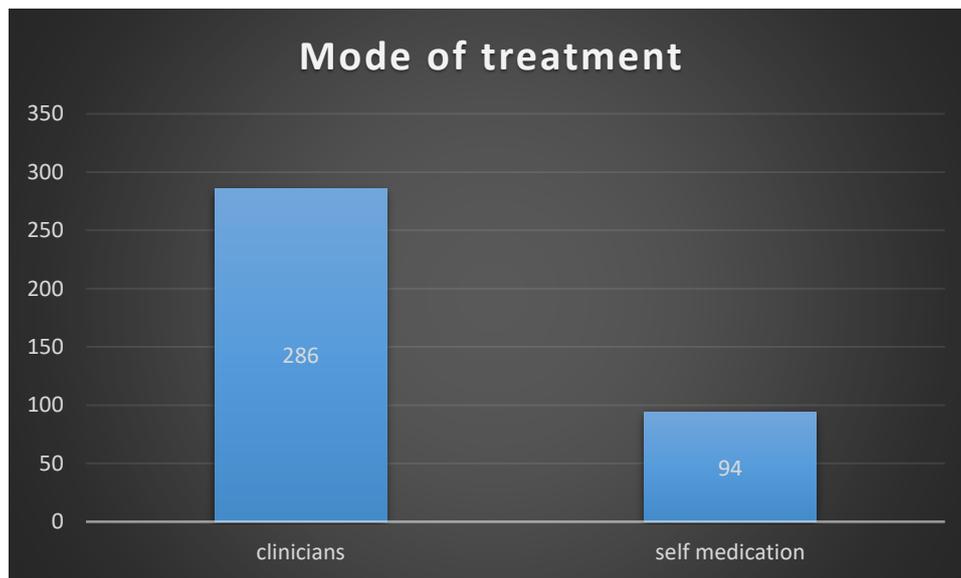
### RESULTS:

Total 380 cases were studied. Average age was  $2.5 \pm 1.4$  years. There were 82(21.6%) cases between 1-12 months, 115(30.3%) between 13-24 months, 96(25.3%) between 25-36 months, 54(14.2%) between 37-48 months and 33(8.7%) between 49-60 months of age.

Mostly children were between 13-24 months of age. Most common presenting complaint was shortness of breath and cough in 146(38.4%) and 93(24.5%) cases. Sore throat was present in 71(18.7%) and non-specific symptoms were present in 70(18.4%) cases. Majority of cases 286(75.3%) were treated by clinicians and other 94(24.7%) were treated by self-medication or from any quack.



(Figure-1) Presenting complaints among children in study group. (N=380)



(Figure-2) Mode of treatment taken by children in study group. (N=380)

### DISCUSSION:

Acute respiratory tract infection in our population is a huge burden on health care system. It contributes major portion of mortality among children below 5 years of age.<sup>7</sup> ARI is an acute infection lasting less than 30 days. Involving respiratory tract and its associated structures. In majority of cases (95%) upper respiratory tract is involved, while in 5% cases lower respiratory tract is involved.<sup>8</sup> Infection can be self-limiting or it can convert to pneumonia requiring hospital admission and continuous monitoring and treatment.<sup>9</sup> Global incidence is 5-7 episodes per child in rural areas and 3-5 episodes per child in urban areas. Mostly ARTIs present as bronchiolitis or pneumonia. In our study female children (55%) were more affected than male children.<sup>10</sup> A similar study done in India reported that female children affected more than male children. Acute respiratory tract infection is a group of disease caused by variety of micro-organisms. It can involve any part of respiratory tract and structures like para nasal sinuses and plural cavity. In this disease local or systemic both effects may develop. Toxins produced by microbes may cause lung dysfunction, systemic inflammatory effect or in severe cases multi organ failure. Mortality rate due to this infection is much higher in under developed or developing countries as compared to developed countries where healthcare facilities are much developed and health services are easily available on doorstep. A study conducted by Ujunwa *et al* reported that in Nigerian and Indian patients male were more affected than female children.<sup>11</sup>

### REFERENCES:

1. Simoes EAF, Cherian T, Chow J, *et al*. Acute Respiratory Infections in Children. In: Jamison DT, Breman JG, Measham AR, *et al.*, editors.

Disease Control Priorities in Developing Countries. Second ed. Washington (DC): The International Bank for Reconstruction and Development / The World Bank and Oxford University Press, New York; 2006.

- Ujunwa FA, Ezeonu CT. Risk Factors for Acute Respiratory Tract Infections in Under-five Children in Enugu Southeast Nigeria. *Annals of Medical and Health Sciences Research*. 2014;4(1):95-9.
- Oyejide C. Review of epidemiological risk factors affecting the pathogenesis of acute respiratory infections. *Niger J Paediatr*. 1988;15:1-9.
- Yousif T, Klaheq B. Epidemiology of acute respiratory infections among children under-five old attending Tikirit general teaching hospital. *Middle East Journal of Family Medicine*. 2006;4(3):4-23.
- Vashishtha V. Current status of tuberculosis and acute respiratory infections in India: Much more needs to be done. *Indian J Pediatr*. 2010;47(88-89).
- Prajapati B, Talsania NJ, Lala MK, Sonalia KN. Epidemiological profile of acute respiratory infections (ARI) in under five age group of children in urban and rural communities of Ahmedabad district, Gujarat. *Int J Med Sci Public Health*. 2012;1(2):52-8.
- Sharma D, Kuppusamy K, Bhoorasamy A. Prevalence of acute respiratory infections (ari) and their determinants in under five children in urban and rural areas of Kancheepuram district, South India. *Annals of Tropical Medicine & Public Health*. 2013;6(5):513-8
- Azizi B, Zulkifli H, Kasim M. Protective and risk factors for acute respiratory infections in hospitalized urban Malaysian children: A case

- control study Southeast Asian. *J Trop Med Public Health*. 1995;26:280-5.
9. Islam F, Sarma R, Debroy A, Kar S, Pal R. Profiling acute respiratory tract infections in children from Assam, India. *J Glob Infect Dis*. 2013;5.
  10. Siziya S, Muula AS, Rudatsikira E. Diarrhoea and acute respiratory infections prevalence and risk factors among under-five children in Iraq in 2000. *Italian journal of pediatrics*. 2009;35(1):8.
  11. Kumar SG, Majumdar A, Kumar V, Naik BN, Selvaraj K, Balajee K. Prevalence of acute respiratory infection among under-five children in urban and rural areas of puducherry, India. *Journal of Natural Science, Biology, and Medicine*. 2015;6(1):3-6