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RESEARCH ARTICLE

PREVALENCE OF RESPIRATORY TRACT INFECTIONS IN CHILDREN UNDER FIVE YEARS AT QUETTA

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Abbreviations:
UK – United Kingdom
USA- United States of America.
WHO- World Health Organization.
RSV- Respiratory Syncytial Virus.
BMCH- Bolan Medical Complex Hospital
SPH- Sandeman Provincial Hospital.

ABSTRACT

Objectives: To study the prevalence of respiratory tract infections in children under five years. **Background:** Respiratory tract infection is an important cause of morbidity and mortality in children under five years of age. These are mostly self-limiting and risk of complications is small. Risk factors for severe complications include malnutrition, low birth weight, passive smoking, non-breast feeding, low socioeconomic condition, and HIV infections. and consequently, most of the morbidity associated with such infections are found in developing countries. The causative agents for respiratory infections are mainly bacterial or viral. although it is not possible to differentiate between the two on the basis of clinical signs or radiology. They are treated either conservatively or admitted in hospital according to the severity of symptoms but vaccination remains the best choice which prevents such infections. This study aims to assess the prevalence of respiratory tract infections in children under five years in the city Quetta. **Methodology:** A cross-sectional study was conducted using a self-made questionnaire. This research was conducted Paeds department of Bolan Medical Complex Hospital (BMCH) and Sandeman Provincial Hospital (SPH), Quetta. Children under 5 years of age were randomly assigned to the study. A total of 153 patients assigned to the study. **Results:** The study showed a high prevalence of respiratory tract infection in children under five years who were visiting the department of Paeds at BMCH and SPH. Out of the total sample, 38% (n=58) of children were victims of respiratory tract infection where 60% of them were children under age one. Among affected total 58 patients, 31 patients presented with a cough and fever, 15 patients were having the complaints of a sore throat and cough, 9 patients had loose motions with a cough, while 3 patients were having vomiting and rhinitis. **Conclusion:** This study has identified a high prevalence of respiratory tract infections among the children visiting the Paeds department of Bolan Medical Complex Hospital and Sandeman Provincial Hospital, Quetta. It also highlights the various risk factors that lead to respiratory tract infection.

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INTRODUCTION

Respiratory tract infection is an important cause of morbidity and mortality in children under five years of age. These are mostly self-limiting and risk of complications is small. Nevertheless, such infections still account for over a third of pediatric consultations in the UK and USA. A study carried out in Assam where the prevalence of respiratory tract infection was 27% (Islam *et al*., 2013). Another study from Delhi shows the prevalence of respiratory tract infection to be 14.6% (Management of childhood illness in developing countries, 1998).

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Moreover, Brazil reported that the prevalence of respiratory tract infection is 25.6% (Duarte *et al*., 2000). These are responsible for the death of more than two million children under the age of five. sometimes these infections may proceed with pneumonia and other complications. Signs and symptoms of respiratory tract infection either includes or combination of a cough and cold, running or blocked nose, sore throat, stops feeding and drinking rapid breathing, noisy breathing and chest indrawing. A new episode of respiratory tract infection is taken as one occurring in an individual who had been free of symptoms for at least three consecutive days or more as per WHO definition of respiratory tract infection (Cherian *et al*., 1988). The causative agents for acute bacterial infections are mainly bacterial or viral. although it is not possible to differentiate between the two on the basis of clinical signs or radiology.

Viruses are responsible for 40 to 50 percent of infection in infants and children hospitalized for pneumonia in developing countries (John *et al*., 1991). Measles virus, Respiratory Syncytial Virus, parainfluenza viruses, influenza type A virus, and adenoviruses are the most important causes of viral pneumonia. Differentiating between viral and bacterial pneumonia radiographically is difficult, partly because the lesions look similar and partly because bacterial superinfection occurs with influenza, measles, and RSV infections (Ghafoor *et al*., 1990).

Risk factors for severe complications include malnutrition, low birth weight, passive smoking, non-breast feeding, low socioeconomic condition and HIV infections (Ujunwa, 2014). and consequently, most of the morbidity associated with such infections are found in developing countries as reported by a study from Delhi (8). Another risk factor is overcrowding, which means a large number of people living in less space (Garenne *et al*., 1992; Erling *et al*., 1999). The weather has been traced to be one of the factors that affect respiratory tract infection. Dry and chilly weather causes more respiratory infections as compared to warm and humid weather (Shahzad *et al*., 2009; Botelho *et al*., 2003). The management of respiratory tract infection depends upon its severity. Nonsevere respiratory tract infection is managed conservatively at home while severe respiratory tract infection is managed at the hospital. The best way to deal with respiratory tract infection is prevention with vaccination, which prevents many viral causes of respiratory tract infection (Campbell *et al*., 1989). This study aims to assess the prevalence of respiratory tract infections in children under five years in the city Quetta.

MATERIALS AND METHODS

A cross-sectional study was conducted using a self-made questionnaire. This research was conducted Paeds department of Bolan Medical Complex Hospital (BMCH) and Sandeman Provincial Hospital (SPH), Quetta. Children under 5 years of age were randomly selected. There were total 153 patients assigned to the study.

RESULTS

The study showed a high prevalence of respiratory tract infections in children under five years. Out of the total sample, 38% (n=58) of children were victims of respiratory tract infection where 60% of them were children under age one. Among affected total 58 patients, 31 patients presented with a cough and fever, 15 patients were having the complaints of a sore throat and cough, 9 patients had loose motions with a cough, while 3 patients were having vomiting and rhinitis.

Table no 1: Prevalence of respiratory tract infection in children. (n =153)

Total	n= 153	100%
Respiratory tract infection (Present)	N= 58	38%
Respiratory tract infection (Absent)	N= 95	62%

Table no 2: Signs and symptoms of respiratory tract infection among children. (n= 153)

Cough+fever	Sore throat+cough	Cough+L.motion	Rhinitis+vomiting
N=31	N=15	N=9	N=3

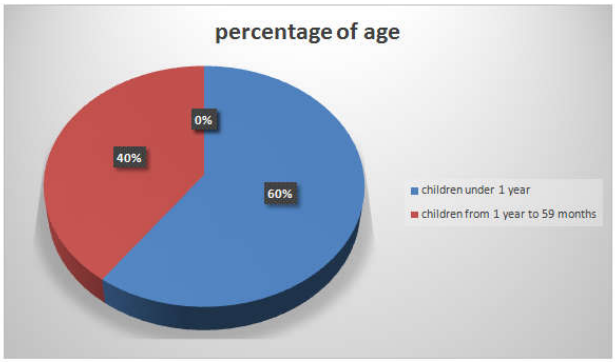

Figure 1. Percentage of patients in terms of age having respiratory tract infection

According to table no 1, there were 38% children who were affected with respiratory tract infections, while 62% had no any symptom of respiratory tract infection. According to table no 2, total affected patients were 58, where 31 patients presented with a cough and fever, 15 patients were having the complaints of a sore throat and cough, 9 patients had loose motions with a cough, while 3 patients were having vomiting and rhinitis. According to figure no 1, total affected patients were making percentage of 60% and they were under age of 1. While the other 40% of affected patients were above the age 1.

RECOMMENDATIONS

This study recommends that respiratory tract infection control programs should be multifaceted with a strong political will. The community awareness programs can help in counseling people about different ways to control the prevalence of respiratory tract infection. The suggested options to be used for awareness sessions are proper hand washing, breastfeeding of children and timely immunization of children against respiratory tract infections.

Conclusion

This study has identified a high prevalence of respiratory tract infection among the children visiting the Paeds department of Bolan Medical Complex Hospital and Sandeman Provincial Hospital, Quetta. It also shows highlights the risk factors that lead to respiratory tract infection

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