



Spectrum of Otolaryngology and Head-neck Diseases at ENT OPD in a Tertiary Level Hospital of Dhaka City, Bangladesh

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Abstract

Objectives: To find out the disease pattern of patients attended at the ENT outpatient department of a tertiary level hospital in the center of Dhaka city and to aware the people about the consequences of ENT diseases, necessity of early management, prevention and also the health care management about the necessity of establishment of proper referral system.

Methodology: It is retrospective observational study performed in the ENT OPD of Shaheed Suhrawardy Medical College Hospital based on data collected by Resident Surgeon during his consultation of referral patients in his OPD chamber between 01 July 2014 and 31 December 2014. A total of 3686 patient's data were analyzed.

Results: Out of 3686 OPD patients male were 1947 (52.82%) and female 1739 (47.17%), ratio is 1.12:1. 11 to 40-year age group patients were more, among them 11-20 (17.25%), 21-30 (21.51%) and 31-40 (21.62%). 47.97% were presented with Ear diseases, 18.96% with Sinonasal diseases, 19.89% with Throat diseases, 2.03% with Laryngeal & Hypopharyngeal diseases, 9.44% with Neck diseases and 1.71% with Oral cavity problems.

Conclusion: Prevalence of Ear diseases are more in Bangladesh like other developing countries. A good numbers of cancer patients were found in the study. Almost half of the patients were attended from rural and slum areas, means under privileged people are getting concern about ENT problems like other medical diseases. A large number of patients came to this center which can be easily managed in Union sub-center, Upzilla health complex or District general hospital. It is recommended to develop proper referral system in our health system.

Keyword: Spectrum; Otolaryngology; Tertiary Center; ENT OPD

Introduction

Dhaka is the capital city of Bangladesh and is the 6th most densely populated cities of the world with 47,400/sq.km [1]. There are very few referral centers in Dhaka for the treating huge number of

population. Patients from whole country come to Dhaka directly for consultations though a large number of patients can be managed in local health care center.

The most common disorder warranting people to come to consult health care provider or hospital OPD in developing countries are related to Ear, Nose and Throat [2,3]. In developing countries Otolaryngological services are overcrowded in referral centers, patients suffering from different acute and chronic problems are usually results in long waiting hours [9], which create exhaustion both to doctors and patients. In one study suggested that in the general hospital the workload of ENT specialists have been on a rise [4]. Another study stated that rise of ENT patients in OPD and emergency need for more ENT specialists for their proper management [5].

The Otolaryngological disease pattern may vary from country to country, community to community and even hospital to hospital for the management of such problems depending on the availability of specialist personnel or the facilities provided by the hospital [6,7]. It is important to note that ear, nose and throat diseases are serious health issues in the globe and affecting all age groups [7,8].

Otologic complaints are the major issue of most the patients attended in hospitals [9]. Chronic suppurative otitis media and its complications are major health problem in Bangladesh and other developing counties [10] though the incidence of complications are declining in the antibiotics era [11].

Thyroid nodules are common in the adult and frequently seen in women population [12]. 10-20% of solitary thyroid nodule may have a chance of malignancy and 80% of thyroid malignancy is papillary carcinoma [13].

Carcinoma of nose and paranasal sinuses are less than benign lesions and account for 3% of all upper aero-digestive tract neoplasm, 80% of which is squamous cell carcinoma [14].

ENT problems are one of the most common causes of illness in children. Seasonal cough, allergy, earache, sore throat are very common in children probably due to wider and horizontal Eustachian tube, under developed immunity, malnourishment, poor hygiene etc. [15]. Foreign body insertion and inhalation are important medical problems in children used to come to ENT OPD or emergency. Other important problems in children are otitis media, hearing and speech disorder [16].

Oral cancer is common in man in high risk countries like Sri Lanka, India, Pakistan, Bangladesh and accounts up to 30% of all

new cases of cancer compared to 2% in UK and 8% in France [17]. Among salivary gland neoplasm parotid gland is the commonest site of neoplasm about 75% and 80% of which are benign [18].

In Bangladesh we have a very good primary and secondary health care setup. But we are lacking of the referral systems. Any patient from any part of the country even with minor complaints can attend in a tertiary level hospital like medical college hospital or medical university OPD. Problem is every referral center is overcrowded with patients even with very simple complaints. For that reasons complicated patients are not getting proper attention and time allocation for the management.

The objectives of this study to find out the disease pattern of patients attended at the ENT outpatient department of a tertiary level hospital, to aware the people about the consequences of ENT diseases and to inform the health care planner about the necessity of development of referral system for the proper management of the diseases and health care providers.

Methods

It is a retrospective observational study performed in the ENT OPD of Shaheed Suhrawardy Medical College Hospital based on the patient data collected in the registrar book by Resident Surgeon during his consultation of referral patients in his OPD chamber between 01 July 2014 and 31 December 2014. He reached on a diagnosis after taking history, clinical examinations and performing necessary investigations. A total of 3686 patient's data were included in the study. Follow up patients are excluded from this study. All the data were statistically analysis and plotted in the table.

Results

Here it is seen that 21 to 40 year age group patients are predominant. 31-40 year age group is 21.62% (797), 21-30 year age group is 21.51% (793). Pediatric patients are of a significant amount. Elderly patients are little in number.

Male (52.82%) patients are more than female (47.17%). Male female ratio 1.12:1 that means almost equal number of patients from both sex attended for consultation.

Though urban patients are more (56.18%), but rural patients (43.81%) are also aware of ENT disorders came for consultation to a referral center at the capital city.

Month	0-10 Year	11-20 Year	21-30 Year	31-40 Year	41-50 Year	51-60 Year	61+ Year	Total
July	130	160	253	216	158	71	26	1014
August	68	85	126	165	116	68	27	655
September	82	81	102	149	101	50	38	603
October	39	39	42	84	40	22	08	274
November	105	217	209	128	107	64	35	865
December	30	54	61	55	41	17	17	275
Total	454 (12.31%)	636 (17.25%)	793 (21.51%)	797 (21.62%)	563 (15.27%)	292 (7.92%)	151 (4.09%)	3686

Table 1: Age distribution of the patients (n = 3686).

Months	Sex		Total
	Male	Female	
July	546	468	1014
August	331	324	655
September	321	282	603
October	149	125	274
November	444	421	865
December	156	119	275
Total	1947 (52.82%)	1739 (47.17%)	3686

Table 2: Sex distribution of the patients (n = 3686).

Months	Referred from		Total
	Urban area	Rural area	
July	546	468	1014
August	331	324	655
September	321	282	603
October	149	125	274
November	528	337	865
December	196	79	275
Total	2071 (56.18%)	1615 (43.81%)	3686

Table 3: Area from where the patients are referred (n = 3686).

Involved Disease area	Number of patients	Percentage
Ear conditions	1768	47.97%
Throat conditions	733	19.89%
Sinonasal conditions	699	18.96%
Neck conditions	348	09.44%
Laryngeal and Hypopharyngeal conditions	75	02.03%
Oral cavity conditions	63	01.71%
Total number of patients	3686	100%

Table 4: ENT Subsites.

About half of the referral patients 1768 (47.97%) are suffering from Otologic diseases. Among the ear conditions CSOM 19.96%, ASOM 2.54%, OME 5.31%, Otomycosis 9.25%, Furunculosis 1.81%, Otosclerosis 0.57%, Foreign body ear 1.68%, Rupture TM 1.27% and Wax 4.74%.

Sinonasal conditions accounts for 18.96% (699) of the referred patients. Among them allergic rhinitis is the highest 9.28% (342), DNS 4.88% (180), sinonasal carcinoma 0.76% (28), foreign body nose 1.25% (46), epistaxis 1.11% (41), nasal polyposis 0.84% (31), atrophic rhinitis 0.43% (16).

Month	CSOM		ASOM	OME	Otomycosis	Furunculosis	Otosclerosis	Foreign body	TM Rupture	Pseudocyst in Pinna	Impacted wax	Others
	736 (19.96%)	AA										
July	22	175	32	65	106	23	12	16	11	-	56	02
Aug	15	143	17	25	81	13	01	11	08	02	35	06
Sept	10	108	08	23	69	14	04	10	07	03	26	-
Oct	02	63	11	12	25	04	-	04	04	02	37	-
Nov	17	124	15	54	48	11	02	16	10	01	15	09
Dec	08	49	12	17	12	02	02	05	07	-	06	03
Total	74	662	95	196	341	67	21	62	47	08	175	20
	2%	17.95%	2.58%	5.31%	9.25%	1.81%	0.57%	1.68%	1.27%	0.21%	4.74%	0.54%

Table 5: Ear conditions (n = 1768, 47.97%).

Month	Nasal polyposis 31 (0.84%)		Rhinosporidiosis	Sino nasal carcinoma	Atrophic Rhinitis	Allergic Rhinitis +HIT	DNS +HIT	FB Nose	Epi-staxis	Others
	Ethmoidal	Antrochoanal								
July	03	-	01	16	-	91	46	11	-	-
Aug	06	05	-	03	-	41	16	04	02	02
Sept	-	02	02	08	05	60	19	05	13	-
Oct	-	-	01	-	-	21	06	04	-	-
Nov	05	07	01	01	05	109	75	21	21	05
Dec	-	03	-	-	06	20	18	01	05	03
Total	14 0.38%	17 0.46%	05 0.13%	28 0.76%	16 0.43%	342 9.28%	180 4.88%	46 1.25%	41 5.86%	10 1.43%

Table 6: Sinonasal conditions (n = 699, 18.96%).

Month	Peritonsillar abscess	Vallecular cyst	Tonsillar growth	Tonsillitis		Pharyngitis	FB in Throat	Others
				Acute	Chronic			
July	01	01	01	24	26	147	11	-
Aug	01	-	-	05	09	79	05	02
Sept	-	02	-	10	26	86	04	-
Oct	01	-	-	05	04	26	02	-
Nov	01	-	02	26	41	100	11	06
Dec	01	-	01	03	15	47	01	-
Total	05 0.13%	03 0.08%	04 0.11%	73 1.98%	121 3.28%	485 13.15%	34 0.92%	08 0.20%

Table 7: Throat conditions (n = 733, 19.89%).

In throat conditions Pharyngitis 13.15% (485) is highest and Tonsillitis 5.26% is next. A good number of patients came with foreign body in the throat 0.92% (34).

1.54% (57), TB lymphadenitis is 1.38% (51), benign neck mass 0.98% and metastatic neck node is 0.54% (20). Neck conditions (n = 338, 09.16%).

Laryngeal carcinoma accounts for 0.84% (31), Hypopharyngeal carcinoma 0.19% and benign laryngeal lesions 0.45%.

Oral carcinoma (0.81%) is high in oral conditions. Among them Carcinoma Tongue 0.49% and Buccal carcinoma is 0.30%. Other benign conditions are also found.

In neck conditions Nodular Goiter is 4.23% (156), Parotid lesion

Month	Benign laryngeal lesion		Laryngitis	Malignant laryngeal Lesion (n = 31, 0.84%)			Pyrifom fossa lesion	Others
	Vocal cord Polyp	Vocal cord Nodule		Supra glottic	Glottis	Trans glottic		
July	03	02	-	06	02	03	02	-
Aug	02	01	04	02	02	-	02	05
Sept	01	03	01	03	01	02	02	-
Oct	01	-	-	02	-	-	-	-
Nov	02	02	03	03	01	-	01	04
Dec	-	-	01	03	-	01	-	02
Total	09 0.24%	08 0.21%	09 0.24%	19 0.52%	06 0.16%	06 0.16%	07 0.19%	11 0.30%

Table 8: Laryngeal and Hypopharyngeal conditions (n = 75, 02.03%).

Month	Parotid Lesion	Submandibular gland Lesion	TB lymph adenitis	Benign neck mass	Metastatic neck mass	Neck abscess	Goiter	Others
July	22	03	16	08	04	05	33	-
Aug	10	02	18	07	02	05	46	05
Sept	07	02	03	04	02	02	31	-
Oct	03	-	-	05	-	02	13	-
Nov	08	01	11	08	01	06	23	04
Dec	07	-	03	03	-	-	10	02
Total	57 1.54%	08 0.21%	51 1.38%	36 0.98%	09 0.24%	20 0.54%	156 4.23%	11 0.30%

Table 9: Neck conditions (n = 348, 09.44%).

Month	Aphthus ulcer	Carcinoma tongue	Ranulla	S.M.G duct stone	Buccal carcinoma	Ulcer/leukoplakia	Cleft palate/lip	Others
July	01	01	01	01	01	01	01	-
Aug	01	05	01	01	01	-	-	03
Sept	02	01	-	-	01	-	-	-
Oct	04	01	01	-	02	-	-	-
Nov	02	09	-	-	05	06	01	05
Dec	02	01	-	-	01	-	-	-
Total	12 0.32%	18 0.49%	03 0.08%	02 0.05%	11 0.30%	07 0.18%	02 0.05%	08 0.21%

Table 10: Oral cavity conditions (n = 63, 01.71%).

Discussion

In this study attempted to find out the pattern of ENT diseases with which patients came to a referral centre in Dhaka city. The current study showed male 52.82% is more than that of female 47.17% and male: female ratio is 1.12:1 that correspond to the studies done elsewhere [9,21,27,30,33].

Here we observed that young adults 21-40 yrs were more than other age groups. Pediatric age group was second highest. Age group 0-10 year 12.31%, 11-20 year 17.25%, 21-30 year 21.51%, 31-40 year 21.62%, which are almost similar to another study [22]. Elderly patients are less may be due to lack of attention towards them or relatively healthy than others.

Majority of patients came from urban area (56.18%) but patients from rural area (43.82%) were also aware of Otolaryngology-Head and Neck problems that correspond to other study [21].

Communication problem, attendant deficits, low socioeconomic conditions and sometimes ignorance kept them away from proper medical attention.

In the current study Otolological diseases are found in almost half of the study populations. 47.97% (1768) of patients are with ear problems which is correspond with other study [9,20,24,28,30-32] but less in studies done by others [22,27]. We observed that those patients came from rural or slum areas mostly have either Otological disease or some sorts of allergic conditions. Among the ear conditions CSOM is 19.96% (AA 2%, TT 17.96%), ASOM 2.58%, OME 5.31%, Otomycosis 9.25%, Foreign body ear 1.68%, Impacted wax 4.74% less than study done in Nepal [19,29], Rupture TM 1.27%.

Sinonasal conditions accounted for 18.96% (699) of the referred patients consistent with other studies [19,27,30]. Among them allergic rhinitis was the highest 9.28% (342), DNS 4.88%

(180) the next, less than studies done elsewhere [9,21,29]. Sinonasal carcinoma was 0.76% (28), foreign body nose 1.25% (46), epistaxis 1.11% (41), nasal polyposis 0.84% (31), and atrophic rhinitis 0.43% (16) more or less found similar finding in other studies [27,29].

Pharyngitis was one of the most frequent illnesses seen in a study [21]. But in current studies it constitutes 13.15% (485) and Acute and Ch. Tonsillitis 5.26% which is less than other study [21,32]. A good number of patients came with foreign body in the throat 0.92% (34). Total number of patients came with problem in the throat is 19.61% (723) which correlates with other studies [9,27]. Laryngeal carcinoma accounted for 0.84% (25), Hypopharyngeal carcinoma 0.19% and benign laryngeal lesions 0.45% found in our study, similar report found in other studies [25-27,33].

Among neck conditions (n = 348, 09.44%) Nodular Goiter was 4.23% (156), Parotid lesion 1.54% (57), TB lymphadenitis was 1.38% (51), benign neck mass 0.98% and metastatic neck node was 0.54% (20). It is more or less corresponds to the study done in Nigeria and Nepal [9,24]. In our study oral cavity condition was 01.71%, of which oral carcinoma is 0.81%. Almost similar to a study was done in India [23]. Among them Carcinoma Tongue 0.49% and Buccal carcinoma was 0.30%. Other benign conditions were also found.

Conclusion

Our study concluded that patients attended in the OPD has male predominant and almost equal number of patients came from rural areas besides from Dhaka city. Ear problem accounts for highest number with CSOM preponderance. A good number of patients came with pharyngitis, rhinitis, laryngitis and with others common complaints. Most of the patients attended this referral center directly with common ENT complaints which could be managed in the local health care center. That would reduce the burden in the tertiary health care center as well as reduce the treatment cost of the patients. Surgeons working in the tertiary center could deal complicated cases giving adequate time and proper attention. From the data compiled in this study it our recommendation to the health system management authorities to establish a proper referral system in the health care management system of Bangladesh.

Bibliography

1. Population stat 2017-2020, data source- world bank, UN.

2. SD Scotland. Scottish Health Statistics. Edinburgh: Information and Statistics Division, National Health Service in Scotland (1998).
3. McCormick A., et al. 4th National Study 1992-1993. London, UK: Office of National Statistics, HMSO. Morbidity statistics from general practice (1995).
4. Bleach N., et al. "Emergency workload in otolaryngology". *Annals of the Royal College of Surgeons of England* 76 (1994): 335-338.
5. Obon PJ., et al. "An outpatient study in ENT (otorhinolaryngology) emergencies at a general hospital". *Acta otorhinolaryngology* 46.4 (1995): 298-304.
6. Ibekwe TS., et al. "Spectrum of Otorhinolaryngological emergencies in elderly in Ibadan, Nigeria". *Nigerian Journal of Medicine* 14.4 (2005): 411-414.
7. Kishve SP., et al. "Ear, Nose and Throat disorders in paediatric patients at a rural hospital in India". *Australasian Medical Journal AMJ* 3.12 (2010): 786-790.
8. Famuyiwa OO., et al. "Some family factors in sickle cell anaemia in Lagos, Nigeria". *Nigerian Medical Practitioner* 35 (1998): 70-73.
9. Waheed Atilade Adegbiiji., et al. "Ear, Nose and Throat disorders in a Nigerian rural community". *Journal of The Scientific Society* 44.3 (2017): 126-129.
10. MHAR Talukder., et al. "Frequency of Extracranial Complications of Chronic Suppurative Otitis Media". *Journal of Bangladesh College of Physicians And Surgeons* 34.1 (2016): 3-8.
11. Md. Harun Ar Rashid Talukder., et al. "Relationship between social factors and frequency of chronic suppurative otitis media and its extracranial complication". *Bangladesh Journal of Otorhinolaryngology* 19.2 (2013): 104-109.
12. Trevor E Angell., et al. "Thyroid Nodules and Thyroid Cancer in the pregnant woman". *Endocrinology and Metabolism clinic* 48.3 (2019): 557-567.
13. Md. Khabir Uddin Paruay., et al. "Pattern of nodal metastases in papillary thyroid carcinoma". *Bangladesh Journal of Otorhinolaryngology* 19.1 (2013): 46-52.
14. Md. Momenul Haque., et al. "Presentation of sinonasal carcinoma". *Bangladesh Journal of Otorhinolaryngology* 19.2 (2013): 99-103.

15. Bijay Kumar Chaudhari, et al. "Spectrum of ear, nose and throat disorders among children reporting to the out-patient department of a tertiary care center, Nepal". *International Journal of Otorhinolaryngology and Head and Neck Surgery* 4.5 (2018): xxx-xxx.
16. Matilda Ujulbekwe and Ogechi Chibuzor Mbalaso. "Pattern of Paediatric ear, nose and throat diseases in Port Harcourt, South-South, Nigeria". *The Nigerian Health Journal* 15.2 (2015): 48-54.
17. Md. Aktar Kamal, et al. "Clinicopathological study of oral carcinoma". *Bangladesh Journal of Otorhinolaryngology* 20.1 (2014): 15-19.
18. Ashim Kumar Biswas, et al. "Complications of parotid surgery- a study of 30 cases". *Bangladesh Journal of Otorhinolaryngology* 21.1 (2015): 23-27.
19. R Nepali and B Sigdel. "Prevalence Of ENT Diseases In Children: Hospital Based Study". *The Internet Journal of Otorhinolaryngology* 14.2 (2012).
20. A Raza Khan, et al. "Analysis of ent diseases at Khyber Teaching Hospital, Peshawar". *Journal of Medical Sciences (Peshawar)* 21.1 (2013): 7-9.
21. Zeeshan M., et al. "ENT diseases presenting to a tertiary care hospital". *Endocrinology and Metabolism International Journal* 6.6 (2018): 416-418.
22. Ibekwe Matilda Uju and Oghenekaro Ediriverere Nosa. "Otolgic diseases in a tertiary hospital in the Niger Delta region of Nigeria". *Journal of Medicine and Medical Sciences* 4.3 (2013): 96-100.
23. Varshitha A. "Prevalence of oral cancer in India". *Journal of Pharmaceutical Sciences and Research* 2015 7 (10): 845-848.
24. ReebaKarki and KiranRai. "Pattern of Otorhinolaryngological disease at rural medical camps in far western region of Nepal". *MJSBH* 11.2 (2012).
25. Saurabh Bobdey, et al. "Epidemiological review of laryngeal cancer: An Indian perspective". *Indian Journal of Medical and Paediatric Oncology* 36.3 (2015): 154-160.
26. Anupam Mishra and Rohit Meherotra. "Head and Neck Cancer: Global Burden and Regional trends in India". *Asian Pacific Journal of Cancer Prevention* 15.2 (2014): 537-550.
27. Ayotunde James Fasunia, et al. "An audit of Ear, Nose and Throat diseases in a tertiary health institution in South-western Nigeria". *Pan African Medical Journal* 14.1 (2013).
28. Prakash Adhikari. "Pattern of ear diseases in rural school children: Experiences of free health camps in Nepal". *International Journal of Pediatric Otorhinolaryngology* 73 (2003): 1278-1280.
29. Bijoy Kumar Chaudhari, et al. "Spectrum of ear, nose and throat disorders among children reporting to the out-patient department of a tertiary care center, Nepal". *International Journal of Otorhinolaryngology and Head and Neck Surgery* 4.5 (2018).
30. Enas M Abd Algalil, et al. "Frequency of ear, nose and throat diseases in Ahmed Gasim Paediatric Teaching Hospital- Khartoum North Sudan". *Sudan Medical Journal* 53.1 (2017): 19-24.
31. Muhammad Zeeshan, et al. "ENT diseases presenting to a tertiary care hospital". *Endocrinology and Metabolism International Journal* 6.6 (2018): 416-418.
32. Badhan Kumar Dey, et al. "Pattern of ear nose and throat diseases in a tertiary hospital of Dhaka city". *IMC Journal of Medical Sciences* 12.1 (2018): 22-26.
33. Nilank Saroha and Nitin Tomar. "An Audit of Patients Attending ENT OPD at a Medical College in Western UP". *Journal of Paediatrics and Child Health* 52 (2016): 284-290.

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