

## Research Article

# Incidence of ear, nose and throat disorders in children: a study in a teaching hospital in Telangana

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**Received:** 24 November 2015

**Accepted:** 05 December 2015

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## ABSTRACT

**Background:** ENT problems are very common among the children, especially diseases such as acute suppurative otitis media, acute tonsillitis, acute epiglottitis, laryngotracheobronchitis, and rhinitis etc. Poor hygienic conditions, malnourishment, different socio-economic levels are also said to play a role in the prevalence of ENT disorders.

**Methods:** 417 children between the ages of 0-15, attending the ENT department in our hospital were included in the study. General demographic details such as age, sex, socio-economic status, clinical history, and examination for common ENT complaints and disorders was taken for all patients. Otoscopy for ear examination for diseases such as otitis media, ear perforation and ear discharge anterior rhinoscopy for nasal discharge, airway obstruction and infection were performed. Presence of any adenoid hypertrophy was looked for. Throat examination was performed for any sign of tonsillitis or pharyngitis. Appropriate investigations such as X-rays, culture and sensitivity, etc were performed where necessary.

**Results:** 258 (61.9%) patients were females while there were 159 (38.1%) males. More than 45% cases who had disorders were concentrated in the 6-15 years age group. Almost 75% of the children were from lower socio-economic status. Otitis media among the ear diseases, rhinitis in the nasal diseases and pharyngitis followed by tonsillitis in the diseases of the throat was found to be the most common.

**Conclusions:** Our study provides basic information of the prevalent disorders in ENT in our area, based on which we can take the relevant step towards development of the medical setup and treatment.

**Keywords:** Ear nose throat disorders, Children, Prevalence, Otitis media

## INTRODUCTION

ENT problems are one of the most common causes that warrant a visit to the doctor, more so if the patient is a child. Paediatric population forms a considerable proportion of the total world's population. 35% of India's population, which is the world's second most populous country, are children.<sup>1</sup>

Respiratory tract symptoms such as cough and cold, earache, sore throat, are very common in children especially when there is a climatic change or in the rainy and winter seasons. Many of the times, the treatment for these are done at home itself or by using alternative treatment and symptomatic treatment, probably because

of monetary reasons. When these symptoms become more serious, the children are normally brought to the doctor.

Ear, Nose, Throat problems are more common in children than in adults, especially diseases such as acute suppurative otitis media, Acute tonsillitis, acute epiglottitis, laryngotracheobronchitis, and rhinitis etc. This could be due to various factors such as wider and horizontal Eustachian tube, under developed immunity, malnourishment, poor hygiene and sanitary conditions, overcrowding, lower socioeconomic status etc.<sup>2</sup>

Fortunately, fatality is very low in such cases except in cases of emergencies, but complications do occur inspite

of improved health care facilities.<sup>3,4</sup> Infection of the middle ear is reported to be one of the most common diseases in children due to altered Eustachian canal.<sup>6</sup>

Assessing the health related issues in children is considered to give an idea of the health status of a community.<sup>5</sup> This study was mainly conducted to give us an idea of the prevalent disorders of the ear nose and throat in our area.

## METHODS

This study was conducted in the Department of Ear, Nose and Throat at Mallareddy Medical College for women. 417 children between the ages of 0-15, attending the ENT department in our hospital were included in the study. Some of these children were referred to from the paediatric and medical department. General demographic details such as age, sex, socio-economic status were taken. Clinical history and examination for common ENT complaints and disorders was also taken for all patients.

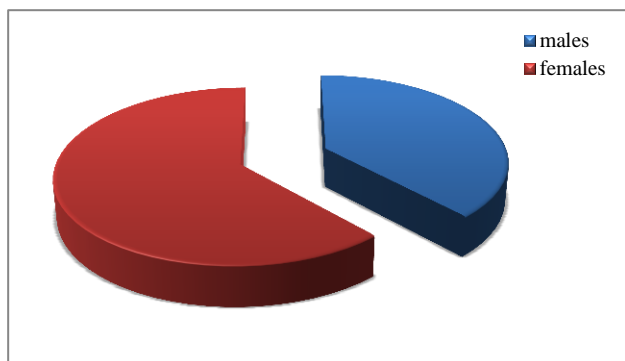
Otoscopy for ear examination for diseases such as otitis media, ear perforation and ear discharge was done. In case of nasal examination, external, anterior rhinoscopy for nasal discharge, airway obstruction and infection were performed. Presence of any adenoid hypertrophy was looked for.

Throat examination was performed for any sign of tonsillitis or pharyngitis. Appropriate investigations such as X-rays, culture and sensitivity, etc were performed where necessary.

Patients with expectorant, pneumonia, tuberculosis, hemoptysis and other diseases were excluded from the study. Children presenting with headache due to any ophthalmic reasons or neurological reasons were excluded from the study.

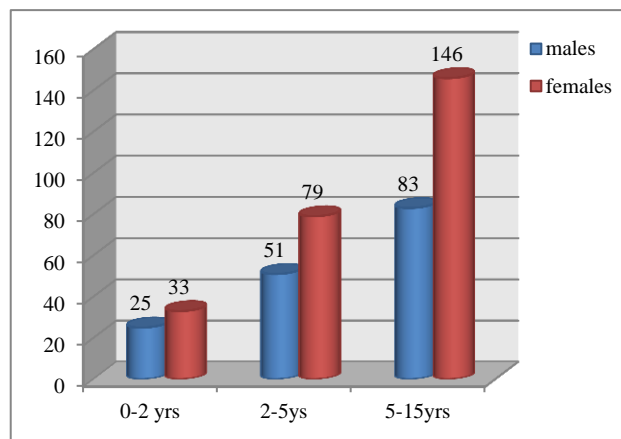
## RESULTS

There was a predominance of females over males in our study. 258 (61.9%) patients were females while there were 159 (38.1%) (Figure 1).



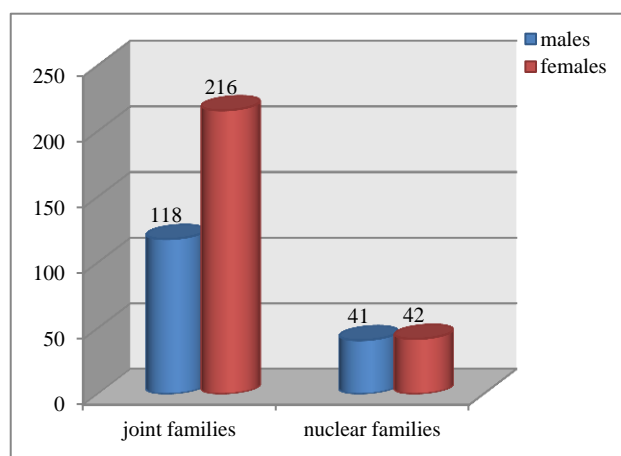
**Figure 1: Sex wise distribution of patients.**

More number of disorders was concentrated in the 6-15 years age group, with more than 45% of the cases (Figure 2).



**Figure 2: Age wise distribution of patients.**

Almost 75% of the children were from lower socio-economic status. Very few, around 8%, were from upper class while the rest were from middle class. About 80% of these children were living in joint families (Figure 3).



**Figure 3: Style of living of the patients.**

Among the 206 ear disorders, chronic suppurative otitis media was the most common disorder accounting for 27.1% of the total cases and 54.9% of the ear disorders. Otitis media with effusion accounted for 20% of the cases. There were very few cases of otomycosis which were 5.8% of the ear diseases. Rhinitis was the most common of the nasal disorders with 48.3% followed by chronic sinusitis (17.2%). Infective rhinitis accounted for 12.5% of the nasal diseases. Pharyngitis (38.2%) was the most common disorder of the throat followed by tonsillitis (33.3%) (Table 1).

**Table 1: Incidence of various ENT diseases.**

	Disorder	Number	Percentage (overall %)
Ear disorders (n=206)	Chronic suppurative otitis media	113	54.9% (27.1%)
	Otitis Media with Effusion	42	20.4% (10.1%)
	Otomycosis	12	5.8% (2.9%)
	Foreign body ear	8	3.9% (1.9%)
	Ear Wax	37	18% (8.9%)
Nose Disorders (n = 377)	Rhinitis	182	48.3% (43.6%)
	Allergic rhinitis	47	12.5% (11.3%)
	Chronic sinusitis	65	17.2% (15.6%)
	Epistaxis	32	8.5% (7.7%)
	Foreign body. <sup>3</sup>	19	5% (4.6%)
	Nasal Polyp	7	1.9% (1.7%)
	Deviation of nasal Septum	16	4.2% (3.8%)
	Injuries	4	1.1% (1%)
Throat Disorders (n = 348)	Others	5	1.3% (1.2%)
	Tonsillitis	116	33.3% (28.7%)
	Pharyngitis	133	38.2% (31.9%)
	Cervical lymphadenitis	34	9.8% (8.2%)
	Adenoid hypertrophy	21	6% (5%)
	Foreign body	32	9.2% (7.7%)
	Others	12	3.5% (2.9%)

## DISCUSSION

The main health problems in the paediatric population in India are low birth weight, malnutrition, infection and parotitis, poisoning, behavioural problems and accidents. ENT problems just add to these problems or may be a consequence of them.<sup>7</sup>

The predominant gender infected in our study was females compared to males although this distribution was not significant, though a similar distribution was found in another study by Yeli.<sup>8</sup>

In our study, the most common morbidity of the ear was due to Otitis media, both CSOM as well as that with effusion both together accounting for about 75% of the ear disorders. Impacted was seen in 18% of the ear disorders. Similar was the case in a study by Yeli<sup>11</sup> and by Kishve et al,<sup>9</sup> although in a study by Nepali et al, the most common ear disorder was Ear Wax which accounted for over 40% of the cases.<sup>10</sup> We had a low prevalence of otomycosis consisting of 5.8% of the ear disorders and 2.9% of overall ENT disorders. This was reported in a similar study by Nepali et al, who found otomycosis to be present in 4.7% in the study population.

Presence of foreign bodies, whether animate or inanimate in the auditory canal and nasal cavity is a common feature among the preschoolers and comparatively uncommon in the older age group. This is probably these children tend to insert objects due to boredom or curiosity.<sup>11</sup>

Foreign bodies, in the nose or the throat were one of the causes of emergencies in our hospital. This was more observed in younger children, below the age of 5 years. There were only 2 children in the school going age who had foreign particles in their throats, and that was also by accident. This was similar to a study by Sharma et al<sup>2</sup> who also found the common age group to be 0-6 years while in a study by Kitcher et al, the common age group was found to be 0-9 years.<sup>12</sup>

The most common foreign particles were small stones, vegetables and fruit particles, paper, chalk, mud particles etc. Similar cases were found in a study by Sharma et al.<sup>2</sup> Coin was a common foreign body in some cases in other studies.<sup>2,13</sup>

Among the nasal disorders, the most common was rhinitis which accounted for 55% of the overall cases and 60.7% of the nasal cases which was corroborated by other studies.<sup>2,10</sup> Allergic rhinitis was seen to be associated with other conditions like asthma and other allergic conditions.<sup>14</sup>

Local irritation in Kiesselbach's plexus leads to Epistaxis, which is relatively common in children. It could be due to local inflammatory diseases, infections and trauma.<sup>15</sup> Most often, the bleeding is self limiting, but sometimes, it may be recurrent. In our study, we found to be 8.5%. Yeli showed epistaxis prevalence of 15%<sup>8</sup> while Sanjay et al showed the prevalence to be 16.6%.<sup>9</sup>

Among the throat disorders, pharyngitis was found most common followed by tonsillitis. The same was found in a study by Nepali et al whereas the prevalence of tonsillitis was more in a study by Yeli.

This study and its results are applicable to the geographical and socioeconomic status around our hospital. As we could not compare these results with another setup, we cannot ascertain the prevalence in other areas. As many patients do not always come to the hospital for ENT disorders and prefer to be treated over the counter or with alternate medicines, the morbidity could be much higher than predicted.

## CONCLUSION

Our study suggests that Otitis media, pharyngitis, tonsillitis and rhinitis are the most common diseases of Ear, nose and Throat. Although many of the diseases are not much of a health concern, they are significant causes of pediatric morbidity. Therefore, this study provides the basic information of the prevalent disorders in ENT in

our area, so that relevant development of the medical setup and treatment can be set up by the hospital.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: The study was approved by the Institutional Ethics Committee*

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**Cite this article as:** Surapaneni H, Sisodia SS. Incidence of ear, nose and throat disorders in children: a study in a teaching hospital in Telangana. Int J Otorhinolaryngol Head Neck Surg 2016;2:26-9.