

**Prevalence Rate And
Morbidity Pattern Of
Common E.N.T. Diseases
And Disorders In Infants
And Children**

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Introduction

Acute infections of the upper respiratory tract, as well as recurrent diseases and disorders of the Ear, Nose and Throat are more common in the initial years of life. These are responsible for considerable morbidity among infants and young children.

In the initial stage these infants and children usually present to the local medical practitioner as well as the paediatrician with acute or sub-acute complaints of variable and non-specific nature. The common complaints are feeding difficulties, vomiting, diarrhoea, irritability, restlessness, sleep disturbances, cough, noisy breathing, and pyrexia. Unless a careful history is obtained and a proper examination of the Ear, Nose and Throat conducted, there is the possibility that these complaints would be mis-interpreted and probably mismanaged. For example it is not uncommon to diagnose and treat noisy breathing due to adenoidal hypertrophy as asthma, or a chronic/recurrent cough due to sinusitis/pharyngitis wrongly interpreted and managed as pulmonary tuberculosis.

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Equally important is the fact that unless a proper diagnosis is made and proper treatment provided, many of these acute or sub-acute ENT problems become chronic and have the potential to undermine the child's general health as well as seriously hamper his developmental capabilities like school performance.

For example infection of the middle ear, if not diagnosed and treated in the early stages, may lead to hearing difficulty which will adversely effect the development of speech and hence cause serious handicap to the growing child. Those children with undiagnosed ENT disorders later present to the ENT specialist, with chronic and more serious problems.

Aims and Objectives

The aims and objectives of this study were:-

1. To study the overall prevalence rate of common ENT diseases and disorders in different age groups of the apparently healthy babies attending the Hospital (for Immunization).
2. To study the frequency pattern of common ENT diseases and disorders in different age groups.
3. To study the relationship between socio-economic factors and the prevalence rate of the common Ear, Nose and Throat diseases and disorders.

Subjects and Methodology

The subjects for this study were chosen from among the normal infants attending the Immunization Centre at Hayat Shaheed Teaching Hospital, Peshawar.

This study was started in the summer months so that the seasonal increase in the prevalence rate of ENT diseases, which is mainly due to increase in the upper respiratory tract infection during the winter months, could be avoided. The mothers of all the babies who were included in this study were interviewed to obtain information about the name, age, socio-

economic background. Information was also obtained about the complaints of common ENT diseases and disorders. All the information was obtained and entered on a standard proforma Part-I by the paediatrician.

These babies were then examined independently by ENT specialist for clinical signs of ENT disorders and the findings were entered on proforma Part-II.

The Methods of Examination were:

a. Ear: Inspection of the ear, followed by Otoscopy. Those babies who were having wax in the ears were excluded from the study. The remaining were examined for signs of ear discharge, otitis media (secretory, suppurative) and tympanic membrane perforation.

b. Nose: Nasal examination included external examination and anterior rhinoscopy to see any nasal discharge, air way obstruction and signs of infection; also signs of adenoidal hypertrophy were noted.

c. Throat: Examination of the oropharynx was conducted for any sign, of tonsillitis and pharyngitis, as well as enlargement of tonsils.

Results and Analysis

This is the preliminary report of a prospective long term study being conducted in collaboration between the departments of Paediatrics and Ear, Nose and Throat Surgery at Hayat Shaheed Teaching Hospital, Peshawar since June 1989. One hundred and fifty infants (age group of one month to three years) were randomly chosen from the "Immunisation Centre" of Hayat Shaheed Teaching Hospital, Peshawar. The mothers of these infants were first interviewed by the Paediatrician and information about the common ENT diseases/disorders obtained. They were then examined by ENT specialist for clinical signs of ENT diseases/disorders. The resultant data was analysed in tabulated form to show the overall prevalence rate and morbidity pattern of common ENT diseases/disorders in the various age and socio-economic groups of infants and children included in this study.

Out of one hundred and fifty infants, those symptomatic were 73 (48.66%); while those having clinical signs were 92 (61.33%). These babies were divided into three groups on the basis of age. Group 'A' (total 78) included babies between 1-6 months of age. Group 'B' (total 52) included babies between 6-12 months. Group 'C' (total 20) included babies between 1-3 years of age. In Group 'A' 42 babies (53.84%) were symptomatic, while 46 (58.97%) were found to have clinical signs. In Group 'B' 25 babies (48.07%) were symptomatic, while 35 (67.30%) had signs present. In Group 'C' 12 babies (60%) were symptomatic, while 10 (50%) were having clinical signs present.

Socio-economic: The babies were further divided into three groups on the basis of socio-economic background of the family:

1. Monthly income (Group-I) upto Rs. 1500.
2. Monthly income (Group-II) Rs. 1500-3000.
3. Monthly income (Group-III) Rs. 3000 and above.

There were 125 babies in the income Group-I (83.33%) of the total); out of these 67% had positive clinical signs of Ear, Nose and Throat diseases/disorders.

There were 18 babies in the income Group-II (12% of the total); out of these 9% had evidence of Ear, Nose and Throat diseases/disorders.

In the income Group-III, there were only 8 babies (5.33% of the total); out of which 3% (of the total) had positive clinical signs of Ear, Nose and Throat diseases/disorders.

TABLE-I**Total No. of Infants = 150**

1-6 months	6-12 months	1 Yr.-3 Yr.
78	52	20
52%	34.66 %	13.33 %

TABLE-II
BABIES WITH SYMPTOMS IN VARIOUS AGE GROUPS

Age group	Total	%	Symptomatic	%
1-6 months	78	52.00%	42	53.84%
6-12 months	52	34.66%	25	48.07%
1 Yr.-3Yr.	20	13.33%	6	30.00%

TABLE-III
BABIES WITH SIGNS IN VARIOUS AGE GROUPS

Age group	Total	%	With Clinical Signs	%
1-6 months	78	52.00%	46	58.97%
6-12 months	52	34.66%	35	67.30%
1 Yr.-3 Yr.	20	13.33%	11	55.00%

**TABLE-IV
INCOME GROUP**

Income group	No. of Babies	%	% of Patients With Clinical Signs
< Rs. 1500/month	125/150	83.33%	67%
Rs. 1500-3000 month	18/150	12.00%	9%
> Rs. 3000/month	8/150	5.33%	3%

**TABLE - V
SYMPTOMS IN ORDER OF FREQUENCY**

Symptoms	Total	%
Ear Ache	45/150	30.00%
Frequent Cough	22/150	13.33%
Nasal Discharge	19/150	12.66%
Noisy Breathing	18/150	12.00%
Ear Discharge	4/150	2.66%
Hearing Difficulty	1/150	0.66%

**TABLE - VI
SIGNS IN ORDER OF FREQUENCY**

Signs	Total	%
Pharyngitis	45/150	30.00%
Otitis Media	44/150	29.33%
Nasal Discharge	39/150	26.00%
Tonsillitis	38/150	25.33%
Nasal Obstruction	8/150	5.33%
Signs of Adenoidal Hypertrophy	6/150	4.00%
Ear Drum Perforation	1/150	0.66%

Discussion

The commonness of acute and sub-acute diseases and disorders of the Ear, Nose and Throat among infants and young children is a daily observation.

This initial study confirms the observation that more than half of the apparently healthy subjects (in all age groups included in this study) had objective clinical evidence of Ear, Nose and Throat diseases in one or the other form. These patients (paediatric age group) initially present to the doctors working at the primary and secondary health care level as well as to the paediatrician, with a wide range of complaints which have been mentioned in the introduction of this paper.

There is a strange contrast between the general public and the clinicians regarding the awareness about the common diseases/disorders of the Ear, Nose and Throat. While the parents almost always seem to be concerned about the Ear, Nose and Throat problems, the clinicians on the other hand attach but little importance to the complaints about the Ear, Nose and Throat disorders.

This casual attitude towards the diagnosis of common diseases of the Ear, Nose and Throat reflects a lack of awareness on the part of clinicians as well as lack of adequate training to examine the Ear, Nose and Throat of infants and young children. In addition most of the clinics, out-patient departments and general wards of the hospitals are usually not well equipped for the proper examination of the Ear, Nose and Throat of the infants and young children.

All the above factors often lead to wrong interpretation of complaints resulting in misdiagnosis and mismanagement of patients.

The neglect, which the paediatric patients (with acute and sub-acute ENT diseases and disorders) suffer, results in the enhancement of their sufferings and cause delay in instituting timely treatment.

This delay in treatment has the potential to make the acute and

simple ENT problems become chronic and more serious. Consequently a substantial number of school children are left with recurrent and chronic Ear, Nose and Throat problems like chronic tonsillitis, sinusitis, otitis media and adenoidal hypertrophy etc.

These chronic problems not only cause physical and emotional suffering to the growing child but can also hamper his developmental progress and school performance.

Thus there is an urgent need for the clinicians to be made aware of the importance of proper diagnosis and treatment of the acute ENT problems at an early stage.

Also screening for the chronic ENT disorders in the school children should be an important component of the school medical officer's duty.

Children with poor school performance should get special attention so as to exclude problems like hearing defects and poor concentration due to chronic adenoidal hypertrophy.

This study also confirms the already established fact that Ear, Nose and Throat problems are more common in adverse socio-economic circumstances (low income group) pointing to the fact that perhaps infection plays an important role in the aetiology of the common Ear, Nose and Throat disorders in the initial stages.

It, therefore, highlights the need to correctly plan and design the class rooms, as well as other places of indoor gathering of young children in the school, so as to minimise the risk of cross infection. This aim can be achieved by providing adequate spacing in the class rooms, as well as ensuring good ventilation and low humidity in the school buildings.

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