



## Prevalence of ENT disorders in children : A tertiary medical care study

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### ABSTRACT

A retrospective study was conducted at al sharq medical centre, a tertiary care center in Fujairah UAE. The entire pediatric age group patients attending ENT OPD clinic during the calendar year of 2013 were selected for the study. The main aim of this article is to determine the prevalence of ENT disorders in children in one of the Northern Emirate of UAE. A total of 625 children registered during 2013. most common ENT diseases seen were rhinitis (47.6%) followed by acute otitis media (42.9%) & tonsillitis.

### Material and Methods

The present study was conducted in Al sharq medical centre ,a tertiary health care unit in Fujairah in UAE. Children aged from 0 -14 years attending ENT OPD clinic from January 2013-December 2013 were included for the study. A structured questionnaire highlighting on symptoms was administered to the patients & parents. All the children undergone complete ENT examination & appropriate investigations were carried out such as x ray nasopharynx, tympanometry ,culture & sensitivity etc. Data were stored in electronic medical records (sap system) & were analysed statistically using frequency and percentage . p value less than 0.05 is considered significant.

## Introduction:

UAE is one of the fastest growing nation in the world with everyday newer infrastructural projects emerging creating vibrant atmosphere in the middle east. The incidence of ear ,nose and throat disorders in children is increasing in gulf countries may be due to environmental factors involved in it. lack of data makes it even more difficult to assess the situation...Ent diseases can be accurately diagnosed by taking good clinical history from children or from their parents.. .According to WHO 42 million children is suffering from hearing disability, most commonest is otitis media(1). Current study aims to find exact magnitude of ear, nose and throat diseases in children in the region. This will encourage health authorities to implement programmes such as to shows, poster presentations ,seminars etc to educate people about disease per se & also ENT specialists play a vital role in preventing & managing these diseases effectively.

## Result:

A total of 625 children aged 0-14 years visiting ENT outpatient clinic during the year 2013 were analysed for the study. ENT diseases in our study population were found to be more common among female children, however this difference was not statically significant.

Fig1 : showing age and sex distribution.

AGE	MALE	FEMALE	TOTAL
0 to 2 years	71	84	155
2 to 6 years	61	134	195
6 to 14 years	127	148	275
	259 (41.4%)	366 (58.56%)	625

Out of 625 children there were 366 female (58.56%) & 259male (41.4%) children with male to female ratio 1:1.4 .

Highest incidence of ent disorders is seen in the age group of 6-14 years comprising about 314(50.24%) among 625 children.(Fig -1).

Fig2 : Distribution of Ent disorders among study population.

<i>EAR</i>	314	MALE- 99 FEMALE - 215	50.24%	
<i>NOSE</i>	170	MALE- 95 FEMALE -75	27.2%	
<i>THROAT</i>	141	MALE- 65 FEMALE -76	22.56%	

Diseases of the ear were common group of ENT problems among children(50.24%)followed by nasal (27.2%) and oropharyngoesophageal disorders (22.56%)(fig-2).

*Fig3 : Ear disorders:*

<i>Acute otitis media (Aom)</i>	(42.9%)	135
<i>Secretory otitis media</i>	(20.6%)	63
<i>Impacted wax</i>	(19.4%)	61
<i>Others</i>	(17.5%)	55

Among the ear disorders, the most common was otological disease which presented as acute otitis media (42.9%)followed by impacted wax (20.6%) & secretory otitis media (19.4%).others such as ear piercing, otitis externa ,mastoid abscess, preauricular sinus etc comprises about 17.5%.(Fig-3)

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Fig 4: Nose disorders.

<i>Rhinitis</i>	71 (41.7%)
<i>Adenoid hypertrophy</i>	51 (30%)
<i>Epistaxis</i>	33 (19.4%)
<i>Others</i>	15 (8.8%)

Nose disorders-Rhinitis (47.6%) was the most common disease entity encountered in our study followed by adenoid hypertrophy (30%).epistaxis was seen in about 19.4% of cases. miscellaneous conditions such as foreign body in nose, furuncle of nose constitute about 8.8% of cases.(fig-4)

Fig 5 :Throat disorders.

<i>Tonsillitis</i>	51(36.1%)
<i>Pharyngitis</i>	40(28.3%)
<i>Cervical lymphadenitis</i>	20(14.1%)
<i>Others</i>	30(21.2%)

Throat disorders- Tonsillitis was troubling in about 48.9% of cases followed by pharyngitis (21.2%).other cases such as cervical lymphadenitis, parotitis, foreign body throat also were reported (fig-5).

## Discussion

The main health problem concerning in UAE is increasing in the frequency of ear, nose, throat ( ENT) symptoms among children. The current study aims to determine the incidence of ENT disorders in children in general population.

In this study majority of the children were suffering from ear problems which accounts for about 50.24%.Acute otitis media (42.9%) is the most prevalent disease causing hearing loss followed by wax(20.6%) &otitis media with effusion(19.4%).

Inflammation of the middle ear cleft is one of the most common medical problems of childhood and a common cause of hearing loss making it one of the most frequent morbidities encountered in day to day clinical practice. Otitis media with effusion occurs either as the aftermath of an episode of Aom or as a consequence of Eustachian tube dysfunction attributed to an upper respiratory infection<sup>(2)</sup>.However, otitis media effusion may also precede & predispose to the development of Aom. These two forms of otitis media may be considered segments of a disease continuum<sup>(3)</sup>.Although otitis media effusion does not represent an acute infective process that will benefit from antibiotics. therefore it is challenging for clinicians able to differentiate normal middle ear status from otitis media effusion or acute otitis media.<sup>(4)</sup>

The study conducted by sanjay p et al <sup>(5)</sup> showed prevalence of acute otitis media in about 31.8% of cases & OME (20.7%) . our study is similar with this study.

In a similar survey by Elton and cornel <sup>(6)</sup> acute otitis media is the commonest cause for hearing loss in about 28% of the cases. Amusa et al <sup>(7)</sup> study revealed otitis media in 29% of cases followed by wax impaction (5.9%)& OME(5.3%). Okafor <sup>(8)</sup> found wax is the 3rd commonest cause of hearing disease in southern part of Nigeria. Furthermore prevalence of csom is low in this region comparable to developing countries may be due to acceptable socioeconomic factors.

Rhinitis (47.6%) is the commonest ENT disorder in our study population. Epistaxis in children is seen in 19.4% of cases. Cherian et al <sup>(9)</sup> showed persistent rhinorrhoea (21%) among rural children associated with otitis media & epistaxis in 15% of the cases. The bottom line is incidence of epistaxis is decreasing when compared to earlier studies. Current study can be comparable to sanjay p et al study done in hospital among rural children which shows incidence of rhinitis in 38.2% & epistaxis in 16.6% of the cases.

Pharyngitis is the most common throat morbidity seen in study by R Nepali et al<sup>(10)</sup> whereas in the present study it constitutes about 21.2%.

Adenotonsillar problems notably obstructive hypertrophy& infection are very common in early childhood.

Recurrent infections of the tonsils & adenoids can be a source of upper & lower respiratory infections. Hypertrophy can lead to sleep disordered breathing, eating disorders & even growth problems

<sup>(11,12)</sup> Recurrences are frequent especially in children between the ages 4 to 7 when some children suffer repeated attacks of tonsillitis.

The current study shows incidence of tonsillitis is 42.5% which is comparable to study by sanjay et al<sup>(5)</sup> which showed 42.9% of cases.

Adenoidal hypertrophy during childhood may both fill the nasopharynx and extend through the posterior choanae into the nose resulting in nasal airway stenosis, impeding airflow. Sequelae include mouth breathing and rhinorrhoea ,sleep disordered breathing, speech anomalies, feeding difficulties, chronic sinusitis, craniofacial anomalies and otitis media. <sup>(13)</sup>

In our study incidence of adenoids is about 30% compared to study by sanjay et al<sup>(5)</sup> which shows 20.5% of the cases.

## Conclusion

From the current study recurrent attacks of otitis media, otitis media effusion, enlarged adenoids causing symptoms are more commonly seen in this region necessitating surgical intervention. Furthermore prevalence of discharging ears is very much low .is a good sign. Finally more research is needed to assess unexplained factors involved in the diseases process in this part of the world.

## References

- 1) Maharajan M et al : Prevalence of otitis media in school going children in eastern Nepal.Kathmandu university medical journal.4 (16),479-482.2006
- 2) Rosenfeld RM. Antibiotic prophylaxis for recurrent acute otitis media.in:Alper CM,Bluestone CD, eds .Advanced therapy of otitis media.Hamilton, Canada: BC Decker: 2004
- 3) Paradise J,Bernard B,Colborn D,Smith C,Rockette H: pittsburg-area childdevelopment/otitis media study group.Otitis media with effusion:highly prevalent and often the forerunner of acute otitis media during the first year life (Abstract) paediatr Res 1993;33:121A
- 4) Allan S lieberthal et al :The Diagnosis and Management of Acute otitis media,Paediatrics vol 131 (3)march 2013
- 5) Sanjay.p.Kishve et al, Ear,Nose and throat disorders in paediatric patients at a rural hospital in india.Australasian medical journal vol3 (12)786-790.2010
- 6) P Elton,J Cornell :Incidence of otitis media in the underfive children presenting with pyrexia of 100 at Wesley guild hospital.Journal of tropical medicine and hygiene.110-112. 1978
- 7) Y B Amusa et al:Acute otitis media,malaria and pyrexia in the underfive age group WAJM 24(3),40-42.2005
- 8) B C Okafor:otolaryngology in south-eastern nigeria pattern of diseases of the ear.Nigeria medical journal.13 (1)11-19.1983
- 9) Cherian T et al Persistent rhinorrhea in rural indian children.Prevalence and consequences.Journal of tropical paediatric.46 (6).365-367.2000
- 10) R Nepali et al:prevalence of ENT diseases in children:Hospital based study.The internet journal of otorhinolaryngology.14 (2).2012.
- 11) Karo.CO et al :Prevalence of tonsillar hypertrophy&associated oropharyngeal symptoms in primary school children in Denizli,Turkey.Int journal of paediatric otorhinolaryngology.66 (2).175-179.2002
- 12) Potsic wp.Assesment and treatment of adenotonsillar hypertrophy in children.American journal of otolaryngology.13 (5) 259-264 .1992
- 13) Thomas Havas,David lowinger.Obstructive Adenoid tissue.An indication for powered shaver adenoidectomy.Arch otolaryngol Head & neck surgery.128.789-791.2002