



Pain Presentation in Otorhinolaryngological Practice in a Tertiary Health Care Center

Adegbiyi WA,¹ Aremu SK²

1. Department of Ear, Nose and Throat, Ekiti State Teaching Hospital, Ado-Ekiti. Ekiti State, Nigeria

2. ENT Department, College of Medicine and Health Sciences, Afe Babalola University, Ado- Ekiti. Ekiti State, Nigeria

ABSTRACT

Background and aims: Otorhinolaryngological, head and neck pain is one of the most common reasons for consultation in ear, nose and throat practices. This present study aimed at determining the otorhinolaryngology, head and neck pain prevalence, sociodemographic features, clinical presentation and prehospittal treatment among patients presenting in our center. **Materials and methods:** This was an hospital-based prospective cross-sectional study of patients presenting with otorhinolaryngological, head and neck pain. Sociodemographic features of the patients and detailed clinical features of the pain were collected and recorded in special forms. Data obtained were collated and analyzed using SPSS version 18.0. **Results:** The prevalence of otorhinolaryngology, head and neck pain was 27.6%. Among the patients, 42.4% were males with female to male ratio of 1.4:1. Commonest site of pain was 37.3% ear. Other were 23.3% head and 14.6% throat. Trauma caused 29.6% pain and infection was 59.7%. Common associated symptoms were 31.7% hearing loss, 31.4% catarrh, 23.4% odynophagia and 42.4% fever. Most patients 51.7% presented between 1 week and 3 months duration of pain while 30.4% presented at more than 3 months. Recurrent pain accounted for 63.1% while primary pain accounted for 91.1%. Majority 91.3% of the patients were referred and main sources of referral was 53.9% general practitioner. Majority 71.9% presented in the outpatient clinic followed by emergency ward in 25.8%. Regarding prior treatment before presentation, 95.7% had analgesics 71.4% were on antibiotics, 84.2% were on herbal medication and 4.2% had traditional surgery. **Conclusion:** Otorhinolaryngology, head and neck pain was a common presentation in our center. It must be considered as one the differential diagnosis of head and neck pain. Most of the patients presented late at outpatient clinic with recurrent pain. Major source of referral was from general practitioners. Majority of the patients were wrongly treated.

Keywords:

Ear-Nose-Throat
Pain
Prevalence
Treatment

INTRODUCTION

Otorhinolaryngological, head and neck pain is a

Corresponding Author
Dr. Shuaib Kayode Aremu
ENT Department, College of Medicine and Health Sciences,
Afe Babalola University, Ado- Ekiti.
Ekiti State, Nigeria
Email: aremusk@abuad.edu.ng
Phone: +2348033583842
Fax: +2348033583842
Postal Code: 371101

pain is a broad concept which comprises of ear, nose, throat with other head and neck organs ².

Pain is a symptom not a disease and very frequent reason for patient's referral for otorhinolaryngologist consultation. It is very common among patients' attendance at the clinic and most of the pain is primarily ear, nose, throat, head and neck origin ³⁻⁵. Otorhinolaryngology, head

and neck pain influence patients' quality of life^{6,7}. These includes frequent consultation, absenteeism, disruption of sleep, reduced social contacts and reduced efficiency⁸.

Pathology leading to pain ranges from trauma, inflammatory to neoplastic disorders⁹⁻¹². Traumatic conditions could be foreign body impaction, iatrogenic, burn, blunt or open injuries. Inflammatory disorders may be infections or reactions as in allergy. Neoplastic disorders mainly from malignancies but benign neoplasia may cause pressure pain.

Response to these painful symptoms depends on pathology and patients' perception. It further depends on factors such as sex, age, self medication, sociocultural background and treatment interventions^{13,14}.

Clinical manifestation depends on the organs of origin which includes nose, paranasal sinuses, ear, pharynx, larynx, salivary glands and others in single or in combination. This also depends on severity and stages of the diseases.

Information on otorhinolaryngology pain is vital for future design of health care, preventive and management strategies. There is paucity of studies available on the pattern and impact of otorhinolaryngology, head and neck pain on patients^{15,16}. However, there is none from this area of the country. This present study aimed at determining the otorhinolaryngology, head and neck pain prevalence, sociodemographic features, clinical presentation and prehospital treatment among patients presenting in our center.

MATERIALS AND METHODS

This was a hospital-based prospective cross-sectional study of patients presenting with otorhinolaryngological, head and pain in ear, nose and throat department of Ekiti state university teaching hospital, Ado Ekiti, Nigeria. The study was carried out over a period of one year (between August 2018 and July 2019).

Patients presenting with pain during the period of the study were recruited after obtaining consent to participate in the study.

Sociodemographic features of the patients and clinical history of the pain were collected and recorded in special forms. The data collected included location of the pain, severity, duration,

precipitating factor, aggregating factor, relieving factor and other characteristics of ear, nose and throat pain. History of associated ear, nose and throat symptoms were obtained. All the patients were examined to arrived at diagnosis of pain and these were documented. Patients' confidentiality were assured, anonymity and preserved.

Data obtained were collated and analyzed using SPSS version 18.0. Summary statistics were used inform of frequency table, percentage, pie charts and bar charts to expressed the outcome.

Ethical clearance for this study was sought for and obtained from ethical committee of the hospital.

RESULTS

A total of 2,682 patients were seen in ear, nose and throat department during the period of the study, out of which 739 patients presented with different otorhinolaryngology, head and neck pain. Thus, the prevalence of otorhinolaryngology, head and neck pain was 27.6%.

Table 1 Age group distribution among the patients

Age group	Number	Percentage (%)
1-10	209	28.3
11-20	142	19.2
21-30	98	13.3
31-40	104	14.1
41-50	76	10.3
51-60	63	8.5
>60	47	6.4
	739	

Otorhinolaryngology, head and neck pain is a common presentation in all the studied age group. The peak value was 209 (28.3%) at age group (1-10) years while the least value was 47 (6.4%) at age group >60 years. This is illustrated in table 1.

Among the patients, 313 (42.4%) were males while 426 (57.6%) were females with female to male ratio of 1.4:1. Urban dwellers accounted for 398 (53.9%) while rural dwellers accounted for 341 (46.1%). Christian faith in 654 (88.5%) were commoner than Muslim faith in 85 (11.5%). Most of the patient's education levels were secondary, primary and post secondary in 261 (35.3%), 224 (30.3%) and 152 (20.6%)

respectively. Majority 298 (40.3%) of the patients were students/apprentices others were 179 (24.2%) civil servants and 91 (12.3%) business. On marital status, single were commonest by 339 (45.9%) followed by 243 (32.9%) married and 108 (14.6%) divorced. This is showed in table 2.

Table 2 Sociodemographic features among the patients

Sociodemographic features	Number	Percentage (%)
Sex		
Female	426	57.6
Male	313	42.4
Dwelling		
Urban	398	53.9
Rural	341	46.1
Religion		
Christian	654	88.5
Muslim	85	11.5
Education level		
Nil formal	102	13.8
Primary	224	30.3
Secondary	261	35.3
Post-secondary	152	20.6
Parent/patient Occupation	298	40.3
Students/apprentice	91	12.3
Business	84	11.4
Artisan	179	24.2
Civil servant	87	11.8
Farming		
Marital status	339	45.9
Single	243	32.9
Married	108	14.6
Divorce	49	6.6
Widow		

Table 3 Anatomical distribution of the pain among patients

Distribution	Number	Percentage (%)
Ear	276	37.3
Nose	41	5.5
Throat	108	14.6
Head	172	23.3
Neck	86	11.6
Facial pain	53	7.2

Commonest site of pain was 276 (37.3%) ear. Right ear pain and left ear pain accounted 128 (17.3%) and 101 (13.7%) respectively. Other location of otorhinolaryngology, head and neck

pain were 172 (23.3%) head, 108 (14.6%) throat and 86 (11.6%) neck. This is demonstrated in table 3.

Trauma caused 219 (29.6%) pain of which foreign body impaction, road traffic accident accounted for 147 (19.9%) and 51 (6.9%) respectively. Pain from infection was observed in 441 (59.7%).

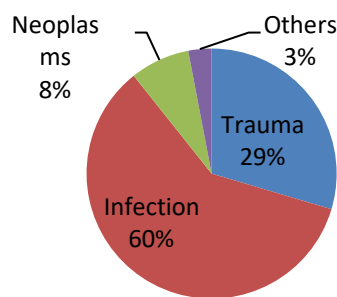


Figure 1 Aetiological distribution among the patients

Table 4 Associated symptoms among the patients

Associated symptoms	Number	Percentage (%)
Hearing loss	234	31.7
Itching	186	25.2
Ear discharge	91	12.3
Catarrh	232	31.4
Nasal blockage	199	26.9
Bout of sneezing	178	24.1
Sore throat	154	20.8
Odynophagia	173	23.4
Hoarseness	72	9.7
Fever	313	42.4
Malaise	252	34.1
Facial discomfort	43	5.8

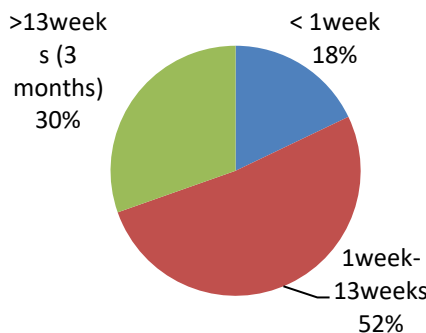


Figure 2 Duration of pain prior to presentation

Common otorhinolaryngology, head and neck infections were 162 (219%) rhinosinusitis, 146 (19.8%) otitis external, 47 (6.4%) otitis media, 38 (5.1%) tonsillitis and 14 (1.9%) pharyngitis. Neoplasm caused pain in 57 (7.7%) with sinonasal tumour and cervical lymphadenopathy in 21 (2.8%) and 16 (2.2%) respectively. Other causes of pain accounted for 22 (3.0%) of which the commonest causes was neuralgia in 13 (1.8%). This is showed in figure 1.

Table 5 Characteristics of pain among patients

Characteristics	Number	Percentage (%)
Recurrence		
Single episode	273	36.9
Recurrent	466	63.1
Sources		
Primary	673	91.1
Referral	136	18.4

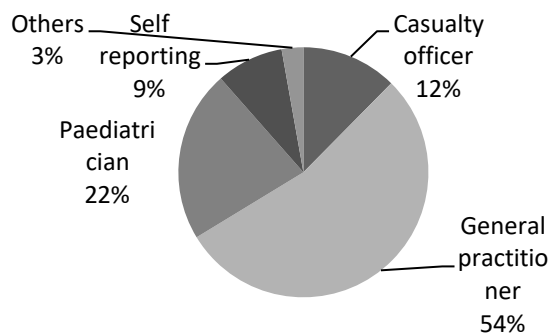


Figure 3 Sources of the patients

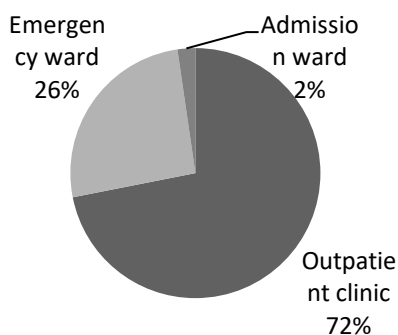


Figure 4 Presentation among the patients

Commonest associated otological symptoms was hearing loss in 234 (31.7%) others included 186 (25.2%) itchy ear. Associated rhinologic symptoms

were catarrh and nasal blockage in 232 (31.4%) and 199 (26.9%) respectively. Associated throat symptoms were 173 (23.4%) odynophagia, and 154 (20.8%). Commonest constitutional symptom was fever. This is demonstrated in table 4. Most of the patients 382 (51.7%) presented to ear, nose and throat department between 1 week and 3 months duration of pain. Other duration of pain prior to presentation were 225 (30.4%) at more than 3 months and 132 (17.9%) within 1 week. This is demonstrated in figure 2.

Table 6 Prior treatment among the patients.

Treatment	Number	Percentage (%)
Analgesics	707	95.7
Antibiotics	528	71.4
Herbal	622	84.2
Traditional surgical	31	4.2

Regarding the nature of pain, recurrent pain in 466 (63.1%) was commoner than single episode of pain in 273 (36.9%). Primary pain accounted for 673 (91.1%) while referred (secondary) pain accounted for 136 (18.4%). This is illustrated in table 5.

Majority 675 (91.3%) of the patients were referred. Main sources of referral were 398 (53.9%) general practitioner, 164 (22.2%) paediatrician and 92 (12.4%) casualty officer. There was 64 (8.7%) self reporting patient. This is showed in figure 3.

On presentation of pain in otorhinolaryngology, head and neck, majority 531 (71.9%) presented in the outpatient clinic. Other presentations were in emergency ward and admissions ward in 191 (25.8%) and 17 (2.3%) respectively. As demonstrated in figure 4.

Regarding prior treatment before presentation, 707 (95.7%) had analgesics and 528 (71.4%) patients were on antibiotics. Also 622 (84.2%) were on herbal medication. Traditional surgery in different form was performed in 31 (4.2%). This is illustrated in table 6.

DISCUSSION

Study of pain in otorhinolaryngology, head and neck practices is uncommon in developing countries. Pain is a symptom not a diagnosis. Pain

in patient must be fully assessed clinically to rule out the aetiology and arrived at definitive diagnosis. Pain is one of the commonest reasons for patient seeking medical consultation worldwide.

The prevalence of pain in otorhinolaryngology, head and neck in this study was 27.6%. This observed prevalence is very high.¹⁷ High prevalence of infection and trauma predisposes to high prevalence of pain in this study compare to lower incidence of neoplastic disorder in this study. Furthermore, prevalence of otorhinolaryngology, head and neck pain varies from place to place and depends on age groups under study.¹⁸ The high prevalence may be due to high preponderance of children with low pain threshold. Pain threshold is low in female who are commoner than male in this study.

In this study, otorhinolaryngology, head and neck pain is common among female than male. Body hygiene and caring in female is commoner than in male. In the process of their general body hygiene head orifices are usually injured and infected.¹⁹ Female seek attention to ill health intervention and general caring from such injuries and infection than male. Majority of the patients with otorhinolaryngology, head and neck pain were urban dwellers compare to rural dwellers. The urban dwellers are more accessible to tertiary health care facility. Location of our center is very close, lower cost of transport and easier for family member to accompany the patients to the hospital. Other sociodemographic features, religion, patient/parent occupation and education does not have much effect on otorhinolaryngology, head and neck pain.

Commonest cause of otorhinolaryngology, head and neck pain was earache which was due to frequent ear picking by patient or their parents. Ear cleaning is to get rid of ear wax, to soothed itchy ear and part of ear play in children.²⁰ This may be referred or primary otalgia. Headache was due to pathology in the head and neck region. Most otorhinolaryngology headache are secondary to sinonasal diseases. This is mostly mistaken by other clinician to be caused by intracranial pathology like brain tumour.²¹ Throat is the entrance to aerodigestive tract and it is more prone to different physical and infective assault. Tonsillitis and pharyngitis are common with pain as major complaint. Neck pain are usually secondary to throat diseases like infection, foreign body impaction and abscesses. Facial pain are commoner

with sinonasal disease or orofacial disorder in our practice. Nasal pain is not uncommon it is usually secondary to trauma or nasal vestibular infection such as furunculosis as noted in most of our patients. Commonest trauma leading to otorhinolaryngology, head and neck pain is foreign body impaction in the ear, nose and throat. The pain is usually worsened by unskilled hand attempted removal using inappropriate instrument in our patient. This is followed by trauma from road traffic injuries and assault while head and neck burn is not common here. Infective pain is commonly otitis externa, otitis media, acute rhinosinusitis, acute tonsillitis, acute pharyngitis and cervical adenitis. These results from acute inflammation of the tissue. Destructive and expansion of the head and neck tumour leads to pain. Common observed tumour in our study were sinonasal tumour, pharyngeal and laryngeal tumours while aural neoplasms are not common.

More commonly, diagnosis of otorhinolaryngology, head and neck pain are missed when clinician concentration on constitutional symptoms like fever and malaise. Disorder like malaria and typhoid fever are treated and most presents late.²¹ Pain location and associated symptoms greatly assisted in diagnosis of the otorhinolaryngology, head and neck pain. Otology pain is accompanied by hearing impairment, discharging ear and itching. Rhinologic pain are associated with catarrh, nasal blockage and sneezing. Associated with throat and neck pain were sore throat, odynophagia and hoarseness in our patient. Wrong diagnosis of headache with brain tumour has exposed some patients to expensive and unwarranted irradiation like skull x ray, brain CT scan and MRI.

Based on duration before presentation at ear, nose and throat department, our observation is similar to reports from other developing countries.¹⁷ Most of the patients delay their visit to the specialist and usually present with complicated cases or when the pain becomes unbearable. Most of our patients presented after one week or month. This is due mainly to poor perception on causes and treatment of diseases, bad attitude to health care, unskilled self intervention, lack of funds, attempted foreign body removal, herbal medication, thought the pain/disease will disappear with or without treatment, medications were most time self-

prescribed or by untrained hand²² Some patients' referral were usually delayed and untimely.

Otorhinolaryngology, head and neck pain are mainly recurrent and it is commoner than single episode. This is because most cases are infective and are poorly managed by untrained personnel. Sources of pain in this study are mainly primary with associated wrong technique of foreign body removal and poor treatment of ear, nose and throat infection are common.²² Referral

otorhinolaryngology, head and neck pain were mostly not known and nonspecialist mostly miss the diagnosis and institute inappropriate treatment.

Majority of the patients in this study were referred with very few patients as self reported cases.²⁰ Main referral were from primary contact like general practitioner, paediatrician and casualty officer. Most of the referral were delayed or wrongly to outpatient clinic. In this study, most patients with otorhinolaryngology, head and neck pain were first seen in our outpatient clinic. Few were referred to be seen in emergency department.²² This may be due to patient abuse of analgesics which mask the pain at presentation to the primary care.

Most of the patients with otorhinolaryngology, head and neck pain were on medication prior to presentation at the ear, nose and throat department. The most worrisome is the fact that almost all of the patients were on analgesics and antibiotics. Some were on narcotics depending on degrees of the pain with prescriptions by non health professional. These practices could lead to drug addiction, emergence of resistant strains of microorganisms and poor treatment of head and neck cancers resulting in late presentation with high mortality and morbidity.¹⁷ There was prior administration of herbs of different types with

unknown chemical composition and dosage. This may be very dangerous to vital organ in the body. Different form of traditional surgery was observed in this study of which the major ones were traditional uvulectomy and scarification. This leads to anaemia and wound infection from poor technique and non sterile instrument.

CONCLUSION

Pain presentation in otorhinolaryngology, head and neck practice was a common symptom in our center. Most of the patients presented late with recurrent pain. Majority of the patients were wrongly treated with analgesics and antibiotics. Early presentation and referral is encouraged while abuse of drugs should be discouraged.

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Competing interests

All the authors declare that there was no competing interests.

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