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Evaluation of the otorhinolaryngology consultations requested from the emergency department

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Abstract

Aim: In this study, the aim was to examine the otorhinolaryngology consultations requested from the emergency service and to discuss the results in light of the literature.

Materials and Methods: In our study, 376 patients who were admitted to emergency department and who were consulted to the otorhinolaryngology outpatient clinic of Kastamonu Training and Research Hospital between the dates 01.10.2019 and 01.10.2021 were examined retrospectively. The age and gender of patients, date of consultation, reasons for consultation, diagnoses made as a result of consultation, and interventions taken were recorded.

Results: 142 (37.8%) of the patients for whom consultations were requested were female and 234 (62.2%) were male. The mean total age was 38.43. The most common reason for consultation was nasal fracture, infectious causes, foreign body in the ear and foreign body in the nose, respectively (n=77, 20.47%; n=51, 13.56%; n=39, 10.37%; n=36, 9.57%). The most frequently consultation requested months are July (n=62, 16.48%), August (n=45, 11.96%) and September (n=44, 11.70%), respectively. As a result of the consultations, the most common interventions were foreign body removal and nasal fracture repositioning (n=64, 17.02%; n=58, 15.42%). No otorhinolaryngology pathology was found in 79 patients (21.01%).

Conclusion: The fact that emergency physicians have sufficient knowledge and experience in otorhinolaryngology emergencies will both reduce the mortality and morbidity of patients and prevent the loss of time and internal power by preventing unnecessary consultation requests.

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Introduction

Consultation refers to the situation in which the physician responsible for the patient receives the opinion of a physician from a different branch regarding follow-up and treatment and directs the follow-up and treatment of the patient in line with his/her recommendations [1]. The main purpose of requesting a consultation is to provide diagnostic and treatment support for the physician following the patient for conditions outside of his/her branch of specialty or for additional findings that cause comorbidity [2].

Otorhinolaryngology emergencies generally consist of diseases requiring emergency care in secondary and tertiary hospitals and constitute an important part of emergency department admissions. These patients may require both medical treatment and emergency or elective surgical interventions. Patients go to the emergency department for many reasons including otitis externa, otitis media, sudden hearing loss, vertigo, foreign body, tympanic membrane rupture, temporomandibular joint (TMJ) luxation, epistaxis, acute tonsillitis, peritonsillar and retropharyngeal abscess, bleeding after tonsillectomy, and maxillofacial trauma [3].

Management of otorhinolaryngology patients may be possible with good anatomical knowledge and sometimes special medical equipment. It is important for emergency physicians to have sufficient knowledge and skills regarding otorhinolaryngology emergencies and to request consultation in necessary cases to reduce the morbidity and mortality of patients. In this study, the aim was to examine the otorhinolaryngology consultations requested from the emergency service between the dates 01.10.2019 - 01.10.2021 and to discuss the results in light of the literature.

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Materials and Methods

Ethical approval was received from Kastamonu University Clinical Research Ethics Committee before starting the study (Decision No: 2020-KAEK-143-125, Date: 20.10.2021), and the study was conducted in accordance with the Helsinki Declaration. In our study, 376 patients who were admitted to emergency department and who were consulted to the otorhinolaryngology outpatient clinic of Kastamonu Training and Research Hospital between the dates 01.10.2019 and 01.10.2021 were examined retrospectively. The age and gender of patients, date of consultation, reasons for consultation, diagnoses made as a result of consultation, and interventions taken were recorded.

Statistical analysis

Statistical Package for Social Sciences (SPSS, Version 15.0, Chicago,IL) was used for statistical analysis. Descriptive statistics for continuous variables were given as mean ± standard deviation, while categorical variables were given as frequency and percentage.

Results

Otorhinolaryngology consultation was requested for 376 patients from the emergency department between the dates 01.10.2019 and 01.10.2021. 142 (37.8%) of the patients for whom consultations were requested were female and 234 (62.2%) were male. The mean age of the women was 38.21 and that of the men was 38.5. The patients were in the 0-94 age range, and the mean total age was 38.43. 97 patients were under the age of 18.

The reasons for requesting a consultation and the interventions performed as a result of the consultation are shown in Tables 1 and 2. The most common reason for consultation was nasal fracture (n=77, 20.47%). This was respectively followed by the required consultations due to infectious causes, foreign body in the ear, and foreign body in the nose (n=51, 13.56%; n=39, 10.37%; n=36, 9.57%) (Table 1).

Table 1. Reasons for requesting consultation.

Reasons for requesting consultation	Number (n)	Percentage (%)
Nasal fracture	77	20.47
Infectious causes	51	13.56
Foreign body in the ear	39	10.37
Foreign body in the nose	36	9.57
Epistaxis	35	9.30
Maxillofacial trauma	28	7.44
Foreign body in pharynx/larynx	23	6.11
Eardrum perforation/ EOC injury	15	3.98
Tracheostomy cannula exchange	14	3.72
Vertigo	11	2.92
Hearing loss	9	2.39
Facial paralysis	8	2.12
Temporal bone fracture	5	1.32
TMJ luxation	5	1.32
Others	20	5.31

Table 2. Interventions performed as a result of consultation.

Interventions performed as a result of consultation	Number (n)	Percentage (%)
Nasal fracture reposition	58	15.42
Removal of foreign body from the nose/ear/ pharynx/larynx	64	17.02
Tracheostomy cannula exchange	14	3.72
Anterior nasal packing	17	4.52
Cauterization	10	2.65
TMJ reduction	5	1.32
Abscess drainage	7	1.86
Requesting consultations from other branches	13	3.45
Medical treatment	47	12.5
Hospitalization	27	7.18
Incision suturing	16	4.25
Otorhinolaryngology polyclinic control	28	7.44
Group without pathology	79	21.01

Table 3. Consultation requested months.

Consultation requested months	Number (n)	Percentage (%)
January	34	9.04
February	19	5.05
March	27	7.18
April	14	3.72
May	30	7.97
June	30	7.97
July	62	16.48
August	45	11.96
September	44	11.70
October	30	7.97
November	32	8.51
December	9	2.39

As a result of the consultations, the most common interventions were foreign body removal and nasal fracture repositioning (n=64, 17.02%; n=58, 15.42%). All nasal fractures were repositioned under local anesthesia and polyclinic conditions. Interventions were performed under general anesthesia in one patient due to resistant epistaxis, one patient due to foreign body, and two patients for incision suturing.

Apart from these, all interventions were performed under local anesthesia. Outpatient medical treatment was recommended to 47 (12.5%) patients, and 27 (7.18%) patients were hospitalized and treated.

7 of the hospitalized patients underwent abscess drainage under local anesthesia. 28 (7.44%) of patients were invited to the otorhinolaryngology outpatient clinic control. No otorhinolaryngology pathology was found in 79 patients (21.01%) (Table 2).

When the frequency of consultation requests was examined according to months, the most frequently requested months were July (n=62, 16.48%), August (n=45, 11.96%), and September (n=44, 11.70%), respectively (Table 3).

Discussion

A significant portion of emergency department admissions consist of otorhinolaryngology patients. Particularly because of the increasing number of otorhinolaryngology emergencies as a result of traffic accidents, occupational accidents and traumas, patients with a tracheostomy due to the increase in the number of home care patients, and viral outbreaks, otorhinolaryngology admissions to the emergency departments have increased in recent years [3]. Smith et al. reported that the ear-nose-throat consultation volume increased by 120% in the five years of the study which they conducted for the purpose of determining the increase in the frequency of consultations and the urgency of consultations. They stated that the biggest reason for this increase was the increase in the number of consultations from the emergency department, but the increase was also a reflection of non-urgent consultation levels [4].

Studies have reported that otorhinolaryngology consultations are most frequently requested from emergency departments [5, 6]. In our study, we examined the consultations requested from the emergency department. A total of 376 consultations were requested from the emergency department in the two-year period in our study. Bali et al. found that the rate of required otorhinolaryngology consultations in a one-year period was 1.4% [7]. In his study, Topuz reported that 877 otorhinolaryngology consultations were requested from the emergency department in a three-year period with a consultation request rate 30 times higher than the results of Bali et al. [6]. It has been reported that 50% of the admissions to emergency departments are preventable [4]. In particular, difficulties in finding an outpatient clinic appointment may direct patients to the emergency department, and this may increase the consultation volume and health costs by creating an unnecessary burden on the emergency department. In this case, which patients should be seen in the emergency department should be carefully determined in order to reduce mortality and morbidity and to prevent loss of labor and time.

Otorhinolaryngology emergency admissions are intense in all seasons, but the frequency and reason for emergency admissions may vary according to months. In our study, the most common required months of consultation were July, August and September. In these months, nasal fractures, maxillofacial trauma, and epistaxis due to traffic accidents were more common. In addition, the population of the city where we conducted the study increased in the summer months, and hospital admissions increased in parallel with this. In the literature, there is no study showing the distribution of otorhinolaryngology consultations by months.

Reasons for requesting for consultation vary according to age. In our study, the most common cause in the pediatric group was found to be a foreign body in the ear or nose and nasal fracture in the adult group. Foreign bodies constitute the most common emergencies for otorhinolaryngology practice. It is the location and type of foreign body that is decisive in terms of the urgency of the intervention and possible complications [8]. The foreign body in the nose is usually seen in children and should have an early intervention due to the risk of aspiration. Foreign bodies in the ear are usually less urgent in terms of removal since they do not cause a respiration problem. However, damage to the external ear canal and tympanic membrane may occur during foreign body intervention [9]. In addition, since special tools such as microscopes may be needed to remove the foreign body, it is important that it is removed by the otorhinolaryngology specialist.

The nose is one of the most common sites for trauma on the face, and nasal fracture is a very common otorhinolaryngology emergency [10]. In spite of being generally treated under local anesthesia, intervention may be required under general anesthesia in pediatric patients and open fractures. In our study, 20.47% of the consultations requested from the emergency department were due to nasal fracture, and all of the patients underwent treatment under local anesthesia. 28 of the patients required consultation due to maxillofacial trauma, 16 of the patients underwent incision suturing, and 12 of the patients were recommended for plastic surgery consultation.

One of the most common causes of otorhinolaryngology emergencies is epistaxis [11]. It can be seen in varying severity levels ranging from a small flow that can be easily staunched to serious nosebleeds that can threaten life [12]. Smith et al. reported that although there was no increase in the incidence of epistaxis, the increase in consultation request was remarkable in their study [4]. In our study, 9.3% of the consultations requested from the emergency department were due to epistaxis. An anterior buffer was applied to 17 patients and cauterization was applied to 10 patients. No intervention was performed in eight patients. Three patients were hospitalized due to resistant epistaxis, and one patient underwent sphenopalatine artery ligation under general anesthesia.

Kayabaşı et al. reported the rate of surgical intervention after consultation to be 1% in their study [5]. In his study, Topuz reported this rate as 6.2% (6). 24 (6.38%) of patients underwent surgical intervention in our study.

In his study, Topuz reported that the most common reason for consultation in geriatric patients (13.9%) was related to tracheostomy [6]. In our study, the emergency department requested a consultation for 14 patients (3.72%) for tracheostomy cannula exchange. The patients consisted of both pediatric care patients and geriatric patients. Tracheostomy cannula exchange is an elective and planned procedure. Thanks to an advanced home care service, emergency department admissions of these patients can be prevented, and the overcrowding they would create in the emergency department can be prevented.

Conclusion

The fact that emergency physicians have sufficient knowledge and experience in otorhinolaryngology emergencies will both reduce the mortality and morbidity of patients

and prevent the loss of time and labor by preventing unnecessary consultation requests.

Ethics approval

The study was carried out with the permission of Kastamonu University Faculty of Medicine Ethics Committee (Date:20.10.2021, Decision No:2020-KAEK-143-125).

Informed consent

Because the study was designed retrospectively, no written informed consent form was obtained from patients.

Conflict of interest statement

The authors have no conflicts of interest to declare.

Financial disclosure

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Author contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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