Scholars Journal of Applied Medical Sciences
Abbreviated Key Title: Sch J App Med Sci
ISSN 2347-954X (Print) | ISSN 2320-6691 (Online)
Journal homepage: www.saspublishers.com

OPEN ACCESS

Medicine

Pattern of Otorhinolaryngology Disorders in the Patients Attending (ENT) OPD: A Study in Rajshahi Medical College Hospital, Bangladesh

Muhammad Aminul Islam[1*], Kumar Subrata Rajan Sarker[2], Md. Mahmud Ali[3], Md. Zakir Hossain[4], Md. Golam Rabbani[5]

[1]Resident Surgeon, Department of ENT, Rajshahi Medical College Hospital, Rajshahi, Bangladesh
[2]Assistant Registrar, Department of ENT, Rajshahi Medical College Hospital, Rajshahi, Bangladesh
[3]EMO, Department of ENT, Rajshahi Medical College Hospital, Rajshahi, Bangladesh
[4]Associate Professor and Classified Specialist, Department of Otolaryngology and Head-Neck Surgery, Central Medical Board and Combined Military Hospital, Dhaka Cantonment, Dhaka-1206, Bangladesh
[5]Medical Officer, Department of ENT, Rajshahi Medical College Hospital, Rajshahi, Bangladesh

DOI: 10.36347/sjams.2019.v07i11.069 | **Received:** 16.11.2019 | **Accepted:** 22.11.2019 | **Published:** 30.11.2019

***Corresponding author:** Muhammad Aminul Islam

Abstract **Original Research Article**

Background: ENT ailments are one of the most common causes for patients to attend hospitals. The present study was undertaken to assimilate data on patients visiting ENT OPD in consecutive 6 months, so that the trend of diseases in this part of Rajshahi, Bangladesh could be studied. ***Objective:*** To study the epidemiological profile of otorhinolaryngology disorders in the patients attending (ENT) OPD, *Rajshahi Medical College Hospital, Bangladesh*. ***Methods:*** This was a retrospective record based study, done in department of ENT from *January to June 2019*. ***Results:*** A total of 5850 patients attended ENT OPD during 6 consecutive months. Out of these, 3041 (51.98%). Were males and 2809 (48.02%) females and Male: female ratio was 1.08:1. More than half of the patients belonged to rural community 3328 patients (56.89%) and urban patients 43.11%. Most frequent age group presenting to ENT OPD was 21-30 years (24.20%), overall. First 5 decades accounted for 84.62%, thereafter percentage dropped as age increased. More than half of the patients were male. Rural community dominated OPD attendance. Most common ailments for attending ENT OPD were pertaining to throat and neck with female preponderance, of which most frequent diagnosis was pharyngitis. Next in line were otological diseases with CSOM as most common. Patients with nasal complaints were least with allergic rhinitis as most common diagnosis. ***Conclusion:*** Our OPD is with male preponderance and rural dominated. Maximum patients were suffering from throat and neck problems and nasal complaints were least.

Keywords: Epidemiology, audit, Chronic Suppurative Otitis Media, pharyngitis, allergic rhinitis.

INTRODUCTION

Rajshahi is the capital and largest city of Bangladesh. Rajshahi is a metropolitan city, and a major urban, commercial and educational centre of Bangladesh. It is also the administrative seat of eponymous division and district. Located on the north bank of the Padma River, near the Bangladesh-India border, the city has a population of over 763,952 residents [1]. The city is surrounded by the satellite towns of Nowhata and Katakhali, which together build an urban agglomeration of about 1 million population. Arguably Rajshahi is the most clean and green among the cities in Bangladesh [2]. The most common problems warranting a visit to a doctor or a health care provider in developing countries are related to ear nose and throat (ENT) [3, 4]. A supportive study by Bleach suggests that in a general hospital the workload of ENT specialists have been on a rise [5]. Another outpatient study suggests that there is a rise in ENT emergencies and need for ENT specialists for their appropriate management [6]. Early diagnosis and management will result in reduction of morbidity and mortality [7]. In studies it has been noted that Otitis Media and its sequelae are most common cause of preventable hearing loss in children in developing countries [8, 9]. The major burden reported in India & other developing countries by WHO is due to Chronic Suppurative Otitis Media [10]. There is a very vast disparity according to the region in incidence of ENT diseases [11]. The aim of this study is to identify the epidemiological profile of patients attending ENT OPD so as to define the prevalent otorhinolaryngological diseases in this area. Epidemiological data regarding common otorhinolaryngological disorder will be helpful in guiding and planning regarding management of

common disorders. 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 hospital in Rajshahi, Bangladesh.

OBJECTIVE

- To study the epidemiological profile of otorhinolaryngology disorders in the patients attending OPD, Rajshahi Medical College Hospital, Bangladesh

MATERIALS AND METHODS

This retrospective study was carried out in *the Department of ENT at Rajshahi Medical College Hospital, Bangladesh*. All the patients who attended or referred to ENT OPD from *January 2019 to June 2019* are included in the study. Patient's records were obtained from ENT OPD record register. All the patients were categorised according to age, gender, residence and clinical diagnosis. The results were expressed as percentage.

Inclusion Criteria

- All new patients attending ENT OPD during consecutive 6 months.

Exclusion Criteria

- Follow up cases.
- Patients presenting in emergency department.

Patients 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. Statistical analysis was done using frequency and percentage. Data analysis windows SPPS version 21.

RESULTS

A total of 5850 patients attended ENT OPD during 6 consecutive months. Out of these, 3041 (51.98%). Were males and 2809 (48.02%) females (Figure-1). Male: female ratio was 1.08:1 (Figure-1). More than half of the patients belonged to rural community 3328 patients (56.89%) and urban patients 43.11% (Figure-2). Most frequent age group presenting to ENT OPD was 21-30 years (24.20%), overall. First 5 decades accounted for 84.62%, thereafter percentage dropped as age increased (Figure-3).

Table-1: Involvement of Ear, Nose & Throat (N=5850)

Disease	Male	Female	Total	%
Ear	1073	1020	2093	35.58
Nose	667	307	974	16.65
Throat & neek	1301	1482	2783	47.57
Total	3041	2809	5850	100
Male: Female Ratio	1.08:1			

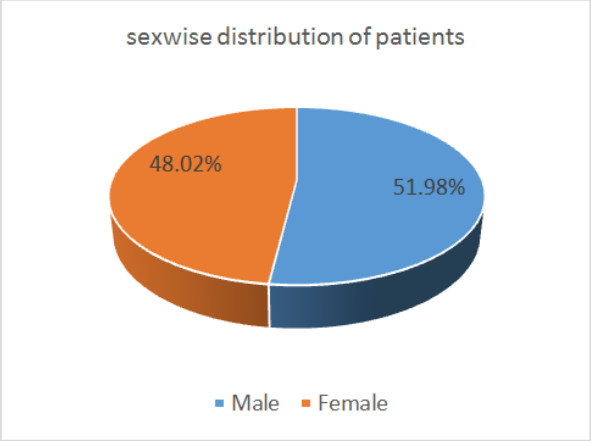

Fig-1: Sex-wise distribution of patients

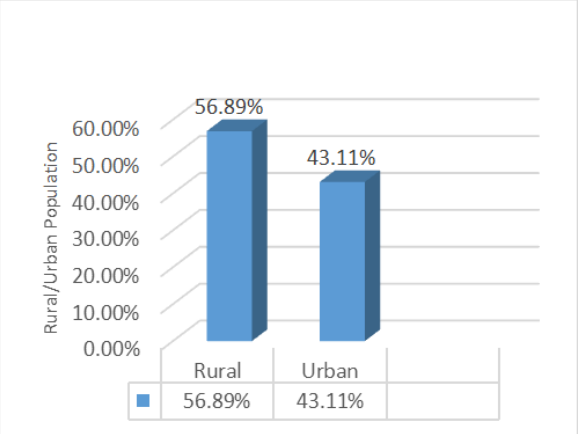

Fig-2: Rural and Urban population

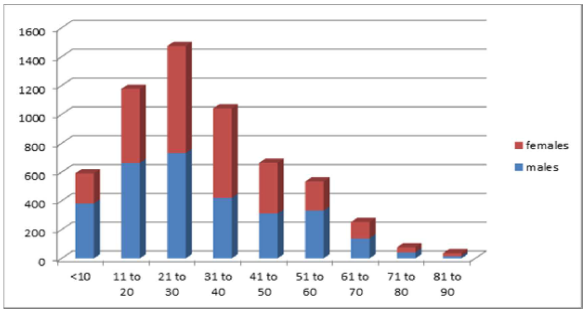

Fig-3: Age-Wise distribution of patients

Table-2: Disease wise distribution of patients [Ear]-(N=5850)

Diagnosis	Male	%	Female	%	Total	%
CSOM	345	16.48	387	18.49	732	34.97
Wax	123	05.88	135	06.45	258	12.33
ET dysfn.	98	04.68	68	03.25	166	07.93
Otitis ext.	73	03.49	62	02.96	135	06.45
Tinnitus	37	01.77	38	01.82	75	03.58
Presbycusis	74	03.54	54	02.58	128	06.12
OME	52	02.48	64	03.06	116	05.54
ASOM	55	02.63	66	03.15	121	05.78
Trauma	44	02.10	31	01.48	75	03.58
Medical fit	38	01.82	0	0	38	01.82
BPPV	37	01.77	15	0.72	52	02.48
Foreign Body	23	01.10	17	0.81	40	01.91
Otomycosis	34	01.62	45	02.15	79	03.77
Others	40	01.91	38	01.82	78	03.73
Total	1073	51.27	1020	48.73	2093	100

Table-3: Disease wise distribution of patients [Nose]-(N=5850)

Diagnosis	Male	%	Female	%	Total	%
AR	187	19.20	104	10.68	291	29.88
DNS	160	16.43	64	06.57	224	22
Epistaxis	124	12.73	31	03.18	155	15.91
ITH	38	03.90	20	02.05	58	05.95
Ac.Rhinitis	51	05.24	28	02.87	79	08.11
Adenoids	42	04.31	30	03.08	72	07.40
CRS	17	01.75	5	0.51	22	02.26
Trauma	10	01.03	5	0.51	15	01.54
Vestibulitis	19	01.95	10	01.03	29	02.98
AC polyp	5	0.51	3	0.31	8	0.82
Mass nose	5	0.51	2	0.21	7	0.72
Others	9	0.92	5	0.51	14	01.44
Total	667	68.48	307	31.52	974	100

Table-4: Disease wise distribution of patients [Throat & Neck]-(N=5850)

Diagnosis	Male	%	Female	%	Total	%
Pharyngitis	465	16.71	567	20.37	1032	37.08
Tonsillitis	278	09.99	230	08.26	508	18.25
Thyroid	5	0.18	196	07.04	201	07.22
GERD	168	06.04	155	05.57	323	11.61
Lymphadenitis	83	02.98	78	28.03	161	05.79
Malignancy	30	01.08	22	0.79	52	01.87
Laryngitis	72	02.59	47	01.69	119	04.28
Oral Ulcer	47	01.69	27	0.97	74	02.66
Neck swelling	35	01.26	28	01.01	63	02.26
SMF	27	0.97	38	01.37	65	02.34
Stomatitis	28	01.01	17	0.61	45	01.62
Globus Ph.	5	0.18	42	01.51	47	01.69
Vocal nodule	8	0.29	15	0.54	23	0.83
V. Cord palsy	8	0.29	2	0.07	10	0.36
Foreign Body	6	0.22	3	0.11	9	0.32
Others	16	0.57	15	0.54	31	01.11
Total	1301	46.75	1482	53.25	2783	100

In our study, majority of the patients (47.57%) had throat and neck ailment as the reason to attend OPD, followed by otological problem. Least number of patients had nasal complaints. Males outnumbered females in all categories except throat and neck (Table-1). Patients with otological disorder were 2093 with 51.27% males. Most common diagnosis amongst ear diseases was CSOM (34.97%) followed by wax (12.33%) (Table-2). A total of 974 patients presented with nasal complaints with 68.48% males. Most frequent diagnosis was allergic rhinitis (29.88%). It was followed by DNS (22%) and epistaxis (15.91%) (Table-3). Maximum patients were with complaints pertaining to throat and neck (1482) with female preponderance

(53.25%). Amongst these, most common diagnosis was pharyngitis in 37.08%, followed by tonsillitis (18.25%). About 15% patients presented with neck mass (Table-4).

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. In our study, a total of 5850 patients attended ENT OPD in six months. Ours was rural dominated attendance (56.89%), which is explainable by the population statistics of this area. We found male preponderance in our study, with male: female ratio as 1.08:1, which is again reflection of demographic profile of our place. Similar results have been quoted in other studies. Bleach *et al*., [5] in a UK based study, reported in their study a male: female ratio of 1.1:1. According to a study by Mina et al, the ratio of male: female was 1.13:1 [12]. It was 1.17:1 in another study [13]. If we talk about age distribution, most common age group involved was 21-30, constituting 25.20% followed by age group 11-20 and age group 31-40. This is in accordance with a study by Das et al where most frequent age group was 21-30 (20.82%), followed by 11-20 and 31-40 age group [11], as young age group is most common age group to seek medical advice in ENT field [14, 15]. It was noticed in our study that first four decades accounted for 73.25% of total which is quite close to that of Mina *et al*., 72.59% [12]. In our study, maximum patients had attended ENT OPD for throat and neck complaints, followed by ear diseases and least with nasal disorder. Amongst ear diseases, most cases were noted to be of CSOM, which accounted for 34.97% with female predominance followed by wax. This finding is in tandem with a study by Das *et al.*, [11], Mina *et al.*, found wax to be more common than CSOM [12]. Most common disease of ear in developing countries is CSOM, which is further leading to a major burden on health care system and society [16, 17]. The major burden of ear diseases being chronic suppurative otitis media is also reported by WHO [10]. WHO census also shows Wax or impacted Cerumen to be most common cause of reversible hearing loss in our country [18]. Nasal complaints were reported to be least, only 16.65% of total OPD. In other studies also it was noted that nasal complaints were least of all cause of bringing patients to OPD [12, 13]. The most frequent diagnosis was allergic rhinitis (29.88%). In other studies also it was noted that allergic rhinitis is most upcoming disease [15]. Due to increase in pollution allergic rhinitis and its comorbidities are on rising trend. Next was DNS which has been reported as most common diagnosis by Mina et al in their study [12]. Throat and neck disorders accounted for the largest group with 47.57% of total OPD. Most common diagnosis was pharyngitis (37.08%) with female preponderance. Mina *et al*., also reported pharyngitis to be most common throat disease [12]. It was followed by tonsillitis and GERD, in that order. In future, another study can be planned for longer duration. Data from all leading referral hospitals of this region should be compiled so that population of whole of Rajshahi is targeted in the study. The data should also have a log on treatment given to the patient so that accurate treatment protocols should be prepared. 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 [18]. 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

Our study concludes that the data of patients attending ENT OPD has male preponderance and most patients are from rural background. Young age group is the one which predominate OPD attendance. Throat and neck complaints account for the maximum number of patients whereas nasal disorders are least. Amongst the subgroups, CSOM is the most common ear disease, allergic rhinitis is most frequent nasal disorder and pharyngitis is most reported throat disease. From the data compiled in this study, common ENT complaints should be evaluated for their cause and available treatment to reduce the burden on tertiary health care centers. The health workers and primary health care centers should be trained to deal with basic diseases and rehabilitation so that in ENT specialists could deal surgical management.

Abbreviations: CSOM-Chronic Suppurative Otitis Media, OME-Otitis Media With Effusion, ASOMA-cute Suppurative Otitis Media, BPPV- Benign Paroxysmal Positional Vertigo, AR-Allergic Rhinitis, DNS- Deviated Nasal Septum, ITH-Inferior Turbinate Hypertrophy, CRS- Chronic Rhinosinusitis, GERD-Gastro Esophageal Reflux Disease, SMF- Sub Mucosal Fibrosis.

REFERENCES

1. Rajshahi (Bangladesh): City Districts and Subdistricts - Population Statistics in Maps and Charts".
2. Rajshahi: the city that took on air pollution – and won". The Guardian. Retrieved 17 June 2019.
3. ISD Scotland. Scottish Health Statistics. Edinburgh: Information and Statistics Division, National Health Service in Scotland, 1998.

4. McCormick A, Fleming D, Charlton J. 4th National Study 1992-1993. London, UK: Office of National Statistics, HMSO. Morbidity statistics from general practice. 1995.
5. Bleach NR, Williamson PA, Mady SM. Emergency workload in otolaryngology. Annals of the Royal College of Surgeons of England. 1994 Sep;76(5):335-338.
6. Pérez JO, Rivares JE, Leache JP, Fernández RL, Marín JG, Sevil JN, Mateo AB. An outpatient study in ENT (otorhinolaryngology) emergencies at a general hospital. Acta otorrinolaringologica espanola. 1995;46(4):298-304.
7. Kitcher ED, Jangu A, Baidoo K. Emergency ear, nose and throat admissions at the Korle-Bu Teaching Hospital. Ghana medical journal. 2007 Mar;41(1):9-11.
8. Kishve SP, Kumar N, Kishve PS, Aarif SM, Kalakoti P. Ear, Nose and Throat disorders in paediatric patients at a rural hospital in India. Australasian Medical Journal (Online). 2010 Oct 14;3(12):786-790.
9. Zakzouk SM, Jamal TS, Daghistani KJ. Epidemiology of acute otitis media among Saudi children. International journal of pediatric otorhinolaryngology. 2002 Feb 28;62(3):219-22.
10. Child and Adolescent Health and Development Prevention of Blindness and Deafness. World Health Organization, Geneva, Switzerland, 2004.
11. Khan AR, Khan SA, Arif AU, Waheed R. Analysis of ENT diseases at Khyber teaching hospital, Peshawar. J. Med. Sci. 2013;21(1):7-9.
12. Mina R, Bisht RS, Sikarwar V, Arya A. An epidemiological profile of otorhinolaryngological disorders in the patients attending ENT OPD of HNB Base teaching hospital of VCSGGRMS & RI, Srinagar, Pauri, Garhwal. Int J Med Res Rev. 2015;3(11):1333-8.
13. Das BK, Nath RK, Joshi M. Epidemiological Profile And Parameters of Ent Diseases And Emergencies At Faamch Barpeta. IOSR J Den Med Sci. 2017;16:23-27.
14. Symvoulakis EK, Klinis S, Alegakis A, Kyrmizakis DE, Drivas EI, Rachiotis G, Philalithis A, Velegrakis GA. Epidemiologic profile of otorhinolaryngological, head and neck disorders in a tertiary hospital unit in Greece: a challenge for general practitioners?. BMC Ear, Nose and Throat Disorders. 2006 Dec;6(1):12-18.
15. Emerson LP, Job A, Abraham V. A model for provision of ENT health care service at primary and secondary hospital level in a developing country. BioMed research international. 2013:562-643.
16. Gupta A, Gupta V. A study of prevalence of complication of suppurative otitis media in rural area of Loni. Indian Journal of Otology. 1996;2(4):177-83.
17. Akinpelu OV, Amusa YB, Komolafe EO, Adeolu AA, Oladele AO, Ameye SA. Challenges in management of chronic suppurative otitis media in a developing country. The Journal of Laryngology & Otology. 2008 Jan;122(1):16-20.
18. World Health Organization. State of hearing and ear care in the South East Asia Region. WHO Regional Office for South East Asia. WHO-SEARO. SEA/Deaf/9. (Available at http://www.searo.who.int/LinkFiles/Publications_ HEARING_&_EAR_ CARE.pdf).
19. Dhingra PL. Diseases of Ear Nose and Throat. 6th ed. Phipadelphia (PA): Elsevier; 2007.