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Original Article

Pattern of Diseases Presenting in ENT Outpatient Department in a Postgraduate Teaching Hospital in S.I.T.E. Area Karachi

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ABSTRACT

Ear, Nose and Throat (ENT) diseases are one of the public health problems and affect a huge number of the patient around the globe. **Objective:** To determine the pattern of ENT disorders or diseases in those patients who were attended outpatient department of ORL in a postgraduate teaching hospital of Karachi. **Methods:** Patients presenting at ENT OPD were selected randomly for the study. Data about ENT problems and information were collected through well structured questionnaire. After data collection, it was entered and analyzes by using software SPSS-23. Variables were age, sex, residence, socioeconomic status and different ENT diseases including wax, otitis media, allergic rhinitis, pharyngitis, tonsillitis, Deviated Nasal Septum (DNS) etc. **Results:** Male patients were 585 (46.8%) while female patients were 665 (53.2%) out of 1250 patients. Most of the patients were from industrial areas 775 (62%) and 475 (38%) were from city areas. 355 (28%) were suffering from wax followed by acute otitis media 300 (24%), acute tonsillitis and deviated nasal septum each in 225 (18%), otitis externa 150 (12%) and acute pharyngitis 145 (11%). In our study, a huge number of 72% of cases had ear disorders. 43.2% of patients had nasal issues, while 45.2% were related to laryngopharyngeal issues. **Conclusions:** Majority of the patients attending outpatient ENT department were related to ear wax followed by acute otitis media, acute tonsillitis, DNS, otitis externa, acute pharyngitis and many patients have multiple diseases.

INTRODUCTION

Ear, Nose and throat related diseases are on rise due to multiple individual and environmental factors. The distribution of ENT disorders also varies considerably among communities based on age and demographic [1]. They might be acquired or congenital. Infectious, inflammatory, neurological, vascular, and trauma-related disorders are examples of acquired illnesses. Complications included are disorders of phonation, breathing, speaking, taste, olfaction and swallowing. Hearing, breathing, phonation, swallowing. ENT diseases may be source of morbidity and produces heavy burden on health management system [2]. There are many Ear infections seen in ENT OPD i.e. Otitis externa, chronic suppurative otitis media, and conductive deafness. Diseases of ENT are not limited to ear nose and throat but also affect the quality of life which require much expensive treatment [3]. Otitis media has a stronger horizontal orientation in children than in adults, making it the most prevalent condition in younger patients. According to reports, the most frequent reason for decrease hearing in children in underdeveloped nations is Chronic Suppurative Otitis Media (CSOM). According to surveys on the

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prevalence of CSOM, 65–330 million people worldwide are affected by the condition, with 60% of those affected by major defects. CSOM define as chronic or persistent ear discharge (otorrhea) through perforated tympanic membrane over 2-6 week's duration [4]. Sometimes chronic suppurative otitis media may have life threatening [5]. Nasal diseases that manifest as ENT OPD include nasal polyps, rhinitis, epistaxis, diseases of the nasal vestibule, tumors, and abnormalities of the nose. Nasal illnesses can be caused by infections, trauma, and nose surgery. Meningitis, cavernous sinus thrombosis, and septal abscess are complications that arise from nasal disorders. In children diagnosis of paranasal sinuses infection is difficult and require thorough knowledge about unique anatomy of Peripheral Nervous System (PNS) [6]. Prevalence of rhinosinusitis was 16% in US adult population [7]. Epistaxis is a prevalent nasal condition that affects a huge number of the patients in developing countries. While the majority of its instances are mild and treatable, some can be fatal. Anatomical abnormalities, tumors, and trauma are common local causes. Its systemic causes include hypertension and cardiovascular disorders. Epistaxis is very common emergency encountered by general physician. Up to 60% of general population experience epistaxis and 6% require medical attention [8]. First aid procedures are usually sufficient to treat epistemic episodes, although in certain cases, further treatments may be required. Sore throat, tonsillitis, pharyngitis, and malignancies are the most prevalent throat conditions in the outpatient department. Allergies are among the other common causes of throat illness, although viral infections are the main culprit [6-8]. Acute glomerular nephritis, peritonsillar abscess development, and acute rheumatic fever are complications of throat illnesses. Laryngeal carcinoma is the second most prevalent malignancy of the respiratory tract. Cigarette smoking, drinking alcohol, and maybe having Helicobacter pylori and Human Papillomavirus 16 are risk factors for this kind of cancer [9]. Obese children have more potential to suffer ENT diseases as compare to normal children or lean child [10]. Due to cross-infections, school-age children are more vulnerable to ENT illnesses. This persistent issue causes both physical and emotional discomfort in addition to impeding academic achievement and developmental progress [11]. Usually discovered in children under 10 years old, foreign things in the ear can be either accidental or iatrogenic. A Peshawar research found that the frequency of frequent ENT conditions presenting in Outpatient Departments (OPD) include chronic tonsillitis (37%), CSOM (14%), and rhinitis caused by a deviated nasal septum (67%). Commonest ENT disease was enlarged adenoids and tonsils in pediatric age group (23.1%), rhinitis (18.4%), CSOM (15.9%) and in adult commonest disease was rhinosinusitis (21.9%) [12].

The objective of our study was to find frequency of ENT disorders or diseases in those patients who attended the outpatient department of ORL in a postgraduate teaching hospital of Karachi.

METHODS

This was a cross sectional study conducted at Kulsumbai Valika Social Security Postgraduate Teaching Hospital SITE Karachi, Pakistan. Permission was obtained by Institutional Review Board (IRB) with Reference Number: 2855 dated: 02-04-2024. The duration of the study was seventeen months from June 2022 to December 2023. Overall a data of 1250 patients was collected from the outdoor patient department of the ENT of our hospital. Non probability convenient sampling technique was used to collect data. Patients who visited ENT outdoor for seeking healthcare were included in this study. The patients were excluded who was in emergency or who refused to give consent for inclusion in the study. Properly data were collected and used a predesigned questionnaire or proforma. The variables included in this study were age of the patient, sex, socioeconomic status, residence (industrial area/city area) and disease for which patient came for health care such as Acute otitis media, Acute sinusitis, Acute pharyngitis, Acute tonsillitis, Ear wax (Bilateral), Allergic rhinitis, Chronic pharyngitis, Chronic Suppurative Otitis Media (CSOM), Chronic tonsillitis, Deviated nasal septum, Epistaxis, and Otitis externa. The data were entered and analyzed by using statistical software i.e. SPSS version 25.0. Mean and standard deviation were calculated for quantitative variables like age, while frequencies and percentages were calculated for categorical variables like gender, socioeconomic status and diseases frequency. Ethical approval was taken from Ethical Committee of the Hospital.

RESULTS

The data on demographic and pattern of ENT diseases, of 1250 study subjects was collected. The mean age was 31 ± 19 years, and mean duration of the diseases was 7 ± 12 days. Out of total 1250 patients, 665 (53.2%) were males and 585 (46.8%) were females. Most of the patients were from industrial areas 775 (62%) and 475 (38%) were city areas.

Table 1 shows that majority of the patients were poor i.e. 955 (76.4%), status of 295 (23.6%) patients were middle class and zero patient was from upper socioeconomic class. Overall it was noted that that out of 1250 patients, 715 (57.2%) were laborer, 535 (42.8%) were dependents of secured workers i.e. wives, sons, daughters and parents (Table 1).

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Table 1: Socioeconomic Status and Residence Wise Distribution of the Patients

Variables	Number of Patients N (%)
Patients Belong to Poor Family	955 (76.4%)
Belong to Middle Class	295 (23.6%)
Reside in SITE Industrial Area	775 (62%)
Reside in City Area	475 (38%)
Laborer	715 (57.2%)
Dependents	535 (42.8%)

Table 2 shows that 355 (28%) were having from ear wax, followed by acute otitis media 300 (24%), acute tonsillitis and deviated nasal septum each in 225 (18%), otitis externa 150 (12%) and acute pharyngitis in 145 (11%) out of 1250 patients. It was noted that many patients have multiple diseases. In our study, a huge number of 72% of cases had ear disorders. 43.2% of complaints are related to nasal issues, while 45.2% were related to laryngopharyngeal issues.

Table 2: Pattern of Diseases Presenting in ENT Outdoor of a Teaching Hospital

Diseases	N (%)
Ear Wax	355 (28.4%)
Acute Otitis Media	300 (24%)
Acute Pharyngitis	145 (11.6%)
Sinusitis	175 (14%)
Deviated Nasal Septum	225 (18%)
Acute Tonsillitis	225 (18%)
Otitis Externa	150 (12%)
Allergic Rhinitis	125 (10%)
Chronic Pharyngitis	120 (9.6%)
Chronic Suppurative Otitis Media	95 (7.6%)
Chronic Tonsillitis	75 (6%)
Epistaxis	16 (1.28%)
Nasal Polyp	20 (1.6%)
Others	75 (6%)

Note: Multiple Diseases in Same Patients

Figure 1 shows gender`s distribution 665 were male and 585 were female and socioeconomic status of the patients, 955 patients were poor and 295 were middle class. This figure also shows residence of patients more patients were resided in industrial area and numbers of labors were more as compared to their dependents.

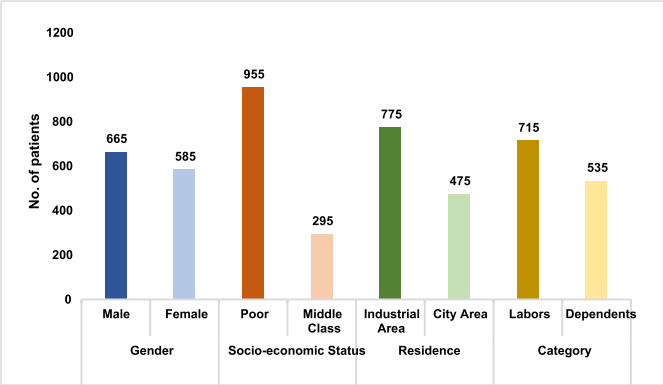

Figure 1: Showing Gender/Socioeconomic Status/Residence/ Workers and their Dependents.

Figure 2 shows male and female distribution in the study, in this study male patients were 665 (53%) out of 1250 and female patients were 585 (47%).

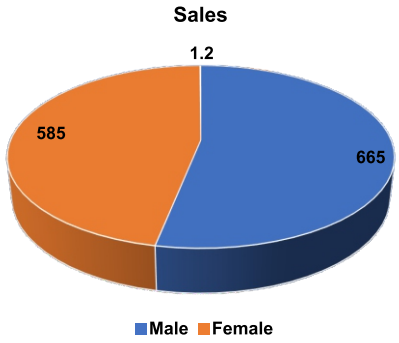

Figure 2: Male and Female Distribution

It was noted that among 1250 patients, 1090 (87.2%) patients had duration of their illness less than 1 year, 70 (5.6%) had between 1 to 5 years of age and 90 (7.2%) had more than 5 years of duration of illness. Regarding health seeking out of 1250, majority of patients have taken treatment due to free of cost treatment.

DISCUSSION

This study was carried out to find the frequency of different ENT disorders or diseases in those patients who were attended outpatient department of ENT in a postgraduate teaching hospital situated at industrial area of Karachi, Pakistan. The age and group-specific patterns of ENT illness differ considerably among communities. A research study published on allergic rhinosinusitis and related co-morbidities was conducted on all consecutive patients visiting the Otolaryngology clinic in Oman [13]. In a study it was reported that ENT involvement of diseases was 71.9%. In that research, 48% of patients had allergic rhinosinusitis [14]. Our study found that 125 (10%) individuals out of 1250 cases had allergic rhinitis. As sample size in our study was adequate so the results are comparable with that study. A previous research using a proforma questionnaire on 15718 primary school students examined the prevalence of avoidable ear diseases in students in primary school (ages

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5 to 12). The most prevalent ENT disease was noted in these small kids were wax in their ear. 7.93% had chronic otitis media, 4.79% had otitis media with effusion, and 3.66% had otitis media with nodule. Children with acute otitis media were identified in 0.65% of cases, and 0.34% had foreign bodies discovered. Our study shows that among 1250 patients, 28% had ear wax, 7% had chronic otitis media, and 24% had acute otitis media. The difference may be attributed to the age groups and sample size selected from outpatient department in our study as compared to population based in previous study. Patient occupational classes in our study indicated that a greater number of patients belonged to lower occupational classes than to upper classes. Various links between asthma and allergic rhinitis have been reported in the last twenty years, pointing great concern in medical community [15]. Nasal blockage is the major symptom of sinus nasal pathology due to inflammation of lining epithelium of nasal cavity [12-14]. The same findings are reported in other studies. A prospective research of 32800 patients conducted at the ORL department of Khaybar Medical College Peshawar, Pakistan, between month of April 2011, May 2012 revealed that 47% of patients had ear problems, 36% had nasal complaints, and 17% had laryngopharyngeal symptoms. In our study, a huge number of 72% of cases had ear disorders. 43.2% of complaints are related to nasal issues, while 45.2% were related to laryngopharyngeal issues. This difference may be due to large sample size in that study and possibility of seasonal variation. In a Pakistani tertiary care hospital in Peshawar, a prospective research was carried out. The majority of ENT conditions that were identified in those babies included tonsillitis (25.33%), pharyngitis (30%), otitis media (29.53%), and nasal obstruction (53 %). According to this study, youngsters are more likely to suffer from ENT disorders [16]. In current study, 355 (28%) were suffering from ear wax, followed by acute otitis media 300 (24%), acute tonsillitis and deviated nasal septum each in 225 (18%), otitis externa 150 (12% and acute pharyngitis in 145 (11%). The age group differences are the reason for the various results. In a study ear disease were found in 198 (46%) out of 430 patients [17]. In another study it was reported that ear wax was the most common in children 37 (35.9%), Otitis media with effusion in 7 patients and hearing loss was 13 (12.6%) [18]. According to a study on the prevalence of ENT disorders in children conducted in India, joint families, low socioeconomic position, and overcrowding may be to blame for the high prevalence of ENT diseases. In a study 583 patients were reported for FB in nose, mean age was 12.9 years, 56.7% were male while 43.22% were female [19]. In a study 230 patients were enrolled, 95% of them had ENT diseases. Nasal Obstruction was 59%, Loss of smell (Anosmia) was 57%, Hearing loss (Deafness) was 23% and Laryngeal involvement was15% [20]. In our study nasal obstruction was 53% i.e. little bit corelating.

CONCLUSIONS

This study showed that majority of the patients attending ENT outpatient department of our teaching hospital were related to ear with most common diseases were ear wax followed by acute otitis media, acute tonsillitis and deviated nasal septum, otitis externa, and other ENT diseases included acute pharyngitis. It was noted that many patients have multiple diseases. Most of the patients were from poor socioeconomic status.

Authors Contribution

Conceptualization: THK
Methodology: AHR, MI
Formal analysis: MJM, DR, MI
Writing-review and editing: THK, TZS

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

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