Epidemiological Profile of Patients Presenting with Epistaxis at a Tertiary Level Hospital in India

Anil Pandey[1], Shubhankur Gupta[1], Rahul[2], Khushboo Jain[3]

ABSTRACT

Introduction: Epistaxis is a fairly common problem, which has been reported to be occurring in about 60% of the population. The aim of the study was to know the incidence and aetiology of epistaxis in patients attending ENT and other Departments of N.S.C.B Medical College and Hospital, Jabalpur.

Material and Methods: After taking approval from the institutional ethics committee, the cases were taken for this study from the Ear, Nose, and Throat out-patient department of N.S.C.B Medical College and Hospital Jabalpur and those patients treated as indoor patients in various departments of N.S.C.B Medical College and Hospital, Jabalpur from October 2013 till September 2014. The patients included in the study were interviewed for demographic and clinical information as specified in the pretested semi-structured questionnaire. Data were then analysed using appropriate statistical analysis.

Results: In the present study 45 cases of epistaxis were studied. The maximum number of cases were in the age group of 11-20 years and 51-60 years each. Trauma to nose caused epistaxis in 31.11%, mostly accidental traumas with 3 (6.67%) cases of epistaxis digitorum. Hypertension accounted for 13.33% of cases. Foreign body accounted for 4 (8.59%) of cases. Most common associated symptom with which the patient presented was nasal obstruction 44.44% and nasal discharge 44.44%. Additionally, more cases were seen in winter season than summer and autumn.

Conclusions: This study provides us with a demographic assesment of epistaxis in the patient population served by our department. More research is required to understand examination and management specificities.

Keywords: epistaxis, emergency, trauma, bleeding

INTRODUCTION

Epistaxis is a common problem, occurring in up to 60 percent of the general population.[1] Although most episodes of epistaxis are uncomplicated, there can be a few instances when bleeding can be difficult to control. During an acute event, basic understanding of the basic anatomy of the nasopharynx can be helpful. In the antique medicine as well as in most primitive cultures, bleeding from the nose has been dealt with great curiosity. Today, we know a lot more about the pathophysiology of epistaxis but the experience of the patient can be very uncomfortable and formidable. Vogel suggested the term epistaxis in 1764, indicating that this term should be used to denote nasal bleeding only.

Bimodal age distribution has been observed in cases presenting with epistaxis, with cases either presenting before the age of 10 years or between 45 and 65 years.[2] Epistaxis is the most common of all hemorrhages that happen without apparent reason or cause. But it is one form of bleeding that occurs by itself or in conjunction with many other diseases. It has been observed that more male patients are found before the age of 49 years, after which the gender distribution evens up. The protective effect of estrogen has been credited for this observation.[3] Seasonal variation, with predominance in winter months, has been found in most but not all, studies.[4] Epistaxis is affected by seasonal variations that may include upper respiratory infections, rhinitis, and general mucosal changes correlated with changes in weather.

Patients with bleeding from the nose are frequently observed in the daily work at the outpatient department as well as in the emergency clinic. The causes and course of epistaxis are probably multi-factorial. Some etiological factors might explain the start of the nose bleeding while other factors explain the long duration and the recurrence of bleeding. Still some other factors might predispose to epistaxis. Epistaxis is definitely seasonal and is much more common in hot and dry weather. The aim of this study was to know the incidence and aetiology of epistaxis in patients attending ENT and other Departments of N.S.C.B Medical College and Hospital, Jabalpur.

MATERIAL AND METHODS

After taking approval from the institutional ethics committee, the cases were taken for this study from the Ear, Nose, and Throat out-patient department of N.S.C.B Medical College and Hospital Jabalpur and those patients treated as indoor patients in various departments of N.S.C.B Medical College and Hospital, Jabalpur from October 2013 till September 2014. The patients included in the study were interviewed for demographic and clinical information as specified in the pretested semi-structured questionnaire. For each case we noted general demographic information like name, age, gender, occupation, education and residence. A detailed clinical history regarding the mode of onset of epistaxis, its association with injury to nose and illness like upper respiratory tract infections was asked. Any past history of epistaxis, hypertension, and drug intake was asked. Family history of bleeding tendencies was enquired. Personal history regarding diet, alcohol, tobacco or any drug addiction was asked. General physical examination of the patient with attention to pulse, temperature, blood pressure, anaemia, lymphadenopathy, subcutaneous bleeding, liver and spleen enlargement was done. As part of the routine treatment all patients underwent standard investigations as deemed appropriate by the treating doctor. The data collected were checked and verified for completeness. Microsoft excel sheets were prepared. Statistical Package

[1]Senior Resident, Department of ENT, AIIMS Rishikesh, [2]Senior Resident, Department of ENT, Vivekanand Hospital, Lucknow, [3]Senior Resident, Department of ENT, SMS Medical College, Jaipur, India

Corresponding author: Dr.Shubhankur Gupta, M.S ENT, Senior Resident, Department of ENT, AIIMS, Rishikesh, India

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for Social Sciences (SPSS) version 21 was used to preform descriptive analysis and other appropriate analysis.

RESULTS

In the present study 45 cases of epistaxis were studied. The cases selected from various Departments of Medical College and Hospital, Jabalpur. The youngest patient was of five years age, while the oldest was 80 years of age. The maximum number of cases were in the age group of 11-20 years and 51-60 years each (20%) and male sex predominated the female in an approximate ratio of 3.5:1 (Table 1). Trauma to nose caused epistaxis in 31.11%, mostly accidental traumas with 3 (6.67%) cases of epistaxis digitorum. Hypertension accounted for 13.33% of cases. Angiofibroma accounted for 11.11% cases. Carcinoma maxilla accounted for 6.67% of cases and Angiomatous polyp accounted for 6.67% cases. Foreign body accounted for 4 (8.59%) of cases out of which 3 (6.67%) of cases were animate foreign dody i.e. maggots in the study and 1 (2.22%) of cases was inanimate (Tamarind seed) (Table 2). Blood dyscrasias accounted for 6.67% of cases and systemic disease accounted for 4.44% of cases. Most common associated symptom with which the patient presented was Nasal obstruction 44.44% and Nasal discharge 44.44% (Table 2). Next most common symptom was common cold followed by anosmia 26.67% followed by Injury nose 24.44%, Foreign Body (8.8`9%), Fever (8.89%). Additionally, more cases were seen in winter season than summer and autumn.

Age distribution	
0-10 years	5
11-20 years	9
21-30 years	6
31-40 years	6
41-50 years	5
51-60 years	9
61-70 years	2
71-80 years	1
Gender distribution	
Males	35
Females	10
Seasonal variation of presentation	
Summer	12
Autumn	11
Winter	22

Table-1: Characteristics of the study enrolled patients

Causes	
Angiofibroma	5
Carcinoma Maxilla	3
Hypertension	6
Foreign body	4
Rhinosporidiosis	1
Traumatic	14
Blood dyscrasias	3
Systemic disease	2
Angiomatous polyp	3
Granuloma	2
Deviated nasal septum	2
Symptoms at the time of presentation	
Nasal obstruction	20
Common cold	16
Fever	4
Injury nose	11
Nasal discharge	20
Foreign body sensation	4
Anosmia	12

Table-2: Causes and symptoms of patients

DISCUSSION

During the study period 45 patients attended the various departments of N.S.C.B Medical College and Hospital, Jabalpur for complaints of bleeding from inside the nose. In the present study, two peaks were noted, one in between 11-20 years of age and other between 51-60 years of age. Minimum number of cases were between 71-80 years of age 2.2% of cases. Shaheen observed similar two peaks, one between 15-35 years of age and other between 45-65 years of age that is in accord with current study.[5] Tucker reported that 43% patients were less than 20 years of age and 12% were more than 60 years old.[6] Number of males was approximately 3.5 times to that of females. Therefore a definite male preponderance is observed. Neivert in his study, studied 104 patients and out of these 59 subjects (56.63%) were males and 45 subjects (43.26) were females, which show definite male predominance.[7] Tucker also noted a higher incidence in male than female.

We observed that during the study period, maximum number of patients was seen during the winter season (48.89%) followed by summer (26.67%), followed by fall (24.44%). Therefore it can be said that epistaxis is more common during dry cold winters followed by dry hot summer months. Holger Juselius found that the number of cases of epistaxis was greatest in autumn and winter months and lowest during May to August.[8] Varshney et al observed more cases during autumn and winter as compared to summers. The maximum number of cases presented during the months of January and March. Hence the present study is in accordance with the studies done by various authors regarding seasonal variations in cases of epistaxis. Mucosal trauma or irritation usually results in anterior nosebleeds, and nose picking is a common culprit. The site for this trauma or irritation is usually proximal to the mucocutaneous junction, a place where a peeled artery can retract. Low moisture content in the ambient air can result in mucosal dryness and irritation. This factor is common in centrally-heated rooms that are not humidified. Any form of rhinitis can result in mucosal hyperemia, which if damaged during a trauma, can bleed profusely, sometimes forcing patients to seek professional help. Recurrent epistaxis was observed in 24.44% cases. Nasal obstruction was the most common associated complaint in 44.44% of cases. Trauma to nose caused epistaxis in 31.11% of cases. Neoplasm of nose, paranasal sinuses and nasopharynx were observed to be responsible for epistaxis in 17.78% of cases. In almost 9% cases epistaxis was a direct result of inflammatory nasal conditions. The most common symptom was bleeding from nose. 60% cases had bleeding from one nasal cavity and 40% cases had bleeding from both nasal cavities of nose. Derbenva TN in his study of 640 patients has reported unilateral nasal bleeding in 84 % and bilateral bleeding in 16% cases.[9] Next most common symptom was nasal obstruction present in 44% cases and nasal discharge in 44% cases, then next was common cold in 35% cases, anosmia in 26.67% cases, injury to nose in 24.44% cases,

fever in 8.89% cases.

Patients on anticoagulant medications are at particular risk of epistaxis. It is debatable whether stopping warfarin or reversing anticoagulation status is helpful in the long term. It has been suggested that those patients can continue warfarin who are in the therapeutic range of their international normalized ration for their specific medical condition. Additionally, epistaxis may be a incidental finding in patients with a nasal tumor, most commonly being squamous cell and adenoid carcinoma, melanoma etc. Moreover, concrete data on the effect of aspirin on epistaxis is missing.[10] A study of patients with repeated episodes of epistaxis showed that the rate of aspirin use did not differ when compared with healthy controls.[11] However, a positive correlation was reported by another study on the used of aspiring and epistaxis (relative risk 2.17 or 2.75 for community and hospital control respectively).[12] None of the other nonsteroidal drugs have reported any increased risk of bleeding.

CONCLUSION

In our study epistaxis is more common in males and it was more common during cold dry winter months. Recurrent epistaxis was observed in 24.44% cases. Nasal obstruction was the most common associated complaint and trauma to nose caused epistaxis in 31.11% of cases. Neoplasm of nose, paranasal sinuses and nasopharynx were observed to be responsible for epistaxis in 17.78% of cases. More research is required to study the associated medical history, examination findings and management techniques in detail.

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