

An epidemiological profile of otorhinolaryngological disorders in the patients attending ENT OPD of H.N.B Base teaching hospital of VCSGGRMS & R I, Srinagar, Pauri, Garhwal

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Abstract

Background: ENT diseases are amongst most common causes for patient to report to hospital in both rural and urban setups. Since India is developing country with growing economy, its health system is still evolving. This study was done to assimilate the data on patients reporting to ENT OPD in past year so that the future treatment and trend of diseases could be studied and managed. It will help in further reconstruction of health care system of Pauri, Garhwal region.

Objective: study conducted to determine the disease pattern and presentations of patients attending OPD of ENT department over a period of 1 year & to study the variation in the disease patterns between the genders & the age group in this region of the country. **Material & Method:** This was a retrospective record based study was carried in the department of ENT. It included patients who had attended the OPD of ENT department of H.N.B Base teaching hospital of VCSGGRMS&RI, Srinagar, Pauri Garhwal between 15th July 2014 to 14th July 2015. **Results:** In this Study, we observed that males of younger age group constituted the maximum percentage. Among all the cases presenting to the OPD complaints were of ear being impacted wax, (H61.2) second was CSOM (H66.1-2). It was noticed that throat complaint was third complaint leading to OPD visits, in which acute pharyngitis was commonest. **Conclusion:** Impacted wax or cerumen is most common disease for seeking medical advice in our centre.

Key words: Chronic Suppurative Otitis Media, Epidemiology, Impacted wax

Introduction

Otorhinolaryngological care in the Garhwal region of Uttarakhand is still in a primitive stage. Otorhinolaryngological disorders are amongst the common reason for seeking medical advice in health care setup [1-2]. ENT disorders constitutes to one of the major cause of morbidity in any hilly area. In this part of country altitude, large pine forests, and poor socio-economic condition of general population and lack of proper medical facilities further aggravate Otorhinolaryngological problems. The general population of Uttarakhand is slightly more than 10 million out of which 69.45% resides in rural set up. The female: male ratio of this region is 963:1000 [3]. There

are only 3 tertiary referral hospitals in this state [3]. Our institute covers a vast population of Garhwal region of Uttarakhand state.

No such epidemiological data about the prevalence of Otorhinolaryngological disorder of this hilly region is available till now. The aim of this study was to define the epidemiologic profile of common Otorhinolaryngological disorders, in order the set guidelines to help general practitioners to deal with them in a primary care centre. Since the primary health care system is still evolving in this region, so patients seeking medical advice have to face considerable trouble in reaching appropriate medical facility. Due to gross shortage of doctors and facilities patients face many problems, the doctor patient ratio in India is 1:1800 [4] despite massive efforts from government to

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improve the situation. The burden on health care system in Uttarakhand is more as people have to travel a huge distances to avail proper treatment. Due to these unfavourable conditions and lack of proper guidance, the health care of general population is suffering. This data would help in guiding the primary health care professionals and training them for common diseases of this region, which would upgrade the health status of people.

The burden of disease on health care system and its impact on general well being is very high in this region. The analysis of 2000 for Global Burden of Disease (GBD) study stated that cause of morbidity (excluding injuries) is most commonly due to infectious diseases and common tropical diseases 60%, 27% due to life-style disorders and 13% due to potentially preventable per-natal conditions [5]. In studies, it has been stated that non-communicable diseases (NCDs) are leading cause of death globally [6]. It have been implicated that 40% of hospital stay and 35% of outpatient visits are due to NCDs [7]. In studies it has been noted that Otitis

Results

In this study group total number of patients of all reporting to ENT OPD were 8188 in time frame of 1 year. Out of which 4356 were males 53.19% and 3832 were females 46.84% (Table 1). The ratio of male: female in this study was 1.13:1.

Table 1: Distribution of patients

Gender	Patients	%
Males	4356	53.19
Females	3832	46.84
Total	8188	100

Out of the patients reporting to OPD most were followers of Hindu religion 96.25% (7881) only 2% (201) were Muslims and rest were Christians 1.25% (103) (Table 2).

Over all patients were in 0-10 years of age group 1632 i.e. 19.9%, although it was noticed that in males same pattern was followed 12.31% (1008) but females predominantly fell into 31-40 years of age group 9.62% (788). It was noticed in this study that 72.59% of patients were till age group 40 years after which the number has steady fallen to 2.49% for 71 and above age group.

Table 2: Involvement of Ear, Nose & Throat

Disease	M	F	Total	%
Ear	2440	2220	4660	56.91
Nose	616	464	1080	13.19
Throat& neck	1300	1148	2448	29.81
Total	4356	3832	8188	100

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]. The previous studies states the prevalence trends to be slightly different from this study, but due a small population group, the data could vary. There is a very vast disparity according the region in incidence of ENT diseases [11].

Methods and Material

The study carried out in the patients who attended or referred to the OPD of department of ENT HNB Base hospital from 15th July 2014 to 14th July 2015. All patients attending the ENT OPD during last one year were included in this retrospective study. All patients categorized based on the age, gender and clinical diagnosis. The classification of the cases based on main symptom or clinical sign with which the patient presented to OPD. Diagnosis was coded according to the International Classification of Diseases (ICD -10)

In this study more than 50% of the patients came with diseases of ear 56.91% (4660), throat were 29.81% (2448) and nose in 13.19% (1080).

Table 3: Age Distribution

Age group	M	%	F	%	Total	%
0-10	1008	12.31	624	7.62	1632	19.9
11-20	864	10.55	572	6.98	1436	17.53
21-30	736	8.98	744	9.08	1480	18.07
31-40	612	7.47	788	9.62	1400	17.09
41-50	508	6.20	484	5.91	992	12.11
51-60	376	4.59	340	4.15	716	8.74
61-70	140	1.70	188	2.29	328	4.0
71+	112	1.36	92	1.12	204	2.49
Total	4356	53.16	3832	46.84	8188	100

Ear: Most common cases were noted to be of impacted wax, which accounted for 1352 (29.01%) of the total accounted OPD cases, mild female predominance was noted in it. It was noticed that in Females most common diagnosis was Wax or Cerumen impaction 684 (14.67%) while in Males it was chronic suppurative otitis media 708 (15.19%). Chronic suppurative otitis media is second most common cause of bringing patients to OPD, 1228 (26.35%) patients.

Other diseases Otitis externa, Acute suppurative otitis media being 488 (10.47%) & 424 (9.09%) respectively while Hearing Loss 300 (6.09%), acute Mastoiditis 284 (6.09%), Otomycosis 156 (3.34%), Dermatitis of EAC 136 (2.91%). Foreign Bodies of ear of all types were aggregated under 'Foreign body' column, 56 (1.12%). Trauma to ear at any part and type were kept together under 'Trauma', they accounted for 52 cases (1.11%). Facial palsy cases in form of Bell's Palsy,

Traumatic or complications were compiled in 'Facial Palsy' group which had 28 (0.60%) patients & and rest all non significant cases with chronic non specific pain with normal findings and investigations were kept together under 'NAD or others' group which accounted for 166 (3.56%) patients. In this group female predominance by 94(2.01%) in comparison to 72 (1.54%) of males were noticed.

All the patients attending OPD treated according to the treatment protocols.

Table 4: Disease wise distribution of patients [Ear]

DIAGNOSIS	MALE	%	FEMALE	%	TOTAL	%
Wax	668	14.33	684	14.67	1352	29.01
CSOM	708	15.19	520	11.15	1228	26.35
Otitis externa	292	6.26	196	4.20	488	10.47
ASOM	256	5.49	168	3.60	424	9.09
Hearing loss	172	3.69	128	2.74	300	6.43
Ac Mastoiditis	104	2.74	180	3.86	284	6.09
Otomycosis	48	1.03	108	2.31	156	3.34
Dermatitis EAC	48	1.03	88	1.88	136	2.91
Foreign body	36	0.77	20	0.42	56	1.12
Trauma	24	0.51	28	0.60	52	1.11
Facial Palsy	12	0.25	16	0.55	28	0.60
NAD/ Others	72	1.54	94	2.01	166	3.56
TOTAL	2440	52.36	2220	47.63	4660	100

Nose: It was noted that nasal complaints were least of all cause of bringing patients to OPD 1080 (13.19%) out of which 616 (57.03%) were males and 464 (42.96%) were females. Amongst all nasal diseases Deviated nasal septum (DNS) was most common being 144 (13.33%) in males & 100 (9.25%) in females overall 244 patients were there which accounted for 22.59%. Second commonest disease of nose found to be Epistaxis 216 (20%) out of which 140 (12.96%) were males and 76 (7.03%) were females. Acute rhinitis accounted for 124 patients 11.48%, Vestibulitis was seen in 92 patients 8.51%, and Chronic Rhinosinusitis accounted for 128 patients 11.85%. Diseases like Allergic Rhinitis, Foreign Body, Chronic dacrocystitis was 104 (9.62%), 76 (7.03%) and 56 (5.18%) respectively. All the diseases with non-specific pain of nose and face with normal examination and investigations were kept in 'Other' group which had 40 (3.70%) patients out of which 16 (1.48%) were males and 24 (2.22%) were females. A slight female predilection was noticed in this group.

Table 5: Disease wise distribution of patients [Nose]

Diagnosis	Males	%	Females	%	Total	%
DNS	144	13.33	100	9.25	244	22.59
Epistaxis	140	12.96	76	7.03	216	20
Acute Rhinitis	80	7.40	44	4.07	124	11.48
Vestibulitis	60	5.55	32	2.96	92	8.51
Chronic Rhinosinusitis	56	5.18	72	6.66	128	11.85
Allergic Rhinitis	56	5.18	48	4.44	104	9.62
Foreign Body	44	4.07	32	2.96	76	7.03
Chronic Dacrocystitis	20	1.85	36	3.33	56	5.18
Others	16	1.48	24	2.22	40	3.70
Total	616	57.03	464	42.96	1080	100

Throat:-The complaints of throat were evaluated and it was noticed that most common symptom was throat pain and disease was acute pharyngitis 988 (40.35%) out of which 568 (23.20%) were males and 420 (17.15%) were females. Neck swelling was seen in 316 (12.90%) of patients, GERD was 296 (12.09%), stomatitis occurred in 288 (11.76%) of patients, acute tonsillitis in 284 (11.60%). It was seen that thyroid swelling, growth or neoplasia and parotid swelling was in 68 (2.77%), 72 (2.94%) and 40 (1.63%) respectively. All the patients with growth at any site were kept together in Growth/ neoplasia group since the confirmed diagnosis could only be made after further investigations only. In 'Others' group had the various cases, which were encountered in very less in our set up which comprised of 96 (3.92%).

Table 6: Disease wise distribution of patients [Pharynx]

Diagnosis	Males	%	Females	%	Total	%
Acute Pharyngitis	568	23.20	420	17.15	988	40.35
Neck swelling	132	5.39	184	7.51	316	12.90
GERD	156	6.37	140	5.71	296	12.09
Stomatitis	128	5.22	160	6.53	288	11.76
Acute Tonsillitis	164	6.69	120	4.90	284	11.60
Thyroid Swelling	56	2.28	12	0.49	68	2.77
Growth / neoplasia	40	1.63	32	1.30	72	2.94
Parotid Swelling	20	0.81	20	0.81	40	1.63
Others	36	1.47	60	2.45	96	3.92
Total	1300	53.10	1148	46.89	2448	100

Discussion

The current study shows that most of the patients were from age group 0-10 years, which collaborates with

findings in other studies, as young age group is most common age group to seek medical advice in ENT field [12-13]. Male: Female ratio of study is 1.13:1 which

could be due to Male predominance in population of India. Uttarakhand region consists of Hindu dominant society so similar findings were noticed that in our study. The census of state shows Hindu population to be 72.1%, Muslim population 10.1% and Christians to be 0.27%. Although the distribution was similar but statistics were different in our study with Hindu being 96.25%, Muslims 2.49% and Christians in 1.25%. The variation noticed in our study from general census could be due regional variations and small population size on the study.

This study shows Ear diseases to be most common in seeking medical advice especially in younger age group. Most common disease was impacted wax or cerumen in EAC 16.51%, WHO census also shows Wax or impacted Cerumen to be most common cause of reversible hearing loss in our country [14]. Although our study has shown CSOM to be second common 14.99% cause otherwise most common disease of ear in developing countries is CSOM, which is further leading to a major burden on health care system and society [15-16].

In our study, DNS was most common disease of nose while in other studies it was noted that allergic rhinitis is most upcoming disease [13]. Due to increase in pollution allergic rhinitis and its comorbidities are on rising trend but DNS was major disease in this region may be due to rural background of this region.

Throat pain was leading cause of bringing patients to hospital in which acute pharyngitis was leading disease. It's a well known fact that infection pathology in disease is common in developing countries due to inadequate resources, improper treatment, incomplete investigations, improper follow-up nutritional deficiencies and overburdened health care system. Due to above reasons infectious diseases are still leading cause of morbidity and mortality in developing country.

In future, another study can plan for longer duration. Data from all leading referral hospitals of this region should be compiled so that population of whole of Uttarakhand 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.

Conclusion

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 centres. The health workers and primary health care centres should be trained to deal with basic diseases and rehabilitation so that in ENT specialists could deal health camps surgical management.

If this model health care system could be implemented in this region, then the primary health in rural population would be improved and burden on government and society would reduce. This health care protocol if followed then it would be beneficial especially for Uttarakhand region where due to inaccessibility, lack of awareness and rehabilitation options ENT health of general population is poor.

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