

Original Research Article

Prevalence of ENT diseases in Chitradurga district of Karnataka, India

Amardeep Singh, Manjunath K.*, Manjunatha Rao S. V., Akash Aradhya S.

Department of Otorhinolaryngology, Basaveshwara Medical College and Hospital, Chitradurga, Karnataka, India

Received: 08 November 2019

Accepted: 31 December 2019

*Correspondence:

Dr. Manjunath K.,

E-mail: drmanjunathk21@gmail.com

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ABSTRACT

Background: Study was conducted to observe the magnitude of ENT morbidity in the predominantly rural district of Chitradurga, Karnataka.

Methods: It was a retrospective study based on medical records of the patients attending OPD of Otorhinolaryngology department in a tertiary care hospital. Retrieved data was tabulated in terms of frequency and percentage to assess the prevalence of ENT diseases in this region.

Results: Study revealed high prevalence of ear diseases (40.4%) followed by throat problems (28.5%). Among ear group, majority of patients (19.7%) had otitis media. In throat region, there was high prevalence of pharyngitis (12.8%) and tonsillitis (8.0%). Nasal diseases reflected allergic rhinitis (7.0%) and symptomatic DNS (6.5%) as the major contributors to ENT pathologies.

Conclusions: Results of the present study reveal that ear and throat diseases form the largest component of ENT problems. Most of these are infectious and preventable. Health education of general population will play a major role in curtailing the related morbidity.

Keywords: ENT, Diseases, Prevalence, Health awareness

INTRODUCTION

On the basis of population, India is the second largest country in the world. Seventy percent of Indian population resides in rural areas. Pattern of diseases in society varies in different communities and also in different geographical areas.¹ Diseases related to ear, nose and throat (ENT) pose serious public health problems both in rural and urban population. Knowledge of prevalence of ENT diseases in a particular region is important to estimate the magnitude and distribution of morbidity in order to formulate appropriate measures to manage such cases.² This will help in identifying the relationship between the ENT related problems and the socio-demographic factors. It also provides opportunity in creating awareness among the target population and to plan methods for preventive and curative actions by health care agencies in that area.³ Basic aim of this study

was to provide a statistical data regarding existence of various ENT diseases in Southern Karnataka, India.

METHODS

This is a retrospective study based on the medical records of patients attending the Out Patient Department of Otorhinolaryngology, Basaveshwara Medical College and Hospital Chitradurga, Karnataka. It is a tertiary care hospital located in Southern Karnataka receiving patients from whole of Chitradurga district. Seventy five percent of 16 lac population of district resides in rural area as per 2011 census. The study records covered 1000 patients who visited OPD over a period of one year extending from September 2018 to August 2019. Demographic data (age and sex) and data on clinical diagnosis of patients was recorded on a pre-designed proforma. Data so collected was classified into four groups of patients on

the basis of clinical diagnosis involving different subdivisions of Otorhinolaryngology viz. ear, nose, throat, head and neck. The results were tabulated and statistically analysed in the form of frequency and percentage. For calculation of percentage in this study, total number of patients with ENT morbidity were taken into consideration.

RESULTS

Out of the 1000 patients taken up for this study, 556 (55.6%) were males and 444 (44.4%) females. Majority of patients were in the age group of 21 to 40 years with (21.5%) males and (19.4%) females followed by those in the age group of 0-20 years (15.7% males and 11.7% females). 13.3% males and 10.2% females were in the age group of 41 to 60 years. Over 60 years persons included 5.1% males and 3.1% females (Table 1). On the basis of subdivisions of ENT, it was observed that 40.4% patients had ear, 23.2% nasal, 28.5% throat and 7.9% head and neck related problems. Most prevalent ear

disease was acute suppurative otitis media (ASOM) observed in 11.7% cases followed by chronic suppurative otitis media (CSOM) in 8.0% cases. Impacted ear wax and otomycosis were responsible for 6.8% and 2.8% of ear morbidity respectively. Vertigo with and without headache was noticed in 2.6% cases (Table 2). Commonest nasal problem was allergic rhinitis seen in 7.0% of the patients. Symptomatic DNS was second prevalent disease of nose involving 6.5% of the study population whereas 3.9% cases were suffering from rhinosinusitis. Epistaxis and vestibulitis was seen in 1.7% and 1.4% cases respectively (Table 3). As far as throat diseases are concerned, acute pharyngitis tops the list at 12.8% followed by tonsillitis (8.0%) whereas tonsillopharyngitis was seen in 3.1% of patients. Oral ulcers and oral mucositis were observed in 1.4% and 1.0% cases respectively (Table 4). In head and neck region, lymphadenopathy (2.1%) was the commonest presentation followed by thyroid swelling (1.5%). Parotitis and facial palsy was observed in 1.3% and 0.5% patients respectively (Table 5).

Table 1: Demographic characteristics.

Age in years	Frequency (n)		Percentage (%)	
	Males	Females	Males	Females
0-20	157	117	15.7	11.7
21-40	215	194	21.5	19.4
41-60	133	102	13.3	10.2
>60	51	31	05.1	03.1
Total	556	444	55.6	44.4

Table 2: Distribution of ear diseases on the basis of diagnosis.

Variables	Frequency (n)			Percentage (%)		
	Males	Females	Total	Males	Females	Total
ASOM	72	45	117	7.2	4.5	11.7
CSOM	45	35	80	4.5	3.5	8.0
Impacted ear wax	40	28	68	4.0	2.8	6.8
Otomycosis	17	11	28	1.7	1.1	2.8
Vertigo	11	15	26	1.1	1.5	2.6
Furuncle	09	08	17	0.9	0.8	1.7
Tinnitus	11	06	17	1.1	0.6	1.7
Otitis externa	09	05	14	0.9	0.5	1.4
Traumatic tympanic perforation	06	06	12	0.6	0.6	1.2
Presbycusis	05	02	07	0.5	0.2	0.7
Foreign bodies	04	01	05	0.4	0.1	0.5
others	06	07	13	0.6	0.7	1.3
Total	235	169	404	23.5	16.9	40.4

Table 3: Distribution of diseases of nose on the basis of diagnosis.

Variables	Frequency (n)			Percentage (%)		
	Males	Females	Total	Males	Females	Total
Allergic rhinitis	31	39	70	3.1	3.9	7.0
Symptomatic DNS	43	22	65	4.3	2.2	6.5
Rhinosinusitis	18	21	39	1.8	2.1	3.9

Continued.

Variables	Frequency (n)			Percentage (%)		
	Males	Females	Total	Males	Females	Total
Epistaxis	12	05	17	1.2	0.5	1.7
Vestibulitis	13	01	14	1.3	0.1	1.4
Nasal polyps	07	05	12	0.7	0.5	1.2
Foreign bodies	04	04	08	0.4	0.4	0.8
Others	03	04	07	0.3	0.4	0.7
Total	131	101	232	13.1	10.1	23.2

Table 4: Distribution of diseases of throat on the basis of diagnosis.

Variables	Frequency (n)			Percentage (%)		
	Males	Females	Total	Males	Females	Total
Pharyngitis	65	63	128	6.5	6.3	12.8
Tonsillitis	36	44	80	3.6	4.4	8.0
Tonsillopharyngitis	14	17	31	1.4	1.7	3.1
Oral ulcer	07	07	14	0.7	0.7	1.4
Oral mucositis	04	06	10	0.4	0.6	1.0
GERD	07	00	07	0.7	0.0	0.7
Foreign bodies	02	02	04	0.2	0.2	0.4
Others	06	05	11	0.6	0.5	1.1
Total	141	144	285	14.1	14.4	28.5

Table 5: Distribution of ENT related diseases of head and neck on the basis of diagnosis.

Variables	Frequency (n)			Percentage (%)		
	Males	Females	Total	Males	Females	Total
Lymphadenopathy	09	12	21	0.9	1.2	2.1
Thyroid swelling	04	11	15	0.4	1.1	1.5
Parotitis	10	03	13	1.0	0.3	1.3
Facial palsy	02	03	05	0.2	0.3	0.5
TM joint pain	02	02	04	0.2	0.2	0.4
Trauma	02	02	04	0.2	0.2	0.4
Submandibular adenitis	02	01	03	0.2	0.1	0.3
Torticollis	02	00	02	0.2	0.0	0.2
Herpes zoster	01	00	01	0.1	0.0	0.1
Branchial sinus	01	00	01	0.1	0.0	0.1
Others	05	05	10	0.5	0.5	1.0
Total	40	39	79	4.0	3.9	7.9

DISCUSSION

Wide varieties of ear, nose, throat, head and neck diseases are seen in the community and indicate the importance of otorhinolaryngology. Although health care facilities are easily available in urban areas but rural areas are lacking behind in this respect. Present study is an endeavour to ascertain the pattern of ENT diseases in Chitradurga district of Southern Karnataka. Prevalence of disease in a geographical area provides an opportunity to have insight into the spectrum of morbidity particularly in developing countries.¹ In the present study, there was predominance of males over females (56:44).

Otological problems in this study constituted 40.4% of the total number of ENT patients. Similar findings were observed by Singh (36.66%), Ebenezer (44.54%), Nanda (47%) and Fasunla (62.7%).¹⁻⁴ In our study ASOM was the most common ear disease seen in 11.7% cases whereas CSOM accounted for 8% of cases. Both ASOM and CSOM (19.7%) constituted half of ear diseases in this cohort. This is comparable to the findings observed in rural population of Maharashtra.⁵ Other most common ear disease in this study was impacted ear wax found in 6.8 % of patients almost tallying with 7.7% observed in Himachal Pradesh.⁴ Otomycosis and vertigo with or without headache were responsible for 2.8% and 2.6% cases respectively. Ear furuncles and tinnitus had

frequency of 1.7% each. Otolological problems being major contributors to ENT morbidity need urgent and aggressive efforts to overcome preventable diseases.

Patients with nasal problems accounted for 23.2% of the patients studied. Study in Himachal Pradesh reflected similar figures (23.7%).³ Allergic rhinitis was the commonest nasal morbidity responsible for 7.0% of nasal diseases which is lower than the figure in literature.⁴ Symptomatic DNS was the second commonest entity (6.5%) in our series with preponderance in males. This figure is lower when compared with 17.1% from Karela.² Rhinosinusitis constituted 3.9% of nasal problems in present study whereas epistaxis, vestibulitis, nasal polyp and foreign bodies were responsible for 1.7%, 1.4%, 1.2% and 0.8% ENT cases respectively.

Throat problems involved 28.5% of the ENT patients in the present series synonymous with 27.0% reported by Nanda but much higher than those observed by Fasunla (9.6%), and Singh (16.58%).^{1,3,4} Pharyngitis was the most common pathology having leading percentage of 12.8 with equal frequency in both sexes. Tonsillitis (8.0%) and tonsillo-pharyngitis (3.1%) collectively formed the second largest entity in this group. These results are in comparison with the other authors.^{4,5} Oral ulcers (1.4%), oral mucositis (1%), GERD (0.7%) and foreign bodies (0.4%) were observed in the present study.

Patients presenting with complaints relating to head and neck region and falling within the preview of otorhinolaryngology constituted 7.9% of cases. Lymphadenopathy was noted in 2.1%, thyroid swelling in 1.5% and parotitis in 1.3% of the patients under consideration. Facial palsy, TM joint pain, trauma, submandibular adenitis, torticollis, herpes zoster and brachial sinus individually contributed less than 1% of the patients.

These results show that ENT diseases in this region are predominantly infectious and are preventable. Due to low economic status, lack of knowledge about health, social taboos, delayed approach in medical check-up, non-availability of ENT facilities in rural population are the major factors responsible for ENT morbidity. These can be minimized by creating health awareness among the population through health workers, school health programmes, involving local voluntary organisations and providing ENT services at the primary level.⁶

CONCLUSION

Study shows high prevalence of ASOM and CSOM in the ear group of ENT diseases. Allergic rhinitis and symptomatic DNS have been the most common morbidity in nasal group. Highest incidence of pharyngitis and tonsillitis was observed in this cohort. ENT component of head and neck region showed lymphadenopathy and thyroid swelling as the more prevalent morbid conditions. Prevalence of infective diseases form the major component of ENT pathologies. Majority of these are preventable therefore health awareness among the concerned population will play an important role in reducing the morbidity.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Singh A, Manjunath K, Manjunatha RSV, Akash AS. Prevalence of ENT diseases in Chitradurga district of Karnataka, India. *Int J Otorhinolaryngol Head Neck Surg* 2020;6:380-3.