

**OTOLARYNGOLOGICAL DISEASES AMONG PAEDIATRIC POPULATION
ATTENDING ENT OPD****Dr. Golam Haider Md Shahidul Haque¹ and Dr. Md. Sirajul Islam Mondol², Dr. Md. Shafiul Akram³ and
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ABSTRACT

Background: Ear diseases are common in children mainly due to altered anatomy of Eustachian tube which is straighter in children as compared to that in adults. However, the cause of hearing loss in children is more varied, including the etiologies. This study was done to find out the pattern of ear diseases in paediatric age group attending ear, nose and throat OPD in a tertiary care centre in Bangladesh. Objective: There is lack of data on paediatric ENT diseases in our country and their consequences. This study was undertaken to determine the hospital prevalence of ENT diseases among paediatric population. Materials and method: This is an observational study which included 430 children presenting with ENT problem in the Department of ENT OPD, in a Tertiary Care Centre at Dhaka, Bangladesh from January 2017 to December 2018. Results: The current study was conducted among children aged 0-15 years attending ENT OPD with common otolaryngological problems. Prevalence of ENT disease was more common among male children (52.79%) mostly belonging to 0-5 years (male 48% and female 39%). Vast majority of these children belonged to lower middle-class family (53%) with inadequacy of basic health care needs. Diseases of the throat (41.04%) were most common followed by ear problems (38.77%) and nasal diseases (20.19%). Conclusion: So clinical specialists who regularly manage these issues can assume a significant part in making mindfulness among the guardians how to survive or when to look for clinical assistance and accordingly decrease the commonness of horribleness these normal ENT issues produce.

KEYWORDS: Population; ENT diseases, otolaryngological.**INTRODUCTION**

Bangladesh is one of the most densely populated countries in the world with an estimated 165 million people (in 2018). Geographically, historically, and culturally, Bangladesh forms the populous part of south Asia. Among the total population, 33% constitute the age group 0-14 years (male 29947500; female 24502500).^[1] Majority of admissions of paediatric population in different hospitals of the country are due to respiratory illness and acute watery diarrhea.^[2] Morbidity pattern of this age group has several determining factors like socio-economic status, basic education, occupation of parents, socio-cultural practices, living environment, etc.^[3] Despite of vast improvement in health practices and various health facilities and awareness, various infections still remain one of the major causes of morbidity and mortality in paediatric age group. Good health is essential for overall growth and development of a child and finally determines their ability to acquire knowledge and skill. Ear, nose and throat diseases (ENT) may adversely affect this ability and are common cause of

consultation to medical practitioners. According to World Health Organization (WHO), 42 million people (age >3 yrs) of the world have hearing loss.^[4] The major cause of deafness being otitis media which is secondary to common cold as a cause of infection in children.^[5] Common otolaryngological diseases in children include otitis media (acute and chronic), tonsillitis, acute laryngotracheobronchitis, adenoiditis, foreign body in ear-nose, and wax with or without fungal infection of ear, etc. Few studies have been conducted on pattern of otolaryngological diseases in paediatric age group in Bangladesh. Children often seek medical treatment for these common otolaryngological problems. Early detection of ENT problem and their accurate management may be beneficial in preventing some life-threatening complications. The current study was done to determine the prevalence of ENT disorders in paediatric population and their relationship with sociodemographic factors in an urban tertiary care hospital in Dhaka, Bangladesh.

Health is vital for overall development of a child and determines his/her ability to acquire knowledge and skill. Otitis media is the most common disease in children mainly due to altered anatomy of Eustachian tube which is straighter in children as compared to that in adults. However, the cause of hearing loss in children is more varied, including the etiologies.

MATERIALS AND METHOD

This is an observational study conducted at a tertiary hospital, Dhaka, Bangladesh. During the study period January 2017 - December 2018 (one calendar year), total number of 1600 patients attended ENT OPD and among them 430 patients were children aged between 0-15 years presenting with ear, nose and throat diseases. Children with suspected neoplasm were excluded from the study. The study population was evaluated by history and complete ENT examination. Statistical analysis was done using frequency and percentage.

RESULTS

Total number of 430 children (0-15 yrs) presenting with ENT problem at ENT OPD, tertiary hospital, Dhaka during the study period of one year were included in the study. In the current study, overall ENT diseases were found more common in male children (52.79%) than female children (47.21%). This sex difference does not correlate with other studies. Majority (53%) of the study population were from lower middle class, living in unhygienic environment with large family size and poor sanitation. The study showed that, diseases of ear (39%) were most common ENT problem among the study population followed by tonsillitis (14.96%), rhinitis (6.80%), enlarged adenoids (6.34%) and epistaxis (4.43%).

Ear disorder

Aural disorder is common in children due to anatomical variation of Eustachian tube (wider, shorter and straighter in children in comparison with adults) that leads to easy entrance and colonization of pathogenic organism from nose and pharynx to middle ear. Otalgia was the most common presenting complaint of majority of the ear problem followed by ear discharge and impaired hearing. Otitis media with effusion (21.54%)

was the most common ear problem followed by wax (6.12%). Fluid in the middle ear with mild to moderate hearing loss was seen among 5.44% study population. Foreign body in ear was seen among 1.81% children. Other ear problems included trauma to the ear, fungal infection, congenital malformation which constitutes 1.81%.

Nose disorder

Among nasal disorders, rhinitis (6.80%) was the commonest problem followed by sinusitis (5.21%), epistaxis (4.43%) and foreign body (1.36%). Rhinitis was associated with upper respiratory tract infection and was infective in nature. Rhinorrhoea and nasal obstruction were the common presenting complaints of these nose disorders.

Throat disorder

Common throat problem found among our study population in decreasing order of frequency were tonsillitis (14.96%), pharyngitis (6.57%), enlarged adenoids (6.34%), ALTB (7.93%) and others (2.55%). The majority of study population with throat disease presented with sore throat. Foreign body in the throat was found only in 0.22% of children.

Table I: Demographic characteristics (N=430).

Characteristics	Frequency	Percentage
Gender		
Male (n=227; 52.79%)		
0-5 years	110	48
6-10 years	75	94
11-15 years	42	65
Female (n=203; 47.21%)		
0-5 years	80	39
6-10 years	65	32
11-15 years	58	29
Socioeconomic status		
Upper class	8	1.9
Upper middle class	48	11.2
Middle class	96	22.3
Lower middle class	228	53.0
Lower class	50	11.6

Table II: Distribution of ENT diseases among study population (N=430).

Disorders	ENT Disorders	Male	Female	Total	Percentage
Ear Diseases	Otitis media (acute and chronic)	55	50	95	21.542
	Otitis media with effusion (OME)	19	14	24	5.4422
	Wax	10	12	27	6.1224
	Foreign body	8	5	8	1.8141
	Others	6	2	8	1.8141
	Total no. of patient with ear diseases	98	73	39.75	38.776
Nose Diseases	Rhinitis	14	16	30	6.8027
	Sinusitis	8	15	23	5.2154
	Epistaxis	10	10	20	4.5351
	DNS	5	3	8	1.1338
	Foreign body	1	2	6	1.3605

	Others	2	3	5	1.1338
	Total no. of patient with nose diseases	40	49	89	20.19
Throat diseases	Tonsillitis	32	34	66	14.966
	Pharyngitis	20	9	29	6.576
	Enlarged adenoids	14	14	28	6.3492
	Acute laryngo trachea bronchitis	19	16	35	7.9365
	Foreign body	0	1	1	0.2268
	Fungal infection	5	5	10	2.2676
	Others	6	6	12	2.7211
	Total no. of patient with throat diseases	96	85	181	41.043

DISCUSSION

In Bangladesh, common diseases of paediatric age group are malnutrition, ARI, diarrhoea, measles, malaria and other infectious diseases. ENT disorders may accompany these diseases or may occur independently. Though the government of Bangladesh has launched various health related programmes which work by early detection and appropriate intervention of common health problems among children, ENT diseases still remain one of the major cause of chronic morbidity due to lack of awareness among general population and parents. The current study was conducted among total 430 children aged 0 to 15 years presenting with ENT problems at ENT OPD, in a tertiary hospital of Dhaka in one calendar year. In the current study, overall ENT diseases were found more common in male children (52.79%) than female children (47.21%). This sex difference does not correlate with other studies.^[6] Otitis media (acute and chronic) and otitis media with effusion are the most common morbid conditions of the ear which if not treated accurately may lead to deafness. This high prevalence of otitis media in our study corresponds with that of other studies.^[7] Among 430 study population 171 (38.78%) children presented with ear problems and the prevalence was more among male (n= 55) than female (n= 40) children. This result correlates with studies done previously.^[8] In our study, among 171 children with ear diseases 24 (5.44%) had otitis media with effusion, 27 (6.12%) had impacted wax, 8 (1.81%) presented with foreign body in ear and other ear problems constitute 1.81% which consisted of trauma to the ear, fungal infection and congenital malformation. In a developing country like Bangladesh, poor socioeconomic condition, large family size, living in overcrowded area, poor sanitation, lack of provision of health care facilities and most importantly lack of awareness among parents regarding the grievous consequences of recurrent ear infection leads to chronic ear problem and ultimately deafness. So awareness of the disease among general population, their knowledge when and where to seek medical help, early detection and appropriate intervention of these problems will enhance to a greater extent to minimize or even prevent long term complications of common ear problems.

Young children particularly <5 yrs old have immature immune system and are prone to infection. Acute otitis media (AOM) is a common complication of upper respiratory tract infection whose pathogenesis involves both viruses and bacteria.^[9] In children, common

presenting complaint of nose disorders is nasal obstruction and rhinorrhoea. These symptoms are commonly produced by rhinitis, allergy, naso pharyngitis and tonsillo adenoiditis. Our study showed, rhinitis (6.80%) was the commonest problem followed by sinusitis (5.21%), epistaxis (4.53%) and foreign body (1.36%). Chronic or recurrent tonsillo adenoiditis require surgical intervention otherwise these children develop chronic nasal obstruction symptom or obstructive sleep apnea (OSA).^[10] Consequences of untreated paediatric OSA are snoring during sleep, poor quality of sleep, day time drowsiness or sleepiness, inattention, hyperactivity, irritability, abnormal urine production at night, adenoid facies, and failure to thrive.^[11] To minimize or prevent these complications, proper diagnosis at early stage and appropriate intervention is necessary. Epistaxis in young children is also a common problem which is usually due to local trauma in Kiesselbach's plexus. The underlying cause of epistaxis is local inflammatory lesion, infection, trauma usually by nose picking.^[12] Most of bleeding is self-limiting. There is scanty availability of data on prevalence of epistaxis in children. In current study 20 (4.53%) children presented with epistaxis and the prevalence was more among male.

Among throat infection acute and chronic tonsillitis is the commonest throat problem usually occurring in children aged 3-15 years.^[13] The prevalence of tonsillitis in our study was 66 (14.97%) which is on the top of the list among throat problem. Tonsillitis was followed by pharyngitis (6.57%), enlarged adenoids (6.34%), ALTB (7.93%), accidental ingestion of foreign body in throat (0.22%), fungal infection (2.26%) and others. Bacterial infection and some immunological factors lead to chronic tonsillitis and its complications. Common pathogens responsible are streptococcus pyogens and beta hemolytic streptococci. During acute attack of tonsillitis if accurate management is not done then it leads to the following complications like: acute rheumatic fever, acute post streptococcal glomerulonephritis, peritonsillar abscess, and septicemia. For the reason, accurate diagnosis at early phase of the disease and appropriate antimicrobial treatment as per required will promote to a greater extent to prevent the afore mentioned long term complications.

CONCLUSION

The current examination recommends that, otitis media (intense and constant), rhinitis and tonsillitis are most

pervasive ENT issue among pediatric investigation populace introducing to ENT OPD during the investigation time frame. These intense issues if not analyzed and oversaw precisely lead to ongoing or repeating side effects and eventually either require careful intercession or produce constant horribleness. So clinical specialists who regularly manage these issues can assume a significant part in making mindfulness among the guardians how to survive or when to look for clinical assistance and accordingly decrease the commonness of horribleness these normal ENT issues produce.

AMJ, 2010; 3(12): 786-90.

REFERENCES

1. Index Mundi [Internet]. Bangladesh Demographic Profile. 2013 (cited 2014 march 22). Available from: <http://www.indexmundi.com/bangladesh/>.
2. Hasan MS, Bar Shaheen MM, Raquib A, Ahmad SM. Chronic Suppurative Otitis Media and Its Association with Socio Economic Factors among Rural Primary School Children of Bangladesh. *Indian J Otolaryngology Head Neck Surgery*, 2012; 64(1): 36-41.
3. Sophia A, Isaac R, Rebekah G, Brahmada K, Rupa V. Risk Factors for Otitis Media among Preschool Rural Indian Children. *Int J Paediatric Otolaryngology*, 2010; 74(6): 677-83.
4. Kliegman RM, Jenson HB, Behrman RE, Stanton BF, editors. *Nelson Textbook of Pediatrics*. 18th ed. Philadelphia (PA): Elsevier, 2007; 1795-99.
5. Pettigrew MM, Gent JF, Pyles RB, Miller AL, Nokso-Koivisto J, Chonmaitree T. Viral-Bacterial Interactions and Risk of Acute Otitis Media Complicating Upper Respiratory Tract Infection. *J Clin Microbiol*, 2011; 49(11): 3750-55.
6. Ahn YM. Treatment of Obstructive Sleep Apnea in Children. *Korean J Pediatr*, 2010; 53(10): 872-79.
7. Vikram VJ, Prasad T, Sahoo GC. Etiology and Management of Epistaxis in Children. *Journal Otolaryngology*, 2014; 4(1): 20-26.
8. Kvestad E, Kverner KJ, Roysamb E, Tambs K, Harris JR, Magnus P. Heritability of Recurrent Tonsillitis. *Arch Otolaryngology Head Neck Surgery*, 2005; 131(5): 383-87.
9. Dhingra PL. *Diseases of Ear Nose and Throat*. 6th ed. Philadelphia (PA): Elsevier, 2007.
10. Mahmud MN, Kamal AHM, Enayetullah M, Karim MR. Disease Profile and Death Pattern among Children Admitted in a Medical College Hospital. *Bangladesh J Child Health*, 2012; 36(2): 66-67.
11. Roy E, Hasan KZ, Richards JL, Haque AKMF, Siddique AK, Sack RB. Burden and Outcome of Acute Otitis Media in Rural Bangladesh. *S A Journal of child health*, 2012; 6(4): 118-22.
12. Morris PS, Leach AJ. Acute and Chronic Otitis Media. *Paediatric Clin North America*, 2009; 56(6): 1383-99.
13. Kishve SP, Kumar N, Kishve PS, Arif SMM, Kalakoti P. Ear, Nose and Throat Disorders in Paediatric Patients at a Rural Hospital in India.