



(RESEARCH ARTICLE)



Epistaxis and its management: A prospective study in a Tertiary Care Centre

Shaik Kashifullah *, Swaroop Dev M, Ranjitha shree C M L, Jyothi Swarup R, Moulya K M, Ketanashree, Suni Iqbal and Bharath kumar K L Vidyashree

Department of E.N.T, Sri Siddhartha Medical College Agalkote, Tumkur, Karnataka, India.

International Journal of Science and Research Archive, 2024, 11(01), 1768–1772

Publication history: Received on 25 November 2023; revised on 06 January 2024; accepted on 08 January 2024

Article DOI: <https://doi.org/10.30574/ijrsra.2024.11.1.0266>

Abstract

Background: Epistaxis (nose bleed) is one of the most common ear, nose and throat (ENT) emergencies that present to the tertiary care center. Management of Epistaxis is challenging and most are managed conservatively and some by surgical intervention. There is always a need to find the prevalence of Epistaxis and to identify the etiological factors in management of Epistaxis, by different methods such as medical treatment, anterior and posterior nasal packing, and surgical intervention that includes endoscopic cauterization, endoscopic arterial ligation, SMR and Nasal bone reduction. In our study we will determine the various etiologies of epistaxis and its management options.

Methodology: A prospective study was done in the Department of ENT, for duration of 18 months, total of 70 patients of both genders in age group of 18 - 60 years with clinical features of nasal bleed were enrolled in the study, and were subjected to clinical examination and history regarding onset and predisposing factors. Patients who are willing to undergo investigations to identify the cause and treatment are enrolled for the study after obtaining the written informed consent.

Results: A total of 70 patients were examined in this study. Males were affected more than females. The patients distribution across different age groups shows maximum at age of 46-60 years followed by 36-45 years. The most common cause was found to be trauma followed by hypertension, rhinosinusitis, deviated nasal septum and idiopathic. In most cases, anterior nasal bleeding was observed. Majority of the cases managed conservatively 71.5% while 28.5% patients required surgical intervention.

Conclusion: The study on epistaxis and its management provides valuable insights into effective strategies for addressing this common medical condition. This study emphasizes the importance of a medical and surgical approaches based on the severity and underlying causes of epistaxis. Anterior epistaxis is more common than posterior bleeds. Majority of cases of epistaxis are manageable by conservative measures and only few require surgical intervention. Overall, this study contributes to the ongoing efforts to enhance our understanding of epistaxis and refine therapeutic approaches for better patient outcomes.

Keywords: Epistaxis; Nasal packing; Trauma; Surgical intervention; Etiology; Bleeding Disorders.

* Corresponding author: Shaik Kashifullah

1. Introduction

Epistaxis is one of the most common ENT emergencies that present to the tertiary care clinic. There are two types : anterior (more common), and posterior (less common).Source of anterior bleed is within keisselbach’s plexus on the antero inferior part of nasal septum (also known as little’s area). The mucosa over the septum in this area is especially thin, making this the most common site of epistaxis[1].Less commonly, vessels in the posterior or superior nasal cavity will bleed, leading to the so called “ posterior epistaxis “. Anterior epistaxis is usually controlled by local pressure or anterior nasal packing while posterior epistaxis often requires posterior nasal packing or arterial ligation.Recent advances in endoscopy have facilitated nasal examination ; however, the effective management of this condition depends on awareness of the probable sources of epistaxis and a comprehensive understanding of the nasal structure[2]. Epistaxis can occur at any age but is mainly in elderly.Its incidence is difficult to asses but it is expected that approximately 60% of the population will be affected by epistaxis at somepoint in their lifetime, with 6% requiring medical attention.[3]

2. Methodology

A Prospective study was done in the Department of ENT, for duration of 18 months, total of 70 patients of both genders in age group of 18 - 60 years with clinical features of nasal bleed were enrolled in the study, and were subjected to clinical examination and history regarding onset and predisposing factors. Patients who are willing to undergo investigations to identify the cause and treatment are enrolled for the study after obtaining the written informed consent. Aim of our study is to determine the various etiological factors causing epistaxis and its management in patients presenting to ENT out patient department. complete blood count (CBC),Liver function test (in Alcoholics), coagulation profile, were done.CT scans of the nose and paranasal sinuses were done to identify structural abnormalities, such as nasal polyps, tumors, or sinusitis, which may contribute to epistaxis.Statistical methods used to analyze correlations between findings and the management outcomes and results were analysed by means and standard deviation for quantitative variables and percentages for categorical variables. The association between categorical variables were analyzed by using the chi-square test, after excluding patients with nasal bleed secondary to malignant tumors of nose and paranasal sinus, Bleeding secondary to granulomatous diseases of nose and PNS and Post operative nasal bleeds.

3. Results

A total of 70 patients were included in our study out of which 48 (69%) were male and 22 (31%) were female. Patients were divided based on age groups that is 18-25 years with 16 (22.8%) patients, 26-35 years with 15 (21.4%) patients, 36-45 years being 19 (27.1%) patients and 45-60 years with 20 (28.5%) patients. Etiology of epistaxis being the crucial part of our study we observed that trauma is the most common cause with 27 (38.5%) patients followed with, hypertension that is 17 (24.2%) patients, acute rhinosinusitis and idiopathic are of same number that is 7 (10%) patients each, DNS being 6 (8.5 %) patients and bleeding disorder are of 6 (8.5%) patients. The epistaxis has been controlled and treated with non surgical measureslike nasal packing (anterior/posterior) in 71.5% of the patients 28.5% of the patients underwent surgical intervention like endoscopic cauterization under GA, arterial ligation, SMR in cases of DNS with Spur and Nasal bone reduction for traumatic injury patients. Only 20 patients underwent surgical procedures in our study like endoscopic cauterization done in 5 patients and arterial ligation treatment done in 2 patients 6 patients having DNS with spur underwent SMR while 7 patients with traumatic injury managed with nasal bone reduction as shown in fig 3, rest of the patients has been managed with non surgical measures that is 50 patients with medical management that includes antihypertensives, antifibrinolytic agents, heamocoagulase, platelet transfusion / clotting factor transfusion/ FFP in cases of liver diseases, 24 patients underwent anterior nasal packing, 7 patients bleeding stopped with posterior nasal packing as shown in fig 4.

Table 1 Age wise distribution of cases.

Age Group	Number of patients
18-25	16
26-35	15
36-45	19
46-60	20

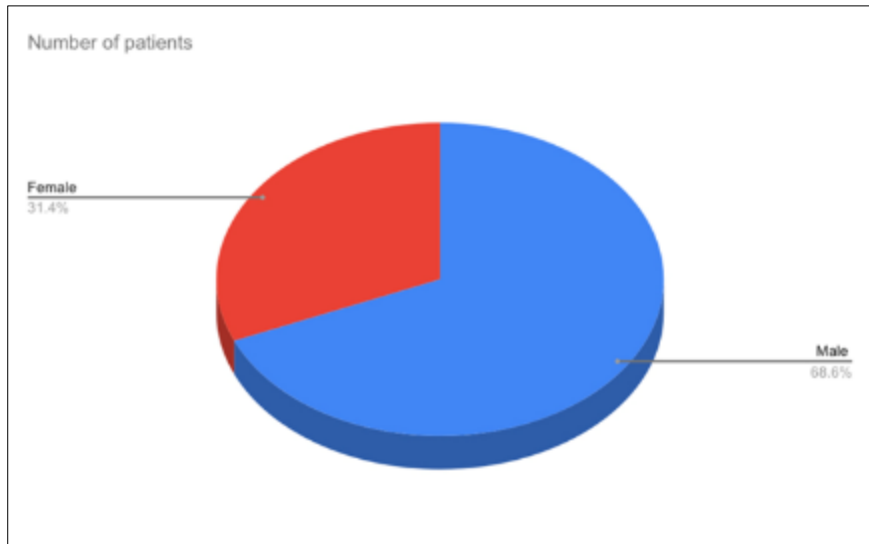


Figure 1 Gender wise distribution of patients

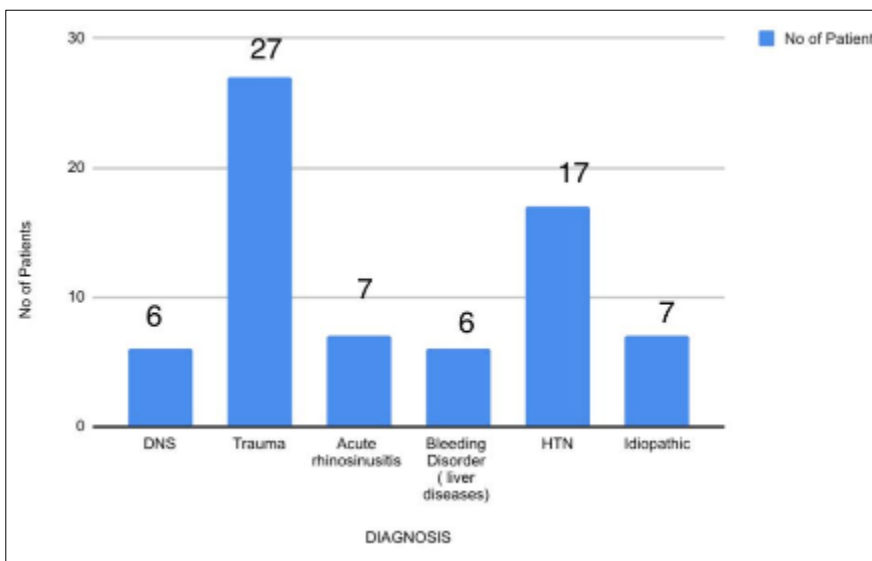


Figure 2 Distribution of patients according to diagnosis

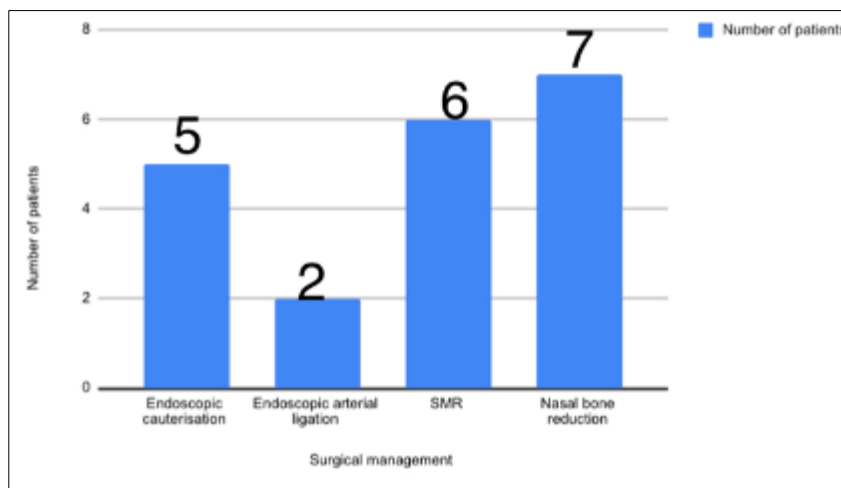


Figure 3 Distribution of patients managed surgically

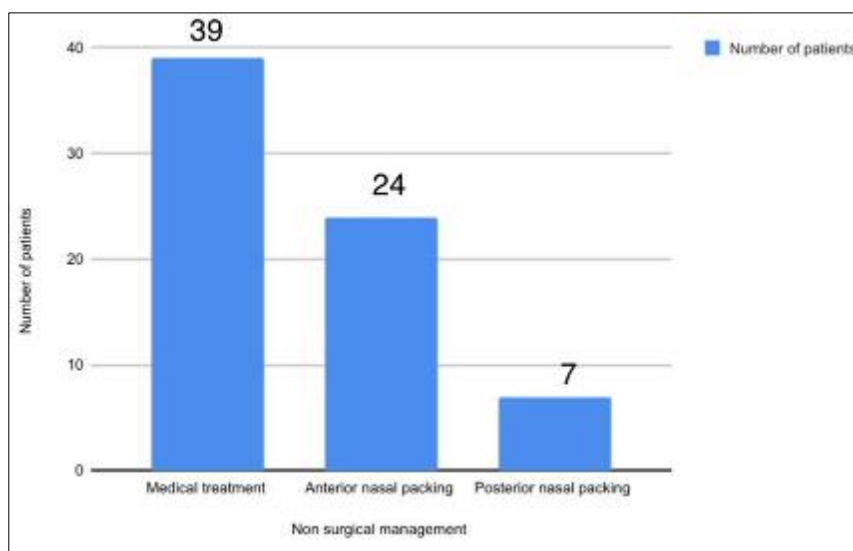


Figure 4 Distribution of patients according to non surgical management

4. Discussion

A total of the 70 cases who had presented with the complaint of bleeding from nose to the ENT OPD, Sri Siddhartha Medical College & hospital, Tumkur, were examined and diagnosed clinically before subjecting them to investigations required and managed under aseptic precautions with appropriate timely intervention. It is a Prospective study. In Juselius et al study, which stated the incidence of epistaxis above the age of 36 years was 91.3% which was also the highest incidence in our study that is 58%. In the present study the commonest etiology is trauma about 39% which was in sync with Amusa et al which was about 70.9%. In Hussain et al study the most common site of bleeding was anterior about 71.6% which was about the same value in our study that is 72%. Roblin DG, Eccles R stated that 80% of the population have a significant deviation. Correlation between epistaxis and septal abnormalities can be coincidental, so in our study the DNS being exclusive cause seen in only 6 (8.5%) patients. Basic blood investigation and diagnostic nasal endoscopy were done to all patients. X-Ray nasal bone was taken for the patients with history of trauma to nose when nasal bone fracture was suspected clinically. CT-Nose and PNS was taken to patients with clinical suspicion of malignancy, older age group patients, adolescent males with suspicion of JNA, patients of chronic sinusitis and to other required patients. The endoscopy helps to identify bleeding points and to treat them effectively. The treatment comparison with Philip et al which was 83% non-surgical type was the same in the present which is also 71.5% non-surgical form of treatment. Most of the anterior type of nasal bleeding can be managed non-surgically in an OPD basis.

5. Conclusion

Our study sheds light on the prevalence, etiological factors, and management strategies for epistaxis, a common and challenging ENT emergency. The findings underscore the significance of a comprehensive approach in addressing this condition, considering both medical and surgical interventions based on the severity and underlying causes. The observed male predominance and the peak incidence in the age group of 46-60 years provide valuable demographic insights.

The study highlights trauma as the leading cause of epistaxis, followed by hypertension, rhinosinusitis, deviated nasal septum, and idiopathic cases. However, a notable proportion (28.5%) necessitated surgical intervention, indicating the importance of tailored approaches for specific cases.

This research contributes to the ongoing efforts to enhance our understanding of epistaxis, offering evidence-based guidance for clinicians in choosing appropriate management strategies. By delineating the spectrum of etiological factors and their corresponding treatments, our study aims to contribute to better patient outcomes and improved overall care for individuals presenting with epistaxis in a tertiary care setting.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of ethical approval

The study was approved and ethical clearance taken from the Ethics committee, Sri Siddhartha Medical College, Tumkur, Karnataka.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

References

- [1] Patel J, Sharma Y, Govindarajulu P, Vadiya S. Clinico-Aetiological Profile of Adult Epistaxis-Three Years' Experience at a Tertiary Care Centre. *Bengal Journal of Otolaryngology and Head Neck Surgery*. 2021;29(3):301-305.
- [2] Islam R, Islam MA, Mahbub AR, Chowdhury AK, Islam MN, Khan AM. A Clinical Study Etiological Factors and Management of Epistaxis at a Tertiary Level Hospital. *Bangladesh Journal Otorhinolaryngology*. 2020 Jul 1;26(1):45-54.
- [3] Kumar KD. A retrospective clinical study of patients presenting with epistaxis in a tertiary care hospital in Central India. *Journal of medical science and clinical research*. 2019;7(6): 195-202.
- [4] Kesari SP, Singh LM, Priyadarsini T, et al. Epistaxis: etiological profile and treatment outcome in a teaching hospital of north eastern state of Sikkim, India. *J. Evolution Med. Dent.Sci*. 2019;8(28):2244-2248.
- [5] Sampigethya S, Elizabeth Cherian, Deepika Pratap, Ivan Mani, and Vadisha Srinivas Bhat. "A clinical study of epistaxis." *International Journal of Otorhinolaryngology and Head and Neck Surgery*. 2018; 41:555-8.
- [6] Sigdel B, Dubey I, Nepali R, Neeraj KC. Endoscopic evaluation and management of epistaxis: An efficient and effective method. *Nepalese Journal of ENT Head & Neck Surgery*. 2018 Dec 30;9 (2):6-8.
- [7] Tabassum A, Cho JJ. "Epistaxis" In: StatPearls Publishing, 2022;1(1) :1-5.
- [8] Kuo, Chin-Lung. "Updates on the Management of Epistaxis." *Clinical Medicine and Therapeutics (CMT)*. 2019;1(1):5.
- [9] Parajuli R. Evaluation of etiology and treatment methods for epistaxis: a review at a tertiary care hospital in central Nepal. *International journal of otolaryngology*, 2015.