

# Tiopathological study of epistaxis in a tertiary health care centre

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## Abstract

**Background:** Epistaxis is one of the most common and emergency condition observed in Otorhinolaryngology. It has various etiological factors like trauma, chronic diseases and infections. This study aimed at finding various etiological factors of epistaxis. **Aim and objective:** To find out common etiological factors of epistaxis in patients at a tertiary health care centre. **Methodology:** Total 100 patients diagnosed with epistaxis in department of Otorhinolaryngology were studied. Detailed history, clinical examination of these patients were recorded. Data was collected with pretested questionnaire and analysed with appropriate statistical tests. **Results and discussion:** Mean age of the patient was 55.23±4.3 years. Majority of the patients were in the age group of 61-70 years (23%) followed by 51-60 years (20%). Male to female ratio was 2.23:1. Trauma was the most common cause of epistaxis in both the genders followed by Bleeding disorder. Hypertension was also observed in 12% study population. Out of total 100 patients 71 patients had anterior nasal bleeding, 15 patients had posterior nasal bleeding and 14 patients had both anterior and posterior nasal bleeding.

**Key Word:** epistaxis.

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followed by hypertension and infection of sinus.<sup>4,5,6</sup> Epistaxis can have an anterior or posterior source and can be from septum or lateral nasal wall. A brief history and physical examination generally determine the cause of bleeding. Both systemic and local factors are responsible for epistaxis. Hospital admission should be considered for patients with significant comorbid conditions or complications of blood loss. Most of the cases can be managed conservatively with anterior nasal packing which exerts direct pressure over bleeding points. Present study was conducted to study the various etiological factors for epistaxis at a tertiary care centre.

## INTRODUCTION

Epistaxis is defined as bleeding from the nose. It is derived from the word 'épistazo' where means above and stazo means 'to fall in drops. It is one of the most common and most difficult emergencies to treat. About 60% of people experience the episode at least once in life time, with less than 10% of these requiring medical attention<sup>1,2</sup> This condition is common in childhood and becomes less in adult life, again showing a peaking 6th decade. Between 70-80% of all cases of epistaxis are idiopathic.<sup>3</sup> Previous studies in developing countries found the most common cause of epistaxis was trauma

## MATERIAL AND METHODS

Present study was a cross sectional study carried out in out patient department of Otorhinolaryngology in a tertiary care center. Study population was patients presented with complaints of nasal bleeding. Inclusion criteria:1. Age group above 12 years2. History of bleeding through the nose Exclusion Criteria1. Age below 12 years2. Patients who are not willing for study No attempt was made to assess the nose of bleeding patients in severe epistaxis as immediate care was the primary requirement. After inclusion and exclusion criteria total 100 patients were

studied during a period of 6 months who visited out patient department of Otorhinolaryngology. Study was approved by ethical committee of the institute. A valid written consent was taken from the patients after explaining the study to them. Data was collected using pretested questionnaire. Data collection included sociodemographic profile of the patients. Detailed history and detailed clinical examination was done to find out the etiological factors of epistaxis. Present symptoms were recorded. Data was analysed using appropriate statistical tests.

## RESULTS

Total 100 patients were studied for etiological causes of epistaxis. Mean age of the patient was  $55.23 \pm 4.3$  years. Majority of the patients were in the age group of 61-70 years (23%) followed by 51-60 years (20%). Patients in

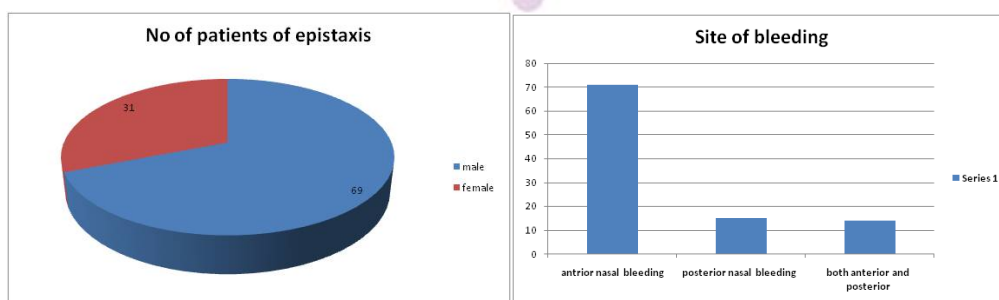
age group of  $>70$  years contributed 12%. Thus epistaxis was more commonly observed above the age of 50 years contributing almost 55% of all study population. Among all patients males were 69% and females were 31%. Male to female ratio was 2.23:1. Table 2 shows distribution of patients according to etiological factors and gender. Trauma was the most common cause of epistaxis in both the genders. Traumatic epistaxis was seen in 45% males and 13% females. Bleeding disorder was second most common cause of epistaxis in both males (8%) and females (4%). Hypertension was also observed in 12% study population. Infections were seen in 10% of patients. other causes observed were nasal polyp (4%), DNS (4%) and malignancy (1%). Out of total 100 patients 71 patients had anterior nasal bleeding, 15 patients had posterior nasal bleeding and 14 patients had both anterior and posterior nasal bleeding.

**Table 1:** Distribution of epistaxis patients according to age group

Sr no	Age group (years)	No of patients	Percentage
1	18-30	13	13
2	31-40	14	14
3	41-50	18	18
4	51-60	20	20
5	61-70	23	23
6	> 70	12	12
7	Total	100	100

**Table 2:** Distribution of etiological factors and gender of the patient

Sr no	Etiological factors	Male	Female	Total
1	Trauma	45(45%)	13(13%)	58
2	Bleeding abnormality	08(8%)	04(4%)	12
3	Infection	06(6%)	04(4%)	10
4	Hypertension	08(8%)	04(4%)	12
5	Nasal polyp	02(2%)	02(2%)	04
6	DNS	01(1%)	03(3%)	04
7	Malignancy	01(1%)	0(0)%	01



**Figure 1:** Distribution Of Epistaxis Patients According To Gender **Figure 2:** Distribution of patients according to site of bleeding

## DISCUSSION

In our study Mean age of the patient was  $55.23 \pm 4.3$  years. Epistaxis was more commonly observed above the age of 50 years contributing almost 55% of all study population. Similar findings were observed in Varshney and Saxena *et al* where they observed majority patients were in age group of above 40 years.<sup>7</sup>

contrary to our study Jain *et al* found that majority patients were in age group of 31-40 years<sup>8</sup>. Age related changes and increased prevalence of chronic diseases like hypertension, chronic heart diseases, renal diseases are responsible for epistaxis in this age group. In present study it was found that Male to female ratio was 2.23:1. Previous diseases like Mgbor N C *et al*<sup>9</sup>, Kaygusuz I *et*

*al*<sup>10</sup> also noted male predominance in epistaxis. Jain *et al* also observed that males are affected more than females, with a male to female ratio of 2.9:1.<sup>8</sup> Traumatic epistaxis was seen in 45% males and 13% females. Bleeding disorder was second most common cause of epistaxis in both males (8%) and females (4%). Hypertension was also observed in 12% study population. Various studies in different areas shows varied results. The trauma is varied from minor injury like nose picking to varying degrees of maxillofacial injuries from Road Traffic Accidents. Nose is the prominent part of face so it experiences injury more commonly. Varshney and Saxena *et al*<sup>7</sup> observed hypertension as the second commonest cause of epistaxis after idiopathic causes in India and Chaiyasate *et al*.<sup>11</sup> reported hypertension to be the commonest cause. Iseh KR *et al*<sup>12</sup> also observed hypertension as the commonest cause. Epistaxis in these patients may be due to uncontrolled /poor controlled hypertension. In our study out of total 100 patients 71 patients had anterior nasal bleeding, 15 patients had posterior nasal bleeding and 14 patients had both anterior and posterior nasal bleeding. Similar findings were observed in a study by Shah *et al*<sup>13</sup> where they observed anterior epistaxis in 69.29% cases while posterior type in 21.05% cases. In a similar study by Jain *et al*, 92.2% had anterior nasal bleeding, 3.3% had posterior bleeding and the remaining 4.4% patients had non-identifiable bleeding sites.<sup>7</sup> Anterior epistaxis is because of damage to Kesselbach's plexus at lower part of anterior nasal septum. Posterior epistaxis arises from damage to posterior nasal septal artery.<sup>14</sup>

## CONCLUSION

Male gender, increased age, trauma and hypertension are most common causes of epistaxis. Its need to control the road traffic accidents and hypertension in elderly persons

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