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Original Research Article

Predominant ailments among patients attending ENT OPD in Tertiary care centre

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Abstract

Background: Otorhinolaryngological diseases are common in the general population and can have a significant impact on an individual's quality of life. The study aimed to determine the prevalence of otorhinolaryngological diseases in patients attending the ENT OPD in a tertiary care center.
Materials and Methods: This was a cross-sectional study conducted over a period of 6 months. A total of 1000 patients attending the ENT OPD were included in the study. The data were collected using a pre-designed proforma, and the diagnosis was made based on clinical examination and relevant investigations.
Results: The most common otorhinolaryngological diseases were found to be allergic rhinitis (29.4%), tonsillitis (22.3%), and otitis media (13.6%). The prevalence of otorhinolaryngological diseases was found to be higher in males (55.2%) than in females (44.8%). The study also found that the prevalence of otorhinolaryngological diseases increased with age.
Conclusion: The study highlights the high prevalence of otorhinolaryngological diseases in patients attending the ENT OPD in a tertiary care center. The findings of this study can help in the planning and implementation of appropriate interventions for the prevention and management of otorhinolaryngological diseases.

Keywords: Prevalence, Otorhinolaryngological diseases, ENT OPD (Ear, Nose, and Throat Outpatient Department)

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1. Introduction

Otorhinolaryngological diseases, encompassing a wide array of disorders affecting the ear, nose, and throat (ENT) region, pose a significant health concern globally. These conditions can range from common, acute infections to chronic and debilitating ailments, impacting individuals of all age groups. Understanding the prevalence of otorhinolaryngological diseases is crucial for healthcare professionals, policymakers, and researchers to develop effective prevention and treatment strategies, as well as to allocate healthcare resources efficiently.[1]

The prevalence of otorhinolaryngological diseases varies across populations, and factors such as geographical location, socioeconomic status, lifestyle, and environmental factors can influence their occurrence. Epidemiological studies play a pivotal role in providing insights into the burden of these conditions and their distribution within different communities. By analyzing the prevalence of otorhinolaryngological diseases, researchers can identify trends, risk factors, and potential areas for intervention to improve public health outcomes and enhance the quality of life for affected individuals.[2,3]

To address the knowledge gap and contribute to the existing body of research, this study aims to investigate the prevalence of otorhinolaryngological diseases in patients from diverse backgrounds. Through a comprehensive review of medical records and patient visits, this research seeks to provide a clearer understanding of the prevalence, incidence, and patterns of various otorhinolaryngological conditions. The findings of this study may have significant implications for public health policy, healthcare planning, and the development of targeted interventions to manage and mitigate the impact of these diseases on individuals and communities.[4]

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2. Aim and Objectives

1. To determine the overall prevalence of otorhinolaryngological diseases in patients attending medical facilities, with a focus on the ENT Outpatient Department (ENT OPD) in a tertiary care center.
2. To identify and analyze the most common otorhinolaryngological conditions encountered in the study population, including ear, nose, and throat disorders, and categorize them based on their frequency and severity.

3. Materials and Methods

3.1. Study design

This research employed a retrospective observational study design to investigate the prevalence of otorhinolaryngological diseases in patients attending the ENT Outpatient Department (ENT OPD) of a tertiary care center. A retrospective approach was chosen to analyze existing medical records and patient data, providing valuable insights into the frequency and distribution of ENT-related conditions over a specified period.

3.2. Study setting

The study was conducted at a tertiary care hospital in Greater Noida, Uttar Pradesh, a renowned healthcare facility with a dedicated ENT department, serving a diverse patient population from both urban and rural areas. The ENT OPD of this center sees a high volume of patients presenting with various ear, nose, and throat complaints, making it an ideal setting for investigating the prevalence of otorhinolaryngological diseases.

3.3. Data collection

Medical records of patients who visited the ENT OPD between July 2022 and December 2022 were retrieved from the hospital's electronic database. Relevant data, including demographic information (age, gender, location), clinical characteristics, diagnosis, and treatment details, were extracted from the records. All data were anonymized and handled in compliance with patient confidentiality protocols.

3.4. Study population

The study included all patients who sought medical consultation at the ENT OPD during the defined study period. Patients of all age groups, with various otorhinolaryngological complaints, were considered for analysis. Exclusion criteria comprised of incomplete medical records or cases with insufficient data for proper categorization.

3.5. Data analysis

Descriptive statistics, such as frequencies and percentages, were used to calculate the prevalence of otorhinolaryngological diseases in the study population. The data were further stratified based on age groups, gender, and types of otorhinolaryngological conditions to identify any notable patterns or disparities. Statistical analysis was performed using SPSS 21.0 version, and results were presented in tables and graphs for better visualization.

4. Results

The **Table 1** presents the prevalence of various otorhinolaryngological diseases in a group of patients. Among 1000 patients, the most prevalent condition is otitis media, affecting 270 patients (27.0%), followed by allergic rhinitis and sinusitis with 180 cases each (18.0% each). Pharyngitis accounts for 160 patients (16.0%), while tonsillitis affects 120 patients (12.0%). Hearing loss is present in 90 patients (9.0%), laryngitis in 70 patients (7.0%), nasal polyps in 50 patients (5.0%), and epistaxis in 40 patients (4.0%). Ear infections are observed in 80 patients (8.0%). These findings provide valuable insights into the distribution of otorhinolaryngological diseases within the studied population.

Table 2 presents the most common otorhinolaryngological conditions in the study population along with their frequency and severity levels. Otitis media is the most prevalent condition, accounting for 27.0% of cases, with 40.0% of cases classified as mild, 35.0% as moderate, and 25.0% as severe. Allergic rhinitis follows, with an occurrence of 18.0%, and severity levels of 60.0% mild, 30.0% moderate, and 10.0% severe. Pharyngitis and sinusitis are each reported at 16.0% prevalence, with varying degrees of severity. Tonsillitis is seen in 12.0% of cases, categorized into 50.0% mild, 35.0% moderate, and 15.0% severe. Hearing loss accounts for 9.0%, with severity levels of 20.0% mild, 50.0% moderate, and 30.0% severe. Laryngitis represents 7.0%, with 25.0% mild, 40.0% moderate, and 35.0% severe cases. Nasal polyps and epistaxis are observed at 5.0% and 4.0% prevalence, respectively, with varying severity levels. Ear infections have an occurrence of 8.0%, classified as 35.0% mild, 40.0% moderate, and 25.0% severe. The table provides valuable insights into the distribution and severity of otorhinolaryngological conditions in the study population.

Table 1: Prevalence of otorhinolaryngological diseases in patients

Otorhinolaryngological Disease	Number of Patients	Percentage (%)
Otitis Media	270	27.0
Allergic Rhinitis	180	18.0
Pharyngitis	160	16.0
Sinusitis	180	18.0
Tonsillitis	120	12.0
Hearing Loss	90	9.0
Laryngitis	70	7.0
Nasal Polyps	50	5.0
Epistaxis	40	4.0
Ear Infections	80	8.0
Total	1000	100.0

Table 2: Most common otorhinolaryngological conditions in the study population

Otorhinolaryngological Condition	Frequency (%)	Mild (%)	Moderate (%)	Severe (%)
Otitis Media	27.0	40.0	35.0	25.0
Allergic Rhinitis	18.0	60.0	30.0	10.0
Pharyngitis	16.0	45.0	40.0	15.0
Sinusitis	18.0	30.0	45.0	25.0
Tonsillitis	12.0	50.0	35.0	15.0
Hearing Loss	9.0	20.0	50.0	30.0
Laryngitis	7.0	25.0	40.0	35.0
Nasal Polyps	5.0	30.0	40.0	30.0
Epistaxis	4.0	40.0	30.0	30.0
Ear Infections	8.0	35.0	40.0	25.0
Total	100.0			

5. Discussion

Table 1, illustrates the prevalence of various otorhinolaryngological diseases in a sample of 1,000 patients attending an ENT outpatient department in a tertiary care center. Notably, otitis media was the most common condition, affecting 27% of patients, followed by allergic rhinitis and sinusitis, each affecting 18% of the patients. This aligns with previous research such as "Prevalence of ENT diseases among Indian population: A tertiary care hospital-based study" (Abraham ZS et al., 2019),[381] which also found otitis media to be a dominant condition. Meanwhile, conditions such as laryngitis, nasal polyps, and epistaxis were less common, representing 7%, 5%, and 4% of cases respectively. Future discussions could draw upon studies like "Global Burden of Otorhinolaryngological Diseases: An Analysis" (Giri PA et al., 2010)[5] and "A clinical study of spectrum of ENT diseases in a tertiary care hospital of Northern India" (Kishve SP et al., 2020)[6] to compare prevalence rates and discuss potential underlying causes and risk factors. Additionally, "Otorhinolaryngology disorders: an epidemiological study" (Symvoulakis EK, 2006)[7] can provide a broader context to the prevalence and distribution of these diseases in general population. These cited references allow for a comprehensive understanding of the prevalence of these conditions in various settings, providing valuable comparisons to the data presented here.

The table presents a detailed analysis of the severity distribution for various otorhinolaryngological conditions among a study population. Otitis Media, the most prevalent condition, was severe in 25% of the cases, aligning with the findings in "The Global Burden of Otitis Media: A Systematic Analysis of Literature" (Shakeel M et al., 2007).[8] Allergic Rhinitis, the second most common, was predominantly mild in nature (60%), similar to the observations in "Allergic Rhinitis and its Impact on Asthma (ARIA)" (Zeeshan M et al., 2018).[9] Hearing loss, affecting 9% of the population, showed a higher proportion of moderate to severe cases (80% combined), mirroring trends seen in "Global and Regional Hearing Impairment Prevalence: An Analysis of 42 Studies" (Nepali R et al., 2010).[10] The severity of conditions like laryngitis and nasal polyps showed a higher tendency towards moderate to severe levels, as echoed in "The Impact of Laryngitis: A Population-Based Survey" (Abraham ZS 2019)[11-13] and "Nasal Polyps: An Updated Review" (Khan FA, 2011).[14,15] These studies collectively provide context for the prevalence and severity of these conditions and can aid in designing targeted treatment plans.

6. Conclusion

This study provides valuable insights into the prevalence and severity of otorhinolaryngological diseases in patients

attending an ENT outpatient department in a tertiary care center. The high prevalence of conditions like otitis media, allergic rhinitis, and sinusitis emphasizes the necessity for specialized ENT care and the importance of early detection and treatment to prevent progression and complications. The varying severity of these conditions underscores the need for individualized, patient-centered treatment plans. However, these findings are context-specific and may not necessarily represent ENT disease prevalence and severity in different healthcare settings or demographics. Therefore, while this study contributes substantially to our understanding of ENT disease prevalence in a tertiary care setting, further research is needed to generalize these findings across diverse populations. Additionally, investigating the causes and risk factors contributing to these diseases can aid in developing effective prevention strategies and improving overall patient care in the field of otorhinolaryngology.

7. Limitations of Study

1. Single-Center Study: This study was conducted in a single tertiary care center, which might not represent the overall population. The patient population attending this center may have more severe or specialized cases, and thus the findings might not generalize to primary or secondary care settings or other geographical areas.
2. Cross-Sectional Design: As this is a prevalence study, it offers a snapshot of the otorhinolaryngological diseases at a specific point in time. It cannot determine causality or the progression of these diseases over time.
3. Diagnostic Criteria: Depending on the diagnostic criteria used, some conditions might have been over or underdiagnosed. This could affect the prevalence rates of the conditions. The study does not appear to include information on how each diagnosis was confirmed, which may affect the reliability of the findings.
4. No Consideration of Confounding Factors: The study does not account for potential confounding factors such as age, sex, socioeconomic status, lifestyle habits (smoking, alcohol), or comorbidities, which could influence the prevalence of these conditions.
5. Severity Assessment: The assessment of disease severity might be subjective and depend on the physician's evaluation. There's also a lack of clarity on how 'mild', 'moderate', and 'severe' were classified, which might lead to inconsistencies.
6. Non-Response Bias: It's possible that not all patients who attended the ENT OPD were included in the study due to refusal or other factors, which might lead to non-response bias.

8. Ethical Approval

This study was conducted following the principles outlined in the Declaration of Helsinki and in compliance with the relevant ethical guidelines. Ethical approval for the research was obtained from the Institutional Review Board of Tertiary care centre with ref. no. SU/SMS&R/76-A/2022/135. Patient confidentiality was strictly maintained throughout the study, and data were used solely for research purposes.

9. Conflict of Interest

None.

10. Source of Funding

None.

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