

# Study of Patients Presenting with Complaints of Headache in Ear, Nose, and Throat Outpatient Department – A Prospective Study

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## Abstract

**Introduction:** Headache is one of the most commonly experienced physical discomforts. About half of the adults have a headache in a given year. In most cases, headaches are not harmful, but in some cases, they can show symptoms of severe or/and life-threatening disorders such as meningitis, subarachnoid hemorrhage, stroke, or brain tumor.

**Aim:** This study aims to study the patients presenting with complaints of headache in the ear, nose, and throat (ENT) department.

**Materials and Methods:** A total of 100 patients were selected randomly, attending the ENT outpatient department at our site hospital from June 2019 to May 2020. A ready questionnaire was used to record the data of patients. A patient approaching with the first and foremost complaint of headache with a history of the recurrent episode was included in the study. Patients coming with different forms of neuralgic pain were excluded from the study.

**Results:** The patients of the age group of more than 50 years were more experiencing headaches. Women suffer more than men do from headaches. The presence of eye pain symptoms and comorbid condition of diabetes mellitus are associated more with the patient in the ENT department. The maximum patients complaining of headaches in the study were diagnosed with an ophthalmic-related problem.

**Conclusion:** The study showed challenges of patients experiencing headaches and approaching the ENT department to determine the exact cause of the headache and get satisfactory treatment. A group of doctors consisting of ENT specialists, neurologists, ophthalmologists, psychiatrists, and psychologists can bring many benefits to remove or cut short the victims' sufferings.

**Key words:** Headache, Migraine, Primary headache, Sinus headache

## INTRODUCTION

Headaches are a common complaint among the public; the World Health Organization (WHO) estimates the prevalence of headaches among adults at 47%, with half to three-quarters of adults aged 18–65 years experiencing headaches in the past year.<sup>[1]</sup> Headache is defined as pain or any unpleasant sensation in the cranial vault region above the orbitomeatal line.

The International Classification of Headache Disorders (ICHD) defines more than 200 different types of headaches.<sup>[2]</sup> ICHD classified headaches into two principal types – primary headache and secondary headache. A primary headache is the one where research scientists have failed to reach any specific cause. Secondary headache is attributed to innumerable reasons and can be caused by any physical disorder or discomfort.<sup>[3]</sup> Primary headaches are migraine, tension-type headache (TTH), cluster headache, and other trigeminal autonomic cephalgias.

It is hard to find out a human being who had never experienced a headache in a lifetime. However, consultation with the physician is done very seldom. Therefore, the true incidence of headache remains unknown. In general, primary headache disorders constitute nearly 98% of all headaches; TTH and migraine are the most prevalent. TTH

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affects 60–80% of the population, while migraine has a prevalence of 11–15%.<sup>[4,5]</sup>

Although many patients come to the ear, nose, and throat (ENT) specialists with a headache claiming to have “sinus trouble,” in reality, a minority of these individuals found solely nasal headaches or sinus in origin,<sup>[6]</sup> it is also rarely caused by other secondary reasons though important to be recognized for timely intervention.

Sinonasal etiology of headache and facial pain is often suspected in otorhinolaryngologic, neurologic, or general practice. However, establishing a diagnosis is sometimes challenging, even for experienced physicians. Misunderstandings usually start with patients receiving an incorrect diagnosis or trying to diagnose themselves. In these instances, “sinus headache” (SH) and “sinus facial pain” are suspected. The rationale behind this assumption lies in clinical similarities between rhinogenic and neurogenic headaches: Both may cause pain located directly over paranasal sinuses and both can be accompanied by nasal discharge and congestion.<sup>[7]</sup> That is why in many cases, SH eventually turns out to be a neurologic disorder misattributed to rhinology diseases, and patients often wait decades for adequate treatment.<sup>[8]</sup> These observations are supported by the results of a population-based study, where 36.5% of patients fulfilling criteria of migraine had been previously diagnosed with SH. That proportion was even higher (42%) in a similar study conducted almost two decades earlier.<sup>[9]</sup> Clinical observations confirmed those results: In a retrospective analysis of 130 migraine patients, 81.5% had been previously diagnosed with SH. Consequently, according to some authors, SH is the most common misdiagnosis in migraines.<sup>[10]</sup>

The prevalence of headaches in ENT patients and its subsequent chances of misdiagnosis are high. Hence, this study was aimed to analyze the incidence of headaches in ENT department patients and various triggering factors for headaches.

**Aim of Study**

This study aims to study the patients presenting with complaints of headache in the ENT department.

**MATERIALS AND METHODS**

A total of 100 patients were selected randomly, attending the ENT outpatient department at our site hospital from June 2019 to May 2020. Patients approaching with the first and foremost complaint of headache with a history of recurrent episodes were included within the study. Patients coming with different forms of neuralgic pain in the

head-neck region diagnostic of temporomandibular joint, neuralgia, trigeminal neuralgia, glossopharyngeal neuralgia, or atypical facial pain were excluded from the study.

For every case, the characteristics of headache, symptoms, comorbidity associated with it, and complaints related to ENT head-neck region or eye or central nervous system were noted very carefully. Any previous head injury history, past or present medical disorder was also documented in the ready sheet. An inquiry was made about the regular use of drugs, particularly OTC analgesics, oral contraceptives, and herbal medicines. Every patient went through complete ENT head-neck and neurological examinations.

**RESULTS**

In this study, a total of 100 patients were enrolled randomly from the ENT department. The maximum patients were found in the age group of more than 50 years and least found in the age group of <13 years [Figure 1].

In all patients under study, 28 (28%) were men and 72 (72%) were women. Whereas 10 children’s (both genders) were also reported in all patients enrolled for the study [Figure 2].

Analyzing the symptoms of patients under study, it was found that all patients showed the symptoms of headaches.

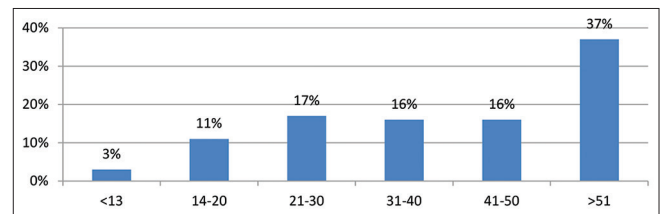


Figure 1: Age distribution of patient (100 patients)

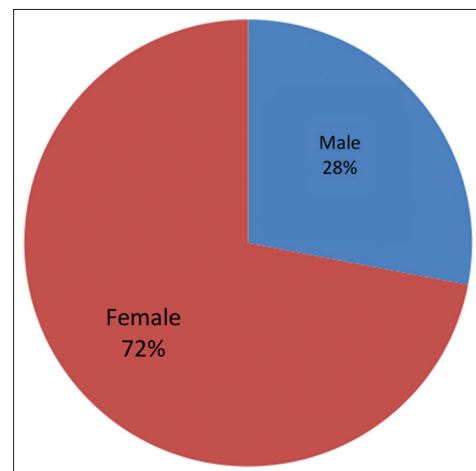


Figure 2: Gender distribution of patients

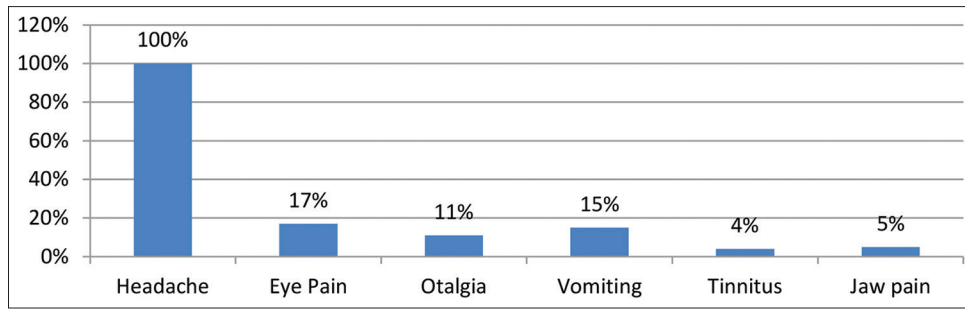


Figure 3: Symptoms of patients

Eye pain symptom was observed in 17% of patients, which is highest after headaches. Tinnitus symptom was observed in the least number of patients (4%) [Figure 3]. About 72% of patients reported headaches for more than 15 days of duration, 11% reported for 8–14 days, whereas 17% reported for <7 days [Figure 4].

In all the study patients, 35% of patients were reported diabetes mellitus (DM), 17% reported hypertension (HTN), whereas only 3% reported cardiac ailments comorbidity with headaches [Figure 5].

When evaluated the various headaches cases reported to the ENT department, it was found that the maximum cases were ophthalmic related (17%), followed by septal spur. Whereas least cases were reported of temporal arteritis headaches (2%) [Figure 6].

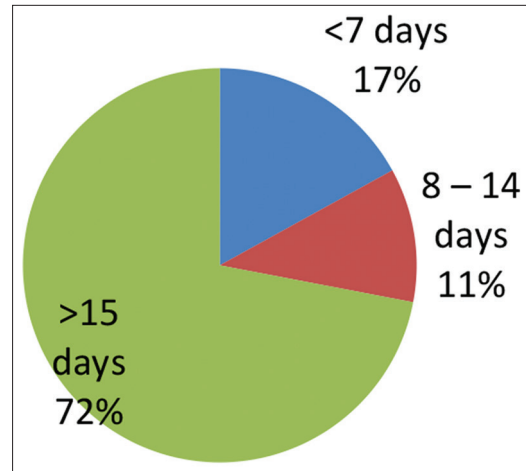


Figure 4: Duration of headaches in patients

**DISCUSSION**

Headaches are a common complaint among the public; the WHO estimates the prevalence of headaches among adults at 47%, with half to three-quarters of adults aged 18–65 years experiencing headaches in the year 2020.<sup>[1]</sup>

The prevalence of headaches increased with an increase in age, reaching a maximum in the age group of more than 50 years (37%). Our study’s findings are contrary to Ahmed *et al.*, where there was an increase in the prevalence of headaches from the age group of 11–20 years (31.67%) to 31–40 years (37.16%). A significant decrease in headaches incidence was observed in the higher age group, 6.66 % in 41–50 years and 0.84% in 51–60 years.<sup>[11]</sup>

Females are seen as sufferers of headaches more than males, as evidenced by various literature studies with headaches’ epidemiology. In this 72%, women were observed with headaches in comparison to 28% in men.<sup>[12]</sup>

Eye pain (17%) and vomiting (15%) were the most common symptom found in patients in our study. Whereas tinnitus (4%) and jaw pain (5%) were reported least. These

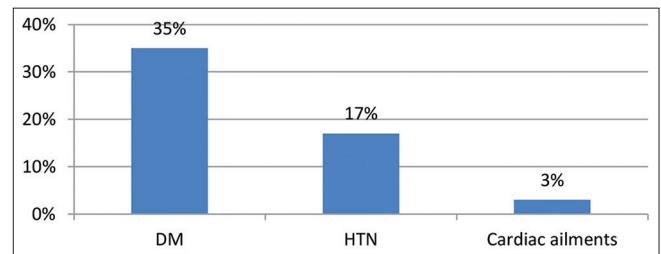


Figure 5: Comorbidity in patients

findings are in accordance with various clinical studies done for the evaluation of symptoms of headaches.<sup>[13,14]</sup>

A significantly high percentage of patients (72%) experienced headaches for more than 15 days; it might be due to comorbidity associated with patients. As in our study, 35% of patients suffered from DM, 17% HTN, and 3% cardiac ailments and these in these condition headaches are very common. These comorbidities in patients could have increased the duration of headaches in patients.<sup>[15]</sup>

In this study, the headache patients approaching the ENT department diagnosed as having ophthalmic-related problems highest (17%) followed by septal spur (16%) and allergic headaches along with vestibular migraine (both 15%). This might be due to an ophthalmic patient

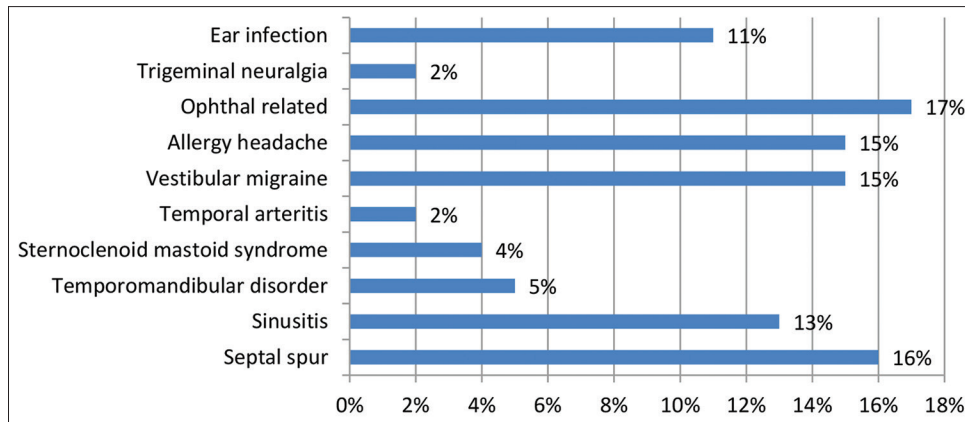


Figure 6: Various headaches cases reported in ear, nose, and throat department

experiencing pressure on the eyes increasing tendency to headaches.<sup>[16]</sup>

## CONCLUSION

Headaches are one of the common complaints in ENT department patients. The presence of comorbidity could increase the duration of headaches. Most patients are suffering from either vascular or muscular headaches, though diagnosed by a medical person or self as having SH. A group of doctors consisting of ENT specialists, neurologists, ophthalmologists, psychiatrists, and psychologists can bring many benefits to remove or cut short the sufferings of headache patients.

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