Original Research Article

Clinical profile of patients of epistaxis: An experience from a tertiary level hospital in Jabalpur

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

[1]Senior Resident, Department of ENT, AIIMS Rishikesh, India
[2]Senior Resident, Department of ENT, Vivekanand Hospital, Lucknow, India
[3]Senior Resident, Department of ENT, SMS Medical College, Jaipur, India
[*]Corresponding author email: **shubhankur1407@gmail.com**

International Archives of Integrated Medicine, Vol. 3, Issue 11, November, 2016.

Available online at http://iaimjournal.com/
ISSN: 2394-0026 (P) **ISSN: 2394-0034 (O)**
Received on: 14-10-2016 **Accepted on:** 27-10-2016
Source of support: Nil **Conflict of interest:** None declared.
How to cite this article: Pandey A, Gupta S, Rahul, Jain K. Clinical profile of patients of epistaxis: An experience from a tertiary level hospital in Jabalpur. IAIM, 2016; 3(11): 83-87.

Abstract

Introduction: Epistaxis is one of the most common encountered otolaryngologic emergency and affects up to 60% of the population in their lifetime, of which 6% require medical attention. This study was done to find out the relationship between general diseases and the occurrence of epistaxis and to evaluate the methods required to manage bleeding from the nose.

Materials and methods: Cases were taken for this study from various indoor and outpatient departments of N.S.C.B Medical College and Hospital Jabalpur from October 2013 till September 2014. Detailed history, clinical information was noted for all patients. All included patients underwent investigations as ordered by their doctor, and relevant clinical examinations were performed. Data was analyzed using appropriate statistical methods.

Results: In this study, maximum number of subjects had bleeding from both nares followed by left and right nares respectively. Deviation to left was more common in this study with not much significant difference between the two sides. Tumors of nose (17.78%) were the most common associated disease in this study followed by hypertension (13.3%), diabetes mellitus was associated with 6.67% of subjects. 11.11% patients had nasal bone fracture and 11.11% of patients had enlarged external framework of nose mainly due to nasal masses. Most commonly used modality was anterior nasal packing in 40% cases, followed by surgery in 35.56% cases.

Conclusions: These results illustrate the relation of epistaxis with past medical history, duration of bleeding. More research is required to understand the management patterns in different geographical locations.

Key words

Epistaxis, Management, Emergency, Bleeding, Nasal deviation.

Introduction

Epistaxis is one of the most common encountered otolaryngologic emergency and affects up to 60% of the population in their lifetime, of which 6% require medical attention [1]. It has been estimated that nosebleeds affect 108 per 100,000 population per year. Peaks in incidence are seen in those under 10 years of age and in people aged over 40 years [2]. Although nosebleeds are rarely life threatening, the initial evaluation should focus upon the respiratory and hemodynamic stability of the patient rather than the bleeding. Normal appearance, vital signs, and respiratory function are evidence that the examiner can safely attend to the presenting complaint. On the other hand, abnormalities in these indices may signal an emergency. Airway intervention and fluid resuscitation are sometimes necessary in massive epistaxis. Rapid assessment of general appearance, vital signs, airway stability, and mental status are necessary to identify children with respiratory or hemodynamic instability who require airway intervention and/or fluid resuscitation. This study was done to find out the relationship between general diseases and the occurrence of epistaxis and to evaluate the methods required to manage bleeding from the nose.

Materials and methods

Study design and patient population

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. Name, age, sex, occupation and address of each case were noted.

Data collection and analysis

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, anemia, lymphadenopathy, subcutaneous bleeding, liver and spleen enlargement was done. While examining the nose we looked for any mark of trauma, deformity of nose, bleeding- mild, moderate, or severe (anterior bleeding or posterior bleeding), nasal obstruction, side and degree, congestion-generalized or localized, crust deposition, any ulcer or crust in the vestibule, any septal deviation, ulcer, spur and perforation, hypertrophy of the turbinates, ulcer, atrophy etc. We also checked for any discharge, if present we noted the type, consistency, amount, colour, odour, mixed with blood or not, frank blood etc. In posterior rhinoscopy we checked for any growth, bleeding, discharge etc. We also examined the oral cavity, conditions of oral mucous membrane, tongue, anterior pillar, tonsils, posterior pillars, palate, teeth, gums and oropharynx was noted. Nasal endoscopy examination was done if and when indicated. As part of the routine treatment all patients underwent standard investigations as deemed appropriate by the treating doctor. Data obtained from hospital was codified and entered into Microsoft excel sheets. Data were then imported in to Statistical Package for Social Sciences (SPSS) version 21 and descriptive analysis was performed using appropriate statistical analysis.

Results

In the present study, 45 cases of "Epistaxis" were studied (**Table - 1**). The cases selected from

various Departments of Medical College & Hospital, Jabalpur. In this study duration of bleeding ranged from 2 hours to 10 years with 64.44% of cases having duration of less than 4 days and 35.56% cases having more than 4 days (**Table - 2**). In this study maximum number of subjects had bleeding from both nares followed by left and right nares respectively. Deviation to left was more common in this study with not much significant difference between the two sides. SPUR was present in 4.4% of cases. Tumors of nose (17.78%) were the most common associated disease in this study followed by hypertension (13.3%), diabetes mellitus was associated with 6.67% of subjects. In this study pallor was found in 42.22% of subject and increased blood pressure was found in 20% of subject. 11.11% patients had nasal bone fracture and 11.11% of patients had enlarged external framework of nose mainly due to nasal masses. In our study clots were found in 55.56% of cases on anterior rhinoscopy and deviated nasal septum was also present in 55.56% of cases. Nasal discharge was present in 44.44% of cases, mass in 22.22% of cases, atrophic changes and abrasion 6.67% cases each. Most commonly used modality was anterior nasal packing in 40% cases, followed by surgery in 35.56% cases, spontaneous stoppage was seen in 31.11% cases, cauterization and posterior nasal packing was required in 11.11% cases each. No cases required arterial ligation.

Discussion

Among systemic causes, hypertension is a significant factor and in present study it accounted for epistaxis in 13.33% cases. Most of the cases presenting with hypertension were males, between 45-80 years of age. Only one female patient (2.2%) who was also diabetic had episode of epistaxis. Olav E. Hallberg [3] and Minn [4] observed hypertension as a cause for epistaxis in 36.4% cases, Holger Juselius in 47.3% cases [5] and Varshney, et al. in 31.82% cases [6] recorded hypertension as a cause for epistaxis. These observations are in contrast with those of the present study. Bleeding disorders accounted for epistaxis in 6.67% cases in the present study. Hallberg noted that 10.4% cases had epistaxis due to bleeding disorders.**Error! Bookmark not defined.** Hara reported that 3.8% cases of epistaxis were due to blood diseases [7]. Holger Juselius observed that bleeding disorders were responsible for epistaxis in 6.4% cases [5] and Varshney, et al. reported that in 4.55% cases bleeding diathesis including liver diseases was responsible for epistaxis [4].

Table – 1: Characteristics of patients involved in the study

Mean age (in years)	32.6 ± 3.8
Males	35
Existing medical condition	
Hypertension	6
Diabetes mellitus	3
Bleeding disorder	3
Tumor	8
Typhoid	1
Dengue	1
Side of nose involved	
Right	12
Left	15
Bilateral	18
Nasal septal deviation, if any	
Right	12
Left	13
SPUR	2

In present study, anatomic deformity that is deviated nasal septum was observed to be responsible for epistaxis in 4.44% cases, inanimate hygroscopic foreign bodies were observed to be responsible in 2.2% of cases and infestation with maggots was found as a cause for epistaxis in 6.67% of cases. Haemoglobin was found to be between 8gm%- 10gm% in 26.67% cases and less than 8 gm% and more than 4 gm% in 13.33% cases. In rest of the cases, hemoglobin was above 10 gm%. Holger had found in 1724 patients of epistaxis that hemoglobin was 9 gm% or less in 17.3% cases. Platelet count was lower than 1.5 lakh/cmm in 6.67% of cases. Petruson reported 9% of cases of

epistaxis having platelet count less than 1.5 lakh/cmm [8]. Bleeding time and clotting time were deranged in 2.2% of cases, of that of aplastic anaemia. X-ray of nasal bones revealed nasal bone fracture in 11.11% cases. CT scan was done in 17.78% of case showing mass in nasal cavities and paranasal sinuses and nasopharynx and their further extensions.

Table – 2: Clinical findings of the patients involved in the study.

Duration of epistaxis	
1 day	23
2 days	4
3 days	2
4 days or more	16
Amount of bleeding	
Mild	30
Moderate	13
Severe	2
Anterior rhinoscopy findings	
Atrophic changes	3
Nasal discharge	20
Mass	10
Clots	25
Deviated nasal septum	25
Abrasion	3
Management given	
Anterior nasal packing	18
Cauterization	5
Surgery	16
Spontaneous stoppage	14
Posterior nasal packing	5
Arterial ligation	0

Majority of nosebleeds resolve, either spontaneously, with the aid of pinching the outer soft tissue of the nose, or by applying an ice pack to the bridge. Some cases require some intervention. The clinician treating epistaxis must understand the normal anatomy of the nose and be familiar with the nasal septum and its appropriate midline position. He or she should be able to identify the inferior and middle turbinates. In present study, anterior nasal packing was done in 40% cases to stop the bleeding from the nose. Bitar [9] and Juselius have reported 44% cases and 32.7% cases respectively, in whom they carried out a series of anterior nasal packing in order to stop epistaxis. Posterior nasal packing was done in present study in 8.89% cases. Holger carried out posterior nasal packing in 24.8% of cases. Chemical cauterization of the ulcers with carbolic acid was done in 11.11% cases. Bitar [9] has done chemical cauterization in 18.6% cases of nasal bleeding. Holger has done chemical cauterization with silver nitrate in 11.02% cases of epistaxis. Surgical treatment was done in 35.56% cases. No case required ligation of blood vessels. Gel and foam products that promote thrombogenesis are being developed and tested for treatment of epistaxis. Quixil, a fibrin glue, is safe, and probably as effective as cautery and packing. Surgicel, Gelfoam, and Avitene, all common conformable hemostatic materials, have each been described in reviews or small case series as useful in nasal bleeding refractory to cautery.

Conclusion

The present study was carried out on 45 patients who presented with epistaxis in N. S. C. B. Medical College and Hospital, Jabalpur. Recurrent epistaxis was observed in one-fourth cases. Deviated nasal septum was responsible for epistaxis in 4.4% cases. Inanimate hygroscopic foreign body was responsible for epistaxis in 2.2% cases, animate foreign body were responsible in 6.67% cases and high blood pressure was found in 13.33% of cases. Anterior nasal packing with iodine-paraffin-antibiotic ointment constituted most effective and frequently used in the management in 40% of cases in our study. More research is required in other parts of India to reach a consensus on how to effectively manage patients of epistaxis.

References

1. Small M, Murray JAM, Maran AGD. A study of patients with epistaxis requiring admission to hospital. Hospital Health Bulletin, 1982; 40: 20-29.

2. Fishpool SJ, Tomkinson A. Patterns of hospital admission with epistaxis for 26,725 patients over an 18-year period in Wales, UK. Ann R Coll Surg Engl., 2012; 94: 559-562.
3. Hallberg OE. Severe nosebleed and its treatment. Journal of the American Medical Association, 1952; 148(5): 355-60.
4. Mahmoud NA. Traumatic aneurysm of the internal carotid artery and epistaxis: (Review of literature and report of a case). The Journal of Laryngology & Otology, 1979; 93(06): 629-56.
5. Juselius H, Epistaxis A. A clinical study of 1,724 patients. J Laryngol Otol., 1974; 88: 317-27.
6. Varshney S, Saxena RK. Epistaxis: a retrospective clinical study. Indian Journal of Otolaryngology and Head and Neck Surgery, 2005; 57(2): 125-9.
7. Hara HJ. Severe epistaxis. Archives of Otolaryngology, 1962; 75(3): 258-69.
8. Petruson B. Epistaxis A clinical study with special reference to fibrinolysis. Acta Oto-Laryngologica, 1974; 77(sup317): 1-73.
9. el-Bitar H. The etiology and management of epistaxis. A review of 300 cases. The Practitioner, 1971; 207(242): 800-4.