



Spectrum of ENT Emergencies at a Tertiary Care Hospital in a Rural Area of Haryana, India

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Abstract

ENT diseases form a considerable amount of ailments in various age groups. Many of these patients present in emergency with acute illness with various symptoms out of which many may require urgent management. A study was conducted in department of ENT, medical college Mewat Haryana, India. ENT emergencies may produce high rate of morbidity. The study was conducted over a period of one year, to determine age wise prevalence and distribution of ENT patients presenting in emergency unit of medical college Mewat, Haryana. The wide spectrum of ENT emergencies we came across, emphasize on the need of presence of ENT specialist even at the distant rural areas. Common cases we came across were foreign body impaction, trauma, infective and inflammatory diseases of ear, nose or throat, epistaxis, airway diseases etc. The ENT personnel should be vigilant enough to diagnose the diseases requiring urgent medical or surgical intervention to avoid mortality. The primary management protocol is also being discussed.

Keywords: ENT Emergency cases, prevalence, diagnosis

Introduction

Ear, Nose and throat emergencies are very common in hospital. 25-40% of all hospital patient attendance belongs to ENT patients¹. ENT emergencies are increasing in past few years, so there is need for ENT specialist for prompt and vigilant diagnosis and management of these ENT emergencies². Early diagnosis and management of these emergencies will result in significant reduction in mortality and morbidity³. Most of the ENT emergencies can be managed without the need for general anaesthesia. Head and neck trauma is considered to be most challenging area of ENT

emergency management³. Although some studies suggest that there is conspicuous lack of involvement of ENT specialists in the cases of facial and neck trauma⁴. The study is aimed to know the age wise prevalence of ENT emergencies. Providing prompt emergency services to patients is considered to be an integral part of any medicine practice.

Material and Methods

A retrospective analysis of the data, taken from a tertiary care hospital emergency department in a rural area of Haryana (India), was done. A total of 1500 patients who presented to emergency

department with ENT ailments over a period of 1 year were included in the study. The patients were categorized in 4 age groups viz, 0-20, 21-40, 41-60, 61-80 years and a detailed age wise distribution of ENT emergencies was documented. Patients requiring multi-disciplinary approach (apart from ENT intervention) were also included in the study.

Results

A wide spectrum of ENT emergencies were encountered during the study period ranging from fatal trauma to cases as trivial as that of impacted wax.

Out of the total 1500 cases, male patients outnumbered females by a ratio of 2.3:1.

Table –I Sex distribution of patients

Sex	Numbers of patients
Male	848
Female	652

Although in a few emergencies females patients were conspicuously found to be involved more than their male counterparts for example- nasal foreign body, impacted ear wax, hysterical aphonia and acute laryngotracheobronchitis, although there may not be any epidemiological significance of this finding in view of the sample size.

2) In our study, the most common ENT emergencies were foreign bodies in ear, nose and aerodigestive tracts. These cases accounted for 33.7% of total ENT emergency. The most common age group involved was 0-20 years. Most common foreign body was coin in cricopharyngeal region followed by wheat grain in external auditory canal. All the ear and nasal foreign bodies were managed without general anaesthesia except one nasal case, a 10 year old girl with longstanding rhinolith and one ear case, a 5 year old male with impacted ball bearing in external auditory canal. All oesophageal foreign bodies were removed under short general anaesthesia without intubation, by rigid hypopharyngoscope or rigid oesophagoscopy intervention. Interestingly, second most common emergency in age group 61-80 years was found to be foreign body in food passage. The foreign body mostly found was meal bolus.

Second most common ENT emergency that presented to our department was trauma accounting for 28.8% of all cases. The traumatic injuries ranged from simple clean lacerated wound involving ENT and Head Neck region to severe life threatening neck wounds with or without laryngotracheal injuries. Most commonly fractured facial bone was nasal bone followed by maxillary, temporal and mandible.

A total of 68% of these trauma cases required multidisciplinary intervention, mostly involving General surgery, dental, orthopaedics and ophthalmology departments apart from ENT team. Trauma was found to be most common ENT emergency in age group of 21-40 years and 41-60 years.

The emergencies involving ear had earache as an important cause for patient's visit to emergency department, sometimes even after well past midnight and the most common ear ailment (apart from foreign body in ear) was acute otitis media in 0-20 years age group, accounting for 4.9% of ENT emergencies. Other ear conditions prompting ENT emergency visits were impacted wax and otitis externa.

One of the most common and important ENT emergency encountered in our study was epistaxis. We didn't include the nasal bleed following nasal trauma in this category, only spontaneous nasal bleeds were included. The age group with least cases of epistaxis was 21-40 years, rest patients were equally distributed in other 3 age groups. The most common cause of epistaxis in 0-20 years age group was found to be finger nail trauma and in age group 41-60 and 61-80 years, hypertensive bleed was most common.. Nearly 70% of cases responded well to conservative management and endoscopic electric or chemical cauterization. Only 30% cases required anterior nasal packing. Out of 150 cases of epistaxis only 3 patients required posterior nasal packing and all the 3 patients fell in 41-60 years age group.

29 cases of septal haematoma were seen and interestingly not a single case was seen in 41-60 and 61-80 years age groups. All the cases underwent

immediate incision and drainage followed by anterior nasal packing for 48 hours. Out of these 29 cases, 8 cases had recollection of haematoma after pack removal on the same day while 3 patients developed fibrosis and thickened nasal septum as a sequelae.

30 patients presented with throat pain and fever, out of them 21 were diagnosed as that of acute tonsillitis and 9 were diagnosed to have peritonsillar abscess. Acute tonsillitis cases responded well to intravenous antibiotics. Cases of peritonsillar abscess underwent incision and drainage followed by intravenous antibiotic coverage and all cases responded well within 2 days of admission. Only 2 out of 9 patients of peritonsillar abscess required re-exploration for drainage of pus.

Patients with deep neck abscess infections were also prevalent among the study and contributed 5% of total patients. Most commonly affected age group was 0-20 years. Various types of deep neck space infections encountered were submandibular abscess, parotid abscess, retropharyngeal abscess, parapharyngeal abscess or pharyngomaxillary abscess. Most common was submandibular abscess.

All deep neck space abscesses were treated promptly by incision and drainage followed by intravenous antibiotic coverage.

Respiratory distress contributes a significant chunk of the ENT emergencies. The distress can be secondary to laryngeal growth compromising the airway or due to acute inflammatory conditions like acute laryngotracheobronchitis, acute epiglottitis. Above 3 conditions contributed 7.8% of total ENT emergency cases. Most common among these cases were that of acute laryngotracheobronchitis accounting for half of the cases presenting with respiratory distress and all these cases were in the 0-20 years age group. Interestingly acute epiglottitis was found to be more prevalent in 41-60 years age group. Laryngeal carcinoma was seen only in 61-80 years age group.

We also came across 15 cases of diphtheria and 11 of these cases presented only in span of 3 months (August, September and October).

Nearly 1.8% of the ENT emergency cases turned out to be functional or hysterical, either presenting as hysterical aphonia or respiratory distress without any obvious organic cause.

Table –II Types of emergencies in all age groups

Types of emergencies	0-20	21-40	41-60	61-80	Total patients	Percentage
Nose foreign body	103	-	-	-	103	6.8%
Digestive tract foreign body	135	-	15	30	180	12%
Tracheobronchial foreign body	44	-	-	15	59	3.9%
Ear foreign body	124	29	15	0	165	11%
Trauma	73	283	60	15	433	28.8%
Epistaxis	45	15	45	45	150	10%
Acute otitis media	59	15	-	-	74	4.9%
Impacted wax	14	-	15	-	29	1.9%
Otitis externa	-	15	-	-	15	1%
Neck abscess (deep neck infection)	45	-	-	30	75	5%
Acute tonsillar and peritonsillar abscess	30	-	-	-	30	2%
Septal haematoma	15	14	-	-	29	1.9%
Respiratory distress due to laryngeal carcinoma	-	-	-	15	15	1%
Respiratory distress due to acute laryngotracheobronchitis	58	-	-	-	58	3.8%
Respiratory distress due to acute epiglottitis	15	-	27	-	42	2.8%
Hysterical or functional causes	13	15	-	-	28	1.8%
Diphtheria	14	1	-	-	15	1%

3) Most common ENT emergency in age group of 0-20 years was foreign body presence. Most common ENT emergency in age group of 21-40 years and 41-60 years was trauma. Most common ENT emergency in age group 61-80 years was epistaxis.

Table –III Age wise distribution of most common ENT emergencies

Age group (years)	Most common ENT emergency
0-20	Foreign bodies
21-40	Trauma
41-60	Trauma
61-80	Epistaxis

Discussion

The ENT emergency cases are on a rise now a day because of industrialization, growing pollution and congested population. In the Mewat region of Haryana, India, still nearly 96% of population is rural, only 41.76% population is literate and female literacy is even less than half of male literacy⁵.

Although this region is adjacent to national capital region of India, it is quite a backward area in terms of education, per capita income and health status. The tendency to avoid or skip the vaccination of children has resulted in endemicity of vaccine preventable diseases like diphtheria, which was alarmingly reported in our study, all the cases of diphtheria were reported to the nodal officer of WHO.

In our study the major chunk of ENT emergencies was foreign bodies in ear, nose, food or air passage, keeping in trend with other studies.^{3, 6, 7} The most common foreign body we encountered was coin in cricopharynx or oesophagus, even more than foreign bodies in ear. Lack of parental supervision, poor hygienic habits along with round, smooth and heavy metallic structure of coins make them prone to slip down the oropharynx and get stuck in the cricopharynx. The ear foreign bodies were mostly wheat grains and most cases were seen in the crop harvesting season, when children use to play in heaps of wheat collected in their fields.

The majority of Mewat population is involved in agriculture and a lot of young people are truck drivers involved in transportation of sand, stones

from mining area or crusher zones, which are very accident prone zones, so trauma cases also frequented our emergency.

The most common fractured bone in ENT emergency was found to be the nasal bone followed by maxillary bone. A few cases of maxillary, mandibular and zygomatic fractures required open reduction and internal fixation by microplates. The studies by Abbas et al⁸ and Prasad et al⁹ also reported that the most common fracture they came across was nasal bone fracture although the study by Gupta et al¹⁰ reported fracture zygoma to be more common than fracture nasal bone.

The ear emergencies can be trivial as ear wax or acute otitis media, but the pain associated with these cases compel the patients to rapidly access the medical help. A study by Bleach et al⁷ showed that ear cases formed the largest group requiring admission. In our study after excluding trauma cases, both ear and nasal cases contributed to nearly 19% of total cases respectively.

Epistaxis turned out to be the most common nasal/sinonasal emergency as also observed in study by Saha et al⁶. Epistaxis can be traumatic or spontaneous. In our study we separately recorded spontaneous epistaxis from the traumatic one which was included in trauma group. Most of the cases of epistaxis responded well to conservative approach of applying pressure by pinching the nose, sitting in stooping forward position and applying ice packs. Only 20% of cases of spontaneous epistaxis further required anterior nasal packing or endoscopic cauterization.

Patients with throat pain were also frequently seen in our emergency, most of these cases were of acute tonsillopharyngitis and peritonsillar abscess. Saha et al⁵ also reported in their study that acute tonsillopharyngitis form maximum number of throat related emergencies.

Neck abscess formed nearly 5% of our total emergency cases, most common being submandibular abscess.

Respiratory distress in ENT emergency mostly require a prompt diagnosis and adequate management otherwise it is the ENT emergency

associated with maximum mortality⁸. The distress may be due to tumors, growth, foreign bodies, infective or inflammatory conditions.

All the laryngeal carcinoma patients underwent tracheostomy to relieve respiratory obstruction. All these patients fell in 61-80 years age group and majority of them were previously diagnosed with the carcinoma, still due to unawareness, illiteracy and poverty they were neglecting their health as well as being neglected by their family members.

Hysterical aphonia is also a common presentation in ENT emergency. The management includes proper clinical examination of patient with indirect laryngoscopy or endoscopy or fibre optic laryngoscopy, excluding all organic causes. It also includes proper counseling of patients as well as their relatives who are anxious about their patient's condition. Psychiatry referral is necessary in these cases. We came across 28 such cases. Out of these 28 cases, 22 were females and 6 were males.

Conclusion

ENT emergencies form a major bulk of all emergency cases presenting in a hospital emergency. The spectrum of ENT emergencies is very wide ranging from trivial earache to fatal respiratory obstruction. The ENT surgeon should be vigilant enough to diagnose the whole lot of diseases and should follow a strict protocol to manage these diseases. If needed multidisciplinary approach should be used for the betterment of patient.

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