



## Original Research Article

# A STUDY OF CLINICO-EPIDEMIOLOGIC PATTERN OF OTORHINOLARYNGOLOGY EMERGENCIES AT A TERTIARY CARE CENTRE

Shefali Chandel<sup>1</sup>, Sharad Hernot<sup>1</sup>, Rishabh Dogra<sup>3</sup>, Apoorva Kumar Pandey<sup>4</sup>, Tripti Maithani<sup>5</sup>, Arvind Varma<sup>6</sup>, Madhuri Kaintura<sup>7</sup>

<sup>1</sup>Junior Resident, Department of ENT, Shri Guru Ram Rai Institute of Medical and Health Sciences Dehradun, Uttarakhand, India

<sup>2,7</sup>Associate Professor, Department of ENT, Shri Guru Ram Rai Institute of Medical and Health Sciences, Dehradun, Uttarakhand, India

<sup>3</sup>Assistant Professor, Department of ENT, Shri Guru Ram Rai Institute of Medical and Health Sciences, Dehradun, Uttarakhand, India

<sup>4,5,6</sup>Professor, Department of ENT, Shri Guru Ram Rai Institute of Medical and Health Sciences, Dehradun, Uttarakhand, India

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### Corresponding Author:

**Dr. Sharad Hernot,**

Associate Professor, Department of ENT, Shri Guru Ram Rai Institute of Medical and Health Sciences, Dehradun, Uttarakhand.  
Email: hernots@gmail.com

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### ABSTRACT

**Background:** Otorhinolaryngology (ENT) emergencies represent a significant proportion of cases presenting to tertiary care hospitals. Their patterns vary with demographic and epidemiological factors, necessitating institution-specific evaluation to improve triage and management strategies.

**Materials and Methods:** This prospective observational study was conducted over one year (May 2024–May 2025) in the Emergency Department and ENT unit of a tertiary care teaching hospital. A total of 380 patients presenting with ENT emergencies were enrolled consecutively. Data on demographics, clinical presentation, examination findings, diagnosis, management, and outcomes were collected using a structured proforma. Statistical analysis was performed using SPSS version 21.0.

**Results:** Young adults (18–30 years) constituted the largest group (41.3%), with a male predominance (61.6%) and majority rural population (61.3%). Epistaxis (18.9%) was the most common presentation, followed by foreign bodies (9.7%) and vertigo (9.5%). Trauma-related cases accounted for 38.4%, with road traffic accidents being the leading cause. Head and neck trauma (31.3%) was the most frequent diagnosis. Most patients (57.9%) had no comorbidities; hypertension was the most common associated condition. Outcomes showed high rates of discharge against medical advice (47.6%) and significant need for ENT (28.4%) and neurosurgical (18.4%) admissions.

**Conclusion:** ENT emergencies predominantly affect young males and rural populations, with trauma and bleeding as leading causes. Strengthening triage systems, rural healthcare access, and patient retention strategies is essential for improved outcomes.

**Keywords:** ENT emergencies, Otorhinolaryngology emergencies, Epistaxis, ENT trauma, Neck trauma

## INTRODUCTION

ENT emergencies constitute a substantial proportion of emergency presentations in tertiary care hospitals across all age groups. Indian studies report a high burden of ear and nasal complaints such as epistaxis, infections, and trauma-related conditions, highlighting the need for structured assessment and timely management.<sup>[1,2]</sup> Head and neck trauma,

frequently associated with maxillofacial injuries, further contributes to emergency workload, particularly in urban and peri-urban regions.<sup>[3]</sup> Globally, similar patterns are observed, with considerable variability in presentation and outcomes influenced by local epidemiology and health-care infrastructure.<sup>[4]</sup> The rising burden of ENT emergencies, coupled with increasing non-urgent presentations and limited

institution-specific Indian data, highlights the need for focused evaluation. This study aims to systematically assess the clinico-epidemiological pattern of otorhinolaryngology emergencies at a tertiary care centre to inform triage protocols, resource allocation, and improved emergency care delivery.

## MATERIALS AND METHODS

This is a prospective descriptive (observational) study conducted in the Emergency Department and Department of Otorhinolaryngology at a tertiary care teaching hospital. The study was carried out over a period of one year, from May 2024 to May 2025.

The study included a total of 380 patients presenting with otorhinolaryngology-related emergencies. All eligible patients who presented either directly to the Emergency Department or were referred on an emergency basis to the ENT outpatient department during the study period were consecutively enrolled, as per the defined inclusion and exclusion criteria.

### Inclusion Criteria

- Patients of any age and gender presenting with ENT emergencies.
- Patients attending the Emergency Department or referred to the ENT department on an emergency basis.
- Patients presenting with –
  - Otorhinolaryngology emergencies
  - Maxillofacial injuries
  - Temporal bone injuries
  - Neck injuries, including hanging and strangulation-related injuries
  - Facial injuries (soft tissue injuries and fractures)
  - Lockjaw
  - Pinna lacerations

### Exclusion Criteria

- Patients seen as routine inpatient department (IPD) references without emergency indication.
- Patients who did not provide informed consent.

### Clinical Evaluation and Data Collection

At the time of presentation, all patients underwent a systematic clinical assessment.

A detailed history was obtained and recorded in a structured study proforma, which included –

- Demographic details (age, sex)
- Chief complaints
- Duration of symptoms
- Associated symptoms, including:
  - Fever
  - Fatigue
  - Pain
  - Cough
  - Night sweats
  - Hearing difficulty
  - History of trauma, if present
  - Past medical history, including systemic diseases

- Family history
- Dietary history
- Personal history, including alcohol consumption and smoking/tobacco use
- Past surgical history

### Clinical Examination

A meticulous otorhinolaryngological examination was carried out for each patient, focusing on the following anatomical regions:

- Ear
- Nose
- Oral cavity
- Neck

Relevant findings were documented systematically for further analysis.

### Statistical Analysis

- Collected data were entered into Microsoft Excel and analyzed using the Statistical Package for the Social Sciences (SPSS) version 21.0 (SPSS Inc., Chicago, IL, USA) for Microsoft Windows.
- Continuous variables were expressed as range, mean  $\pm$  standard deviation (SD), or median with interquartile range (IQR), as appropriate.
- Categorical variables were expressed as frequencies and percentages.
- The Chi-square test was used to compare categorical variables.
- Fisher's exact test was applied when the expected cell frequency was less than 5.
- A p-value  $< 0.05$  was considered statistically significant.

## RESULTS

The study included a total of 380 patients presenting with otorhinolaryngology-related emergencies. All eligible patients who presented either directly to the Emergency Department or were referred on an emergency basis to the ENT outpatient department during the study period were consecutively enrolled, as per the defined inclusion and exclusion criteria.

The study population was predominantly young adults, with the largest group aged 18–30 years (41.3%), followed by 31–40 years (16.8%) and 41–50 years (15.3%), showing that over two-thirds of ENT emergencies occurred in economically productive age groups. Participants aged 51–60 years made up 9.5%, and those 61–70 years accounted for 11.8%. Older adults were less represented, with 71–80 years at 2.4% and above 80 years at 2.9% [Table 1. A]. Overall, ENT emergencies in this tertiary care centre were mainly seen in younger and middle-aged adults, with relatively fewer elderly cases.

The study showed a clear male predominance, with males accounting for 61.6% of cases and females 38.4% [Table 1.B]. This may be due to greater male exposure to risk factors such as road traffic accidents, occupational hazards, interpersonal violence, and outdoor activities. The finding is

consistent with common emergency care patterns and reflects the demographic profile of ENT emergency patients in a tertiary care centre.

The study showed a predominance of rural residents (61.3%) compared to urban residents (38.7%), indicating a higher burden of ENT emergencies in the rural population [Table 1.C]. This may be due to increased trauma exposure, delayed access to primary healthcare, and reliance on tertiary care centres. The distribution reflects the hospital's largely rural catchment area and underscores the need to strengthen emergency ENT services and referral systems in rural settings.

Among 380 ENT emergencies, epistaxis was most common (72; 18.9%), followed by foreign body in ear/nose/throat/oesophagus/bronchus complaints (37; 9.7%) and vertigo/dizziness ± headache (36; 9.5%). Otologic issues included ear pain/blockage/tinnitus (30; 7.9%) and otorrhagia (30; 7.9%). Other presentations were odynophagia/dysphagia (27; 7.1%), oral bleeding (27; 7.1%), and soft-tissue lacerations (27; 7.1%).

Neck emergencies (swelling/abscess/laceration/hanging) accounted for 26 cases (6.8%), and breathing difficulty for 15 (3.9%). Less common were external ear swelling (14; 3.7%), facial swelling (12; 3.2%), and nasal + ear bleeding, facial weakness, and upper respiratory/nasal symptoms (each 9; 2.4%), reflecting a caseload dominated by bleeding, foreign bodies, vestibular symptoms, and trauma [Table 2].

In our study, most patients had no history of trauma (234; 61.6%), while 38.4% reported trauma. The most common mechanism was road traffic accidents (75; 19.7%), followed by assault (36; 9.5%) and fall from height (18; 4.7%). Less frequent causes included unspecified trauma (e.g., kite-string/barbed-wire injuries) (11; 2.9%), fall from vehicle (3; 0.8%), and slip and fall (3; 0.8%), indicating that while non-traumatic cases predominated, a substantial proportion were trauma-related ENT emergencies [Table 3].

On local examination, we found that the most common findings were vestibular/neuro-otologic signs (51; 13.4%) and nasal bleeding/intranasal clots (48; 12.6%), followed by other isolated findings (39; 10.3%) and facial/oral/neck lacerations (38; 10.0%).

Foreign bodies in ear/nose/throat/oesophagus/bronchus were noted in 36 (9.5%), nasal trauma in 33 (8.7%), and ear trauma or lesions in 30 (7.9%). Oral cavity/oropharyngeal lesions and middle ear/tympanic membrane pathologies were each seen in 27 (7.1%), and head-neck swellings/abscesses in 24 (6.3%), reflecting a caseload dominated by epistaxis-related findings, vestibular signs, trauma, and foreign bodies [Table 4].

Among 380 participants, 220 (57.9%) had no comorbidities. Hypertension was most common (81; 21.3%), followed by type 2 diabetes (33; 8.7%) and combined hypertension with diabetes (12; 3.2%). Cardiovascular diseases (including coronary artery

disease or ischemic heart disease) were seen in 10 (2.6%). Chronic respiratory illnesses included COPD (6; 1.6%) and asthma (3; 0.8%). Chronic kidney and liver diseases were present in 5 (1.3%) and 3 (0.8%) cases, while neurological conditions (CVA and seizure disorder) were rare (2 each; 0.5%) [Table 5]. Overall, although most had no comorbidities, a significant proportion had hypertension and diabetes, which may affect presentation, management, and outcomes.

In the diagnostic profile of 380 ENT emergencies, head-neck trauma/injuries/lacerations constituted the largest category (119; 31.3%), followed by epistaxis (63; 16.6%) and foreign body/globus cases (42; 11.1%). Infections like head-neck infections/abscesses accounted for 39 (10.3%), and vertigo/vestibular disorders for 36 (9.5%). Non-traumatic throat inflammation was seen in 27 (7.1%), growth-related cases (upper aerodigestive tract) in 21 (5.5%), otologic infections (AOM/COM) in 18 (4.7%), and facial nerve palsy in 12 (3.2%). Airway compromise was rare (3; 0.8%), indicating a caseload dominated by trauma and bleeding, with significant contributions from foreign bodies and infections, with a minority presenting with neoplastic and airway-threatening pathology [Table 6].

Out of 380 ENT emergencies, we found that conservative management was done most commonly (187; 49.2%), followed by laceration suturing (62; 16.3%). Anterior nasal packing (ANP) was alone done in 24 (6.3%) and ANP with posterior nasal packing in 3 (0.8%), while incision and drainage was performed in 24 (6.3%). Foreign body removal occurred in 18 cases (4.7%) — non-endoscopic 11 (2.9%) and endoscopic 7 (1.8%). Airway/oesophageal procedures included tracheostomy (14; 3.7%), intubation (9; 2.4%), oesophagoscopy (5; 1.3%), and bronchoscopy (4; 1.1%). Otologic procedures included ear packing (9; 2.4%) and syringing (6; 1.6% for wax, 3; 0.8% for foreign body). Other interventions (each 3; 0.8%) included ANP + EAC pack, neck exploration, tracheostomy stoma dilatation, and specialist referrals, indicating that while nearly half were managed conservatively, many required haemostasis, wound repair, or airway support [Table 7].

Among 380 patients, the most common outcome was discharge against medical advice (LAMA) in 181 (47.6%). ENT admission was required in 108 (28.4%), while 70 (18.4%) were admitted under Neurosurgery, mainly for trauma-related cases. Smaller proportions were admitted under Medicine (12; 3.2%) and Pediatrics (3; 0.8%). Only 3 patients (0.8%) were discharged after treatment, indicating most required admission or follow-up. Overall, the findings show high LAMA rates and significant use of ENT and neurosurgical services, highlighting both case severity and challenges in patient retention and continuity of care [Table 8].

Month-wise analysis of 380 ENT emergencies showed a relatively uniform distribution with mild seasonal variation. The highest cases occurred in May (38; 10.0%), followed by December and June (36 each; 9.5%), and January (35; 9.2%) and October (34; 8.9%). Lower frequencies were seen in

September (26; 6.8%), July and November (28 each; 7.4%), and March (29; 7.6%), while February, April, and August each had 30 cases (7.9%). Overall, presentations were consistent year-round, with slight increases in late summer and early winter [Table 9].

**Table 1: Age, Sex, and Residence-wise distribution of patients**

<b>(A) Age-group distribution among the studied participants (n = 380)</b>		
Age group (years)	N	%
18–30	157	41.3
31–40	64	16.8
41–50	58	15.3
51–60	36	9.5
61–70	45	11.8
71–80	9	2.4
>80	11	2.9
Total	380	100.0
<b>(B) Sex distribution among the studied participants (n = 380)</b>		
Sex	N	%
Female	146	38.4
Male	234	61.6
Total	380	100.0
<b>(C) Residence distribution among the studied participants (n = 380)</b>		
Residence	N	%
Rural	233	61.3
Urban	147	38.7
Total	380	100.0

**Table 2: Categorized Chief Complaints among the Studied Participants (N = 380)**

Category of chief complaint	Details	N (%)
Epistaxis (nasal bleed)	Nasal bleed; nasal bleed + raised BP	72 (18.9)
Foreign body sensation/ingestion (ear/nose/throat/esophagus)	FB ear (R/L); FB nose; FB throat; FB oesophagus/esophagus; FB sensation throat	37 (9.7)
Vertigo/dizziness ± headache	Dizziness; dizziness + headache	36 (9.5)
Otologic symptoms (pain/blockage/tinnitus)	Ear ache/pain (R/L); ear blockage; ringing sensation	30 (7.9)
Otorrhagia (ear bleeding)	Ear bleed; right/left ear bleed	30 (7.9)
Odynophagia/dysphagia (non-foreign body)	Throat pain; pain throat; dysphagia; difficulty swallowing	27 (7.1)
Oral bleeding	Oral bleed	27 (7.1)
Soft-tissue lacerations (nose/pinna/lip)	Nose laceration; pinna lacerated wound; lip laceration	27 (7.1)
Neck emergencies (swelling/abscess/laceration/hanging)	Neck swelling; neck abscess; neck laceration; neck swelling + dysphagia; hanging	26 (6.8)
Airway/breathing difficulty	Difficulty breathing	15 (3.9)
External ear swelling/abscess	Earlobe swelling; pinna swelling; postauricular abscess	14 (3.7)
Facial swelling	Facial swelling (R/L)	12 (3.2)
Combined nasal + ear bleeding	Nasal and ear bleed	9 (2.4)
Facial weakness/deviation	Facial deviation; deviation of angle of mouth	9 (2.4)
Upper respiratory/nasal symptoms	Fever/cough/sore throat; nasal pain; nasal discharge	9 (2.4)
Total		380 (100.0)

**Table 3: Distribution of Trauma History (RTA/Trauma/Fall/Assault) Among the Studied Participants (N = 380)**

Trauma history category	N	%
No trauma	234	61.6
RTA	75	19.7
Assault	36	9.5
Fall from height	18	4.7
Unspecified Trauma (such as slit throat injury from kite string, injury from barbed wire fence, etc)	11	2.9
Fall from vehicle	3	0.8
Slip and fall	3	0.8
Total	380	100.0

**Table 4: Categorized Local Examination Findings among the Studied Participants (N = 380)**

Category (local examination)	Details	N (%)
Nasal bleed / intranasal clots	Active nasal bleed; inactive nasal bleed; left nasal cavity clots; right nasal cavity clots	48 (12.6)
Nasal trauma / swelling / crepitus / fracture / laceration	Nasal swelling; crepitus; deformity; swelling + crepitus; fracture nasal bone; laceration nose/nose laceration	33 (8.7)
Oral cavity / oropharynx (tonsil/pharynx lesions & inflammation)	Grade III/IV tonsillar hypertrophy with acute tonsillitis; tonsillar pillars congested; congested PPW; growth tonsillar region; leukoplakic patches	27 (7.1)

Lacerations – facial/oral/neck (non-nasal)	Lip laceration; tongue laceration; palate laceration; deep lacerated wound; neck laceration/lacerated wound neck	38 (10.0)
External ear canal / pinna trauma & local ear lesions	EAC laceration/right EAC laceration; pinna laceration; impacted earring in lobe; impacted FB ear lobe, otitis externa, otomycosis.	30 (7.9)
Foreign body (ear/nose/throat/esophagus)	FB insect (R/L) ear; FB pea nose; FB throat; FB esophagus, impacted fish bone in tonsil	36(9.5)
Middle ear / TM pathology (infective/traumatic)	Congested/bulged TM; hemotympanum (R/L); traumatic perforation (R/L) TM; TM intact; impacted wax/right EAC wax/impacted ear wax	27 (7.1)
Airway compromise / laryngo-tracheal	Stridor; tracheal stenosis; Pharyngitis , laryngitis, Croup	27 (7.1)
Vestibular / neuro-otologic	Nystagmus present; facial palsy/facial deviation/deviated angle of mouth	51 (13.4)
Head–neck swellings / abscess	Tender neck swelling; neck swelling; submandibular swelling; thyroid swelling; left pinna abscess; postauricular swelling; swelling vestibule, Ludwig’s angina, Preauricular sinus abscess	24 (6.3)
Other isolated findings	Watery nasal discharge; active discharge; fever + swelling; ear bleed; poorly differentiated SCC	39 (10.3)
Total		380 (100.0)

**Table 5: Distribution of Co-Morbidities among the Studied Participants (N = 380)**

Co-morbidity category	N	%
No co-morbidity	220	57.9
Hypertension (HTN)	81	21.3
Type 2 diabetes mellitus (T2DM)	33	8.7
HTN + T2DM	12	3.2
Bronchial asthma	3	0.8
Hypothyroidism	3	0.8
Coronary artery disease (CAD)/IHD	10	2.6
Chronic obstructive pulmonary disease (COPD)	6	1.6
Chronic kidney disease (CKD)	5	1.3
Chronic liver disease (CLD)	3	0.8
CVA/Stroke history	2	0.5
Seizure disorder/epilepsy	2	0.5
Total	380	100.0

**Table 6: Categorised Diagnosis Profile among the Studied Participants (N = 380)**

Diagnostic category	Details	N (%)
Epistaxis / nasal bleeding	Epistaxis; epistaxis with HTN/CAD; nasal bleed post RTA/fall/assault	63 (16.6)
Head–neck trauma / injuries / lacerations (includes ear trauma + nasal injury + other otologic complaints)	Facial/head–neck trauma; polytrauma; lip/pinna/tongue/palate lacerations; EAC laceration; hemotympanum; traumatic TM perforation; ear bleed post RTA; nasal trauma; fracture nasal bone; nose laceration; hanging; neck penetrative injury; CSF leak.	119 (31.3)
Foreign body / globus sensation	FB ear/nose; FB throat; FB oesophagus (coin/dentures); impacted FB tonsil; Globus Pharyngeus	42 (11.1)
Head–neck infections / abscess	Facial cellulitis (Masticator space abscess or Zygomatic abscess); Perichondritis; Submandibular sialadenitis or abscess; Parotitis; Deep neck space abscess; Postauricular abscess; nasal vestibulitis; thyroiditis; EAC furunculosis	39 (10.3)
Vertigo / vestibular disorders	BPPV; Acute labyrinthitis; Vestibular Neuronitis	36 (9.5)
Throat symptoms / inflammation (non-trauma, non-cancerous)	Acute tonsillopharyngitis; oral candidiasis	27 (7.1)
Growth	Growth Oropharynx / Laryngopharynx / Hypopharynx / Oesophagus	21 (5.5)
Otitis media (AOM/COM)	Acute otitis media (R/L); Acute on Chronic Otitis Media (R/L)	18 (4.7)
Facial nerve palsy	Grade III facial nerve palsy / facial palsy (including post RTA), Bells Palsy, Herpes Zoster Oticus, Malignant Otitis externa	12 (3.2)
Airway compromise (stenosis)	Tracheal stenosis, Croup, Post RTA (Blunt trauma), Growth oropharynx, growth laryngopharynx, growth hypopharynx	3 (0.8)
Total		380 (100.0)

**Table 7: Treatment Provided Among the Studied Participants (N = 380)**

Treatment Modality	N	%
Conservative management	187	49.2
Suturing of Lacerations	62	16.3
Anterior nasal packing (ANP) alone	24	6.3
Anterior Nasal Packing with Posterior nasal packing	3	0.8
Incision & drainage (I&D)	24	6.3
Foreign body removal (non-endoscopic)	11	2.9
Foreign body removal (Endoscopic)	7	1.8
Tracheostomy	14	3.7
Ear canal packing (EAC pack)	9	2.4
Intubated	9	2.4
Esophagoscopy (FB removal)	5	1.3
Bronchoscopy (FB removal)	4	1.1

Ear Syringing for WAX	6	1.6
Ear Syringing for FB Removal	3	0.8
ANP + EAC pack	3	0.8
Surgery (such as Neck Exploration in case of Penetrating Neck Trauma)	3	0.8
Tracheostomy stoma dilation	3	0.8
Psychiatric/ Neurology opinion	3	0.8
Total	380	100.0

**Table 8: Disposition (Admission/Referred/LAMA) Among the Studied Participants**

Disposition	N	%
LAMA	181	47.6
Admitted in ENT	108	28.4
Admitted in Neurosurgery	70	18.4
Admitted in Medicine	12	3.2
Admitted in Pediatrics	3	0.8
Discharged	3	0.8
Medicine	3	0.8
Total	380	100.0

**Table 9: Month-wise Distribution of ENT Emergency Presentations (N = 380)**

Month	N	%
January	35	9.2
February	30	7.9
March	29	7.6
April	30	7.9
May	38	10.0
June	36	9.5
July	28	7.4
August	30	7.9
September	26	6.8
October	34	8.9
November	28	7.4
December	36	9.5
Total	380	100.0

## DISCUSSION

ENT emergencies are common and include trauma, bleeding, infections, foreign bodies, and airway problems requiring prompt diagnosis and treatment. Their pattern varies with age, sex, environment, and healthcare access, making it important to study their clinico-epidemiological profile in tertiary care for better planning and management.

ENT emergencies in this study were predominantly seen in young adults, with the highest proportion in 18–30 years (41.3%), followed by 31–40 years (16.8%) and 41–50 years (15.3%), indicating that over two-thirds occurred in economically productive age groups. Similar trends were reported by Pandit et al,<sup>[5]</sup> Adegbi et al,<sup>[6]</sup> and Olajide et al,<sup>[7]</sup> linking higher young adult involvement to trauma exposure such as road traffic accidents and violence. While Haider et al,<sup>[8]</sup> and Kumar et al,<sup>[9]</sup> reported higher burden in older adults, especially for chronic and malignant conditions. In comparison, the elderly proportion here was lower ( $\geq 61$  years: 17.1%), suggesting that emergency ENT workload in this centre was concentrated in younger adults, likely due to trauma-related cases.

A clear male predominance was observed, with males comprising 61.6% and females 38.4% of cases. Similar trends were reported by Adegbi et al,<sup>[6]</sup> Olajide et al,<sup>[7]</sup> and Khan et al,<sup>[10]</sup> attributing higher male involvement to road traffic accidents and occupational exposure. In contrast, outpatient

studies by Yasmeen et al,<sup>[11]</sup> Alam et al,<sup>[12]</sup> showed a more balanced sex distribution, likely due to inclusion of mainly infective conditions. Thus, the male predominance here reflects the trauma-oriented emergency case mix.

Male predominance persisted across most age groups, especially in 18–30 years (males 29.5% vs females 11.8%). Similar patterns were reported by Adegbi et al,<sup>[6]</sup> and Olajide et al,<sup>[7]</sup> identifying young adult males as the largest subgroup, and by Huang et al,<sup>[13]</sup> who noted higher male representation across adult age groups. The equal distribution in the 31–40-year group (8.4% each) appears to be a local demographic pattern not widely reported in the literature.

Most cases were from rural areas (61.3%) compared to urban (38.7%). Similar rural predominance has been reported by Nanda et al,<sup>[14]</sup> Khan et al,<sup>[10]</sup> and Sumbria et al,<sup>[15]</sup> attributing it to poor health awareness, delayed care-seeking, limited access to facilities, and reliance on tertiary centres. In contrast, Huang et al,<sup>[13]</sup> and Vidal et al,<sup>[16]</sup> reported more balanced distributions in urban-based populations. The higher rural proportion here likely reflects the centre's predominantly rural catchment and referral pattern.

Epistaxis was the most common complaint (18.9%), followed by foreign body cases (9.7%) and vertigo/dizziness (9.5%). Similar findings were reported by Vidal et al,<sup>[16]</sup> and Huang et al,<sup>[13]</sup> who noted bleeding, infections, and foreign bodies as

major ENT emergencies. The prominence of foreign bodies aligns with Rana et al,<sup>[17]</sup> and Kwon et al.<sup>[18]</sup> Otolgic symptoms and otorrhagia (7.9% each) correspond with Cohen et al,<sup>[19]</sup> while trauma-related lacerations and neck emergencies reflect patterns described by Adegbijiet al.<sup>[6]</sup> Vertigo/dizziness appears relatively prominent here compared to other studies, indicating a broader vestibular emergency caseload.

In this study, 61.6% of patients had no trauma history, while 38.4% were trauma-related; with road traffic accidents (19.7%) as the leading cause, followed by assault (9.5%) and falls (6.3%). Similar patterns were reported by Adegbiji et al,<sup>[6]</sup> and Olajide et al,<sup>[13]</sup> identifying RTAs and assaults as major causes of ENT injuries. The high proportion of non-traumatic cases aligns with Huang et al,<sup>[13]</sup> indicating many ENT emergencies are infection- or bleeding-related. Compared to trauma-focused series, the higher non-trauma proportion reflects a mixed emergency profile in this tertiary centre.

The most common findings were vestibular/neuro-otologic signs (13.4%) and nasal bleeding/intranasal clots (12.6%), followed by other findings (10.3%) and facial/oral/neck lacerations (10.0%). Foreign bodies accounted for 9.5%, with notable nasal and ear trauma. Similar patterns of bleeding, trauma, and foreign bodies were reported by Huang et al,<sup>[13]</sup> and Vidal et al,<sup>[16]</sup> while Kwon et al,<sup>[18]</sup> also identified foreign bodies as common. However, the prominence of vestibular/neuro-otologic signs suggests a relatively higher neuro-otologic emergency load in this centre.

More than half of patients (57.9%) had no comorbidities, while hypertension (21.3%) and diabetes (8.7%) were most common. Similar findings were reported by Huang et al,<sup>[13]</sup> noting many ENT emergency patients are otherwise healthy and managed conservatively. Hypertension is clinically relevant due to its association with epistaxis, as highlighted by Vidal et al.<sup>[16]</sup> Compared to chronic or malignancy-focused studies, the higher proportion without co-morbidity reflects the acute and trauma-related nature of ENT emergencies.

Head-neck trauma/injuries were the largest diagnostic group (31.3%), followed by epistaxis (16.6%) and foreign bodies (11.1%). Similar trauma predominance was reported by Adegbiji et al,<sup>[6]</sup> and Olajide et al,<sup>[7]</sup> while epistaxis patterns align with Vidal et al.<sup>[16]</sup> Foreign body rates correspond with Rana et al,<sup>[20]</sup> and Kwon et al,<sup>[18]</sup> and infections (10.3%) with Huang et al.<sup>[13]</sup> Vertigo (9.5%) appears relatively higher than in most series, indicating a broader neuro-otologic emergency spectrum.

Nearly half of cases were managed conservatively (49.2%), with suturing (16.3%) and nasal packing (7.1%). Similar high conservative management was reported by Huang et al,<sup>[13]</sup> and Cohen et al.<sup>[21]</sup> Laceration repair aligns with trauma findings by Adegbiji et al,<sup>[6]</sup> while nasal packing reflects standard epistaxis management (Vidal et al.<sup>[16]</sup> Airway procedures in a small subset indicate severe

airway-threatening cases, as noted in acute ENT emergency reviews. Nearly half of patients left against medical advice (47.6%), while 28.4% required ENT admission and 18.4% neurosurgical admission. Similar admission needs for complicated cases were noted by Huang et al,<sup>[13]</sup> and multidisciplinary (including neurosurgical) involvement in trauma by Adegbijiet al.<sup>[6]</sup> The high LAMA rate is less commonly reported and may reflect local socioeconomic or referral-related factors.

ENT emergencies were fairly evenly distributed year-round with mild variation, peaking in May (10.0%), December and June (9.5% each), and January (9.2%), and lowest in September (6.8%). Seasonal variation has been reported (Haider et al,<sup>[22]</sup> Huang et al,<sup>[13]</sup> but the uniform pattern here suggests consistent presentations without marked clustering, reflecting a mixed profile of trauma, bleeding, infections, and foreign bodies rather than season-specific conditions.

## CONCLUSION

The study concluded that otorhinolaryngological emergencies in a tertiary care setting predominantly affected young adults, with the highest burden in the 18–30-year age group and a gradual decline in older ages. A marked male predominance was observed across most age groups and diagnostic categories, particularly in trauma-related presentations. Rural residents constituted the majority of cases, highlighting greater reliance of rural populations on tertiary centres for emergency ENT services. Epistaxis, foreign body events, vertigo, and otologic complaints emerged as the most frequent presenting symptoms, indicating a diverse emergency spectrum of bleeding, trauma, and vestibular conditions. Trauma-related diagnoses formed the largest diagnostic category, with road traffic accidents being the leading mechanism and predominantly affecting young males. Non-traumatic conditions such as bleeding, infections, and vestibular disorders still accounted for the majority of overall ENT emergencies. On examination, vestibular or neuro-otologic signs and nasal bleeding were most common, followed by lacerations and foreign bodies. Most patients had no systemic comorbidities; hypertension was the most frequent associated condition, especially in bleeding cases. Nearly half of cases were managed conservatively, while a considerable proportion required procedures such as suturing, nasal packing, incision and drainage, or foreign body removal. A small but critical subset required airway-protective interventions like tracheostomy or intubation, indicating the presence of life-threatening emergencies. Almost half of patients left against medical advice, while many required admission under ENT or neurosurgery, reflecting significant trauma burden and multidisciplinary care needs.

Emergency presentations occurred consistently throughout the year without clear seasonal clustering. Trauma-related cases were concentrated in young males, whereas non-traumatic conditions were relatively more frequent in females. Neoplastic and growth-related conditions increased with advancing age, while infections and otitis media were more common in younger adults.

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