Original Research Article

A retrospective study of patients with epistaxis at tertiary health care centre

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Abstract

Background: Epistaxis is a common symptom in otorhinolaryngology practice, with most people suffering one or more episodes in their lifetime. It occurs more frequently in the dry environment, when low humidity dries the mucosa of the anterior nasal septum. Epistaxis may occur due to various underlying causes with a significant morbidity and even mortality in rare cases. **Aim and Objective**: To study various factors associated with and treatment modalities available for epistaxis among the patients at tertiary health care centre **Material and Methods:** It's a retrospective, observational study carried out among epistaxis cases examined between January 2014 and December 2014 in a tertiary health care centre. A total of 90 cases of epistaxis were identified by data received from the medical records department of the institution. **Results:** Of total 90 epistaxis cases, Males outnumbered females. Age group 21-40 years was most commonly affected. Trauma was the most common factor responsible for epistaxis. The observational type (62.22%) of non-surgical treatment modality is practiced commonly for the patients with epistaxis. **Summary and Conclusions:** Age is a highly significant factor responsible in determining the etiology of epistaxis. Hypertension on irregular treatment is an important underlying etiology of epistaxis. A comprehensive management of the underlying cause, is necessary to reduce the morbidity associated with epistaxis in the patients.
Key Words: Epistaxis.

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INTRODUCTION

Epistaxis is a symptom which is often benign and nonspecific, but it may be a life threatening in elderly patients. Epistaxis means bleeding from the nose or a nosebleed, is relatively common occurrence of haemorrhage from the nose. Pathophysiology of epistaxis lies in the fact that blood vessels rupture within the richly perfused nasal mucosa. Rupturemay be spontaneous or initiated by trauma.[1] Epistaxis may occur due to various underlying causes with a significant morbidity andeven mortality in rare cases. It occurs more frequently inthe dry environment, when low humidity dries the mucosaof the anterior nasal septum.[2] Depending on the site of origin, epistaxis is commonly divided into anterior and posterior. Anterior epistaxis is far more common thanposterior, accounting for more than 80% of cases. Commonly epistaxis occurs from the Kiesselbach's plexus or the retro-columellar vein, which results in anterior epistaxis. These nosebleeds arerelatively easy to manage with the pressure and most often it stops spontaneously on its own.[3]The traditional methods of anterior or posterior nasal packing, nasal tampons and arterial ligation are advocated to control posterior bleeding. Nasal packing is most commonly used. Apart from the high failure rate of 26-50%,marked discomfort, pain and swallowing difficulty may be associated with traditional nasal packing.[4] Epistaxis is a leading cause of hospitalization in elderly patients with otolaryngologic diseases. It poses a greater risk in elderly in whom clinical deterioration progresses rapidly with significant blood loss. Elderly population with their associated morbidity requires more intense treatment.[5]Local

complications such as sinusitis, nasalsynaechia, otitis media, collumelar or alar necrosis, septalperforation, facial edema, epiphora, and orbital cellulitismay also develop with nasal packing. General complications such as toxic shock syndrome, hypoxia, angina, cardiacarrhythmia, and sepsis may rarely occur after applying anterior, posterior pack. As much as 68% complication rate has been reported by Wang and Vogel.[6]

MATERIAL AND METHODS

It's a retrospective, observational study carried out among epistaxis cases examined between January 2014 and December 2014 in a tertiary health care centre. A total of 90 cases of epistaxis were identified by data received from the medical records department of the institution. These patients were received through Accident and Emergency department, Otolaryngology (ENT) clinic and as referral from other departments. The study included patients (n=90) who presented with nasal bleeding (epistaxis) at tertiary health care centre over the one year period. Postoperative nasal bleeding cases were excluded from the study. The diagnosis of epistaxis was based on clinical examination(including endoscopic techniques), general physical and systemic examination, laboratory and radiological investigations with examination under anaesthesia of the nose, nasopharynx and biopsy. Conservative (non-surgical) treatment included observation, anterior and posterior nasal packing. Surgical treatment included fractured nasal bone reduction, septal surgeries, FESS (Functional endoscopic sinus surgery) and resection of bleeding intranasal tumours. Collected data included patients' demographics, various causes of epistaxis and management modalities.

RESULTS AND OBSERVATIONS

Of total 90 epistaxis cases, Males outnumbered females, accounting for 60% of the cases (Table no.1). Age group 21-40 years was most commonly affected(40%), followed by less than 20 years age group (25.55%) and 41-60 years age group (20%) as detailed in table no 01.Trauma was the most common factor responsible for epistaxis in 38.89% of the cases, followed by idiopathic (22.21%) and systemic hypertention in 14.45 % of the cases (Table no 02). Unilateral epistaxis was three times the bilateral variety (Table no 03). From Table No. 04 and 05, among the different treatment modalities studied in patients with epistaxis, non-surgical modalities (81.11%) were common. The observational type (62.22%) of non-surgical treatment modality is practiced commonly for the patients with epistaxis followed by anterior nasal packing. Among the surgical modalities, surgical excision of bleeding intracranial tumour and septal surgeries were equally prevalent.

Table 1: Age and gender wise distribution of patients

Age Intervals	Gender		Total
	Male	Female	
0-20	14	09	23(25.55%)
21-40	21	15	36(40.00%)
41-60	11	07	18(20.00%)
Above 60	08	05	13(14.45%)
Total	**54 (60.00%)**	**36(40.00%)**	**90(100.00%)**

Table 2: Etiological Factors wise distribution of patients

Factor	Number of patients	Percentages
Trauma	35	38.89
Idiopathic	20	22.21
Systemic Hypertension	13	14.45
Inflammatory	07	07.78
Neoplastic (Benign+ Malignant)	05	05.55
Others	10	11.12
Total	**90**	**100.00**

Table 3: Type of Epistaxis depending on side of nose involved

Type of Epistaxis	Number of patients	
	Frequency	Percentage
Unilateral	67	74.44
Bilateral	23	25.56
Total	**90**	**100.00**

Table 4: Treatment modality wise distribution of patients

Type of treatment modality used	Number of patients	
	Frequency	Percentage
Non-surgical	73	81.11
Surgical	17	18.89
Total	**90**	**100.00**

Table 5: Treatment modality statistics

Various treatment modalities	Number of patients under treatment Modality		Total
	Non-surgical	surgical	
Observation	56	00	62.22
Anterior nasal packing	15	00	16.66
Posterior nasal packing, Conservative treatment for atrophic rhinitis	02	00	02.23
Surgical excision of bleeding intracranial tumour	00	05	05.56
Septal surgery	00	04	04.44
Fractured nasal bone reduction	00	02	02.22
FESS	00	01	01.11
Rhinolith excision, other surgical	00	05	05.56
Total	**73 (81.11%)**	**17 (18.89%)**	**100.00**

DISCUSSION

The male to female ratio was1.5:1 in our study. Male predominance is supported by Siddapur GK *et al*.[3] and

Padghum[7]. Possible explanation is hormonal. Oestrogen in females provides protection to the nasal vasculature as they do to other areas of thev ascular tree. Our Present study had a higher incidence of non-idiopathic epistaxis (77.79%), similar to study done by Siddapur GK *et al*.[3]andPino*et al*.[8] But, older study by Stell *et al*.[9] from England found a reverse proportion. This means, with advancement of diagnostic modalities, incidence of idiopathic epistaxis is decreasing. Unilateral bleeding being more common is also supported by Razdan *et al* [10]. Unilateral predominance signifiesprobability of local causes. In our study, trauma was the most common etiological factor responsible (40%). Similar to our study, Nash and Field recorded trauma (30.89%) as the commonest cause of epistaxis in a study on the epidemiology of epistaxis.[11] Hypertension (BP>140/90mmHg) at presentation was seen in 13 (14.45%) patients. In Vaamonde[12] study, epistaxis due to hypertension was 22.9%. Increased blood pressure at presentation may be due to apprehension. In present study, the observational type (62.22%) of non-surgical treatment modality is practiced commonly for the patients with epistaxis followed by anterior nasal packing. In a study by Sharma K *et al*.[1] use of eitheranterior nasal packing or merocele application was done inthe majority (87%) of the cases for the initial control of the bleeding and few required posterior nasal packing. There is need for further research to find out association between deviated nasal septum with epistaxis. Therefore, before labeling as idiopathic, we should ideally do CT scannose and paranasal sinuses.

SUMMARY AND CONCLUSIONS

Epistaxis is a leading cause of hospitalization in patients with otolaryngologic diseases, and males are almost one and half times affected than females. Trauma is the most common factor responsible for epistaxis. Age group commonly affected is the middle age group followed by early childhood. Unilateral epistaxis was three times the bilateral variety. Among the different treatment modalities for patients with epistaxis, non-surgical modalities that too the observational type of non-surgical treatment modality is practiced commonly for the patients with epistaxis.

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