



ETIOPATHOLOGICAL FACTORS AND MANAGEMENT OF EPISTAXIS- A RETROSPECTIVE STUDY IN A TERTIARY CARE CENTRE

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ABSTRACT

Introduction- Epistaxis is a common ENT problem, and its incidence ranges from 7% to 60% of the population as per reports, of which only 6% seek medical attention. 10% of patients with epistaxis have no defined symptoms. Control of haemorrhage, minimizing hospital stay, low complications, and cost effectiveness are the goals of all methods of therapy. **Materials And Methods-** Hospital based retrospective observational study conducted in the Department of Otorhinolaryngology, Assam Medical College and Hospital for a period of one year (October 2022 to September 2023) in patients presenting with epistaxis in Department of Otorhinolaryngology, AMCH. **Results-** Most of the patients belonged to age group of 41-50 years. Male: female ratio was 2.07%. Hypertension was the leading cause of nasal bleed in 27.5% of cases. This was followed by trauma in 22.5% of cases. Conservative management was the most common modality of treatment. **Conclusion-** From Trotter's method to endoscopic ligation of sphenopalatine artery, management of epistaxis has evolved fourfold. With the advent of Novo seven (coagulation factor VII A activator), fresh frozen plasma etc, the therapeutic treatment of bleeding disorders could be dealt conveniently.

KEYWORDS :

INTRODUCTION

Epistaxis is a common ENT problem, and its incidence ranges from 7% to 60% of the population as per reports, of which only 6% seek medical attention.¹⁻³

Epistaxis can be anterior or posterior. Anterior epistaxis is self-limited at most times and often originates from Kiesselbach's plexus in the anterior septum. Posterior epistaxis is from Woodruff's nasopharyngeal plexus, which is primarily supplied by branches of the sphenopalatine artery.⁴

Reports estimate that as many as 10% of patients with epistaxis have no defined symptoms.⁵ The causes of epistaxis can be local and systemic factors. The diagnosis of epistaxis requires a careful history, physical examination, and laboratory assessment to rule out the various local causes like trauma, septal deviations and perforations, foreign bodies, tumors, aneurysms and systemic factors like cardiovascular diseases, blood dyscrasias, Osler-Weber-Rendu or idiopathic.⁶

A variety of treatment regimes can be found in the literature. Control of haemorrhage, minimizing hospital stay, low complications, and cost effectiveness are the goals of all methods of therapy.⁶

The management of epistaxis is complex and varied. Treatment can be separated into two groups: nonsurgical/noninterventional approaches and surgical/interventional approaches. The nonsurgical approaches include local cauterization, anterior packing, and posterior packing. Surgical approaches include formal arterial ligation (i.e., internal maxillary artery [IMA] ligation and anterior/posterior ethmoid artery ligation).⁴

The aim of our study is to assess the etiological factors and the line of management in patients presenting with epistaxis.

MATERIALS AND METHODS

1. **Place Of Study:** Department of Otorhinolaryngology, Assam Medical College and Hospital.
2. **Duration Of Study:** One year (October 2022 to September 2023)
3. **Study Design:** Hospital based retrospective observational study.

4. **Study Population:** Patients presenting with epistaxis in Department of Otorhinolaryngology, AMCH.
5. **Sample Size:** 200

The written and informed consent was taken from all patients. The data collected was tabulated in Microsoft Excel worksheet and computer based analysis done.

Inclusion Criteria-

Patients of all age groups presenting with epistaxis and patients admitted for other reasons in whom epistaxis developed.

Exclusion Criteria-

As long as he or she met the above criteria, no patient was excluded from the study.

RESULTS

From our study we found that most of the patients belonged to age group of 41-50 years. It was followed by 51-60 years and 31-40 years respectively. However after 60 years, there was a drop in number of cases to 17.5%. The first three decades of life presented with only 2.5%, 5% & 7.5% of cases respectively. Male: female ratio was 2.07%.

Table 1: Age of Presentation.

Age of Presentation. (In years)	No. of Cases	Percentage (%)
0-10	5	2.5
11-20	10	5
21-30	15	7.5
31-40	40	20
41-50	50	25
51-60	45	22.5
>60	35	17.5
TOTAL	200	100

Table 2: Etiological factors

Etiological factors	No. of cases	Percentage (%)
DIGITAL MANIPULATION	15	7.5
TRAUMA	45	22.5
INFECTION (FUNGAL)	10	5
HYPERTENSION	55	27.5

COAGULOPATHY	20	10
LIVER DISORDER	30	15
TUMOR (JNA)	25	12.5

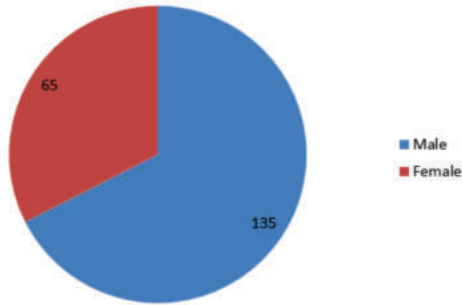


FIG 1- Gender wise distribution of cases.

Hypertension was the leading cause of nasal bleed in 27.5% of cases. This was followed by trauma in 22.5% of cases. Liver disorder was found in 15% of cases, followed by coagulopathy in 10% of them. Digital manipulation and fungal infection was recorded in 7.5% and 5% of cases. However, tumors like Juvenile Nasal Angiofibroma was detected in 12.5% of cases who presented with epistaxis.

Table 3: Type of Epistaxis

Type	No.of cases	Percentage.(%)
ANTERIOR	165	82.5
POSTERIOR	35	17.5

Table 4: Management of Epistaxis

Type of Management	No. of Cases	Percentage (%)
Conservative		
Medication	80	40
Anterior Nasal Packing	50	25
Posterior Nasal Packing	10	5
Surgical		
Thermal cauterization	17	8.5%
Chemical cauterization	21	10.5%
Endoscopic ligation of Sphenopalatine Artery	15	7.5%
External carotid artery ligation	7	3.5%

Conservative management was the most common modality of treatment. Nearly 40% of cases responded with medication like Anti – hypertensive, coagulants, platelet activators, ethamsylate, tranexamic acid, epsilon amino caproic acid, vitamin K administration, oral vitamin C Tablets etc. Out of various procedures done to control bleed, anterior nasal packing was done in 25% of cases & 5% required Posterior nasal packing.

Among the patients who required surgical intervention, Thermal & Chemical cauterisation was done in 8.5% & 10.5% of cases. However, 7.5% of cases underwent Endoscopic ligation of sphenopalatine artery. External carotid artery ligation was done in 3.5% of cases respectively.



FIG 2- Anterior nasal pack



FIG 3- Application of posterior nasal pack under GA

DISCUSSION

In our study we found that majority of patients 25% belonged to age group of 41-50 years, which is similar to the study done by Saurabh Varshney et al⁶ where 36% of patients belonged to 41 -50 years of age.

Most commonly females were affected which was similar to the study done by Philip Police et al⁴ where 53% epistaxis patients were females.

Hypertension 27.5% was commonly found in patients presenting with epistaxis, which was similar to the study done by Fatakia et al⁷ where hypertension was the most common systemic cause of nasal bleed.

In our study 82.5% of cases presented with anterior epistaxis, which is also similar to the study done by Tabasuum et al⁸ where anterior epistaxis was most common.

Conservative management was the most effective and applied treatment in our study with nearly 40% responding to medication. It was similar to the study done by Adoga AA et al⁹ where conservative management proved to be most effective in 84.8% of cases. However, surgical management with endoscopic sphenopalatine artery ligation was being done in 7.5 % of patients. The success rate of TESPAL (transnasal sphenopalatine artery ligation) was found to be 90% according to the study done by Ismi O et al¹⁰. External carotid artery ligation was done in 3.5% of patients in our study. According to the study done by Kuhn AJ et al¹¹, 8% of patients in his study underwent successful management of epistaxis with external carotid artery ligation.

CONCLUSION

From trotter's method to endoscopic ligation of sphenopalatine artery, management of epistaxis has evolved fourfold. However the conservative management can't be ruled out. With the advent of Novo seven (coagulation factor VII A activator), fresh frozen plasma etc, the therapeutic treatment of bleeding disorders could be dealt conveniently. Besides correction of liver enzymes, control of liver disorders, systemic hypertension, and blood dyscrasias have led to better management conservatively. In times to come, who knows we can even expect embolization procedures with metallic alloy coils, gelfoam etc.

Contribution of authors:

1. All authors have contributed
2. The article is original with the authors and does not infringe any copyright or violate any other right of any third party.
3. The article has not been published (whole or in part) elsewhere in any form, except as provided herein.
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