

## A Study of frequency of different causes of Epistaxis among patients Presenting in ENT Emergency

MUHAMMAD RIAZ, WAQAS JAVAID CHEEMA, USMAN KHALID, MANSOOR BASIR PAL

### ABSTRACT

**Aim:** To evaluate how often certain factor is a cause of epistaxis among patients presenting in ENT Emergency as compared with other causes. The fresh study on local level will be helpful to determine this. Once the magnitude is known, steps can be designed to control it so that complications can be prevented.

**Study setting** The study was done in the Department of ENT Unit II, Mayo Hospital Lahore. One hundred cases fulfilling the inclusion criteria were included in the study. The duration of study was one year from Dec 2012 to Nov 2013. Sample size of 100 cases was calculated with 95% confidence level and 6.5% margin of error.

**Sampling technique:** Non-probability, purposive.

**Study design** Cross sectional survey.

**Results:** 100 patients with history of epistaxis fulfilling the inclusion criteria were included in study. Mean age was  $34.84 \pm 11.32$  years, fifty five were males (55%) and 45 (45%) were females. Among 100 patients of epistaxis 32% were idiopathic, 21% were of trauma, 19% of upper respiratory tract infection, 17% of hypertension and 11% of blood dyscrasia.

**Conclusion:** Idiopathic is the most common variety of epistaxis.

**Keywords:** Epistaxis, emergency, causes.

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### INTRODUCTION

Epistaxis is a significant and serious problem. It is one of the commonest emergencies of otolaryngology<sup>1</sup>. It affects the hemodynamics and causes a great anxiety to patients and their relatives. Usually it is spontaneous and trivial and stops by itself. However at times it can be massive and may be fatal<sup>2,4</sup>.

The purpose of this study is to evaluate how often certain factor is a cause of epistaxis among patients presenting in ENT Emergency as compared with other causes. The fresh study on local level will be helpful to determine this. Once the magnitude is known, steps can be designed to control it effectively so that complications can be prevented. The major causes of epistaxis include local causes of nose and nasopharynx such as finger nail trauma, forceful blowing of nose, violent sneeze, upper respiratory tract infections, accidental and surgical trauma, all crust forming chronic diseases, granulomatous diseases of nose, foreign bodies, atmospheric changes, deviated nasal septum and neoplasms<sup>2,3</sup>. There are some general causes like cardiovascular diseases, blood dyscrasias, hepatic or renal

diseases, drugs, chronic alcohol abuse, vascular abnormalities and acute general infections<sup>4,5</sup>. Use of steroid nasal sprays can also be complicated by epistaxis, which is usually mild and stops after cessation of use of spray<sup>6</sup>. Seasonal variation, with predominance in winter and hot dry summer months has been found in most cases<sup>7</sup>. However, cause is not identifiable in a majority of patients and the group is termed as idiopathic<sup>3,4</sup>.

Although 60 percent of adults in general masses have experienced an epistaxis episode<sup>1</sup>, only 10 percent have required medical attention<sup>8</sup>. It is a common otorhinolaryngologic cause for hospital admission, though surgical intervention is rarely needed. It appears to have a bimodal age distribution, with most cases occurring before age 10 or between 45 and 65 years of age<sup>8</sup>. Hospital admission for epistaxis increases progressively with age<sup>9</sup>. Patients presenting with epistaxis are anxious and fear bleeding to death. Although death from epistaxis is rare, it can occur, and significant morbidity is relatively common. Pediatric epistaxis is treated mostly on an outpatient basis, but older patients (>60 years old) often require hospital admission. There are three levels of epistaxis management (1) to control the bleeding (2) to resuscitate the patient (3) to try to find and treat the cause.

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Department of ENT, King Edward Medical University/Mayo Hospital, Lahore

Correspondence to Dr. Muhammad Riaz, Assistant

Professor of ENT, Fatima Jinnah Medical College Lahore.

Email: muhammadriazmd@gmail.com Cell: 0334-4005157

## MATERIAL AND METHODS

This Cross Sectional Survey was conducted in the Dept of ENT Unit II, Mayo Hospital, Lahore. Mayo Hospital Lahore is a tertiary care hospital. All cases of epistaxis were managed in ENT department for one year from Dec 2012 to Nov 2013. Sample size of 100 cases was calculated with 95% confidence level and 6.5% margin of error. Sampling technique was Non-probability / purposive sampling.

Patients of either sex, age:15–65 years and patients with acute episode of nasal bleeding presenting in emergency were included in the study. Patients with age<15 and>65 years with history of drugs affecting blood hemostasis. e.g., anticoagulants like aspirin, heparin, warfarin were excluded from the study. 100 patients fulfilling the inclusion criteria were included in the study from Emergency Department of Mayo hospital, Lahore. After an informed consent demographic information like name, age and initial assessment was included, hemodynamic status and severity of bleeding assessed and recorded. Steps were taken to stabilize the patient. Assessment of cause of epistaxis in all the patients was done by asking about finger nail trauma and respiratory tract infection. Symptoms like sore throat, flu, sneezing, cough, fever>98.6F was recorded and infection was confirmed on total leucocyte count>11,000/cmm, systolic and diastolic blood pressure was noted, hypertension was noted if 140/90mm Hg, platelets count was done and thrombocytopenic purpura was labelled if platelet counts were < 150,000. All the patients underwent ultrasound abdomen for the assessment of chronic liver disease and the cases in whom no cause of epistaxis was noted were labelled as idiopathic. All the investigations were done from the laboratory of Mayo Hospital Lahore. All this information was recorded in a pre-designed proforma.

The data was entered in SPSS version 13.0 and analyzed through it. Quantitative variables like age was presented in the form of mean±S.D. Qualitative variables like gender, finger nail trauma, upper respiratory tract infection, hypertension, bleeding disorders (Thrombocytopenic purpura and CLD) and idiopathic epistaxis were presented in the form of frequency and percentages.

## RESULTS

One hundred patients with history of recurrent epistaxis more than once presenting in ENT Emergency were included; in those patients mean age was 34.84 years±11.327 (Descriptive statistics (Table 1). Out of total 100 patients of epistaxis fifty five were males (55%) and forty five (45%) were

females (M:F=1.5:1) (Table 2). The distribution of causes of epistaxis was as follows (Table 3). Among hundred patients of epistaxis thirty two (32%) had no obvious cause and hence labelled idiopathic. Twenty one (21%) were due to finger nail trauma, nineteen (19%) were due to upper respiratory tract infection, seventeen (17%) were due to hypertension, eleven (11%) were due to bleeding disorders and blood dyscrasia.

Table 1: Descriptive statistics for age (n=100)

Mean	Median	Mode	Std. Deviation
34.84	33.00	33	11.327

Table 2: Gender distribution (n=100)

Gender	Frequency	%age
Male	55	55
Female	45	45

Table 3: Frequencies of different causes of epistaxis

	Frequency	%age
idiopathic	32	32
Nasal trauma	21	21
Upper respiratory tract Infection	19	19
Hypertension	17	17
Blood dyscrasia and bleeding disorders	11	11

## DISCUSSION

Epistaxis is the most common emergency in otorhinolaryngology, with prevalence of about 10 to 12%, generally associated with predisposing factors such as trauma, rhinosinusitis, hypertension and coagulopathy. It may clinically be divided into anterior and posterior with significant differences in its manifestation and prognosis<sup>10</sup>. The etiology of epistaxis is divided into local and systemic causes. In my study, I evaluated the frequency of five local and systemic causes in patients with epistaxis, in which twenty one (21%) were due to finger nail trauma, seventeen (17%) were due to upper respiratory tract infection, nineteen (19%) were due to hypertension, eleven (11%) were due to bleeding disorders and blood dyscrasia, and thirty two (32%) having no obvious cause were labelled as idiopathic.

These results were compared with different studies, in one of which conducted by Iseh KR, Muhammad Z<sup>11</sup>, a total number of 72 cases were seen with epistaxis out of 3,706 new cases seen at the ENT clinic. The incidence of epistaxis amongst UDUTH ENT patients was 19/1000. There were 45 males (62.5%) and 27 females (37.5%) with a male to female ratio of 1.7:1. Their ages ranged between 5 to 70 years with the 0-10 age range recording the highest number (26.4%). The commonest cause of epistaxis was idiopathic (29.2%), followed by trauma

(27.8%) and hypertension (18%). Although results are different in this study but are comparable with another study conducted by Secchi, Myrian Marajó Dal-Indolfo, Maria Lucia Pozzobon-Rabesquine, Matheus Moro- Castro, Fabrício<sup>12</sup>, in terms of Gender distribution and prevalence of hypertension, in which the results are showing that most patients were men, in the proportion of 1.5 per 1 woman, and the age range varied from 1 to 88 years old (37±26, average±DP), prevailing between 11 to 30 were 21(35%) and between 51 to 60 years were 17(28%). The prevailing factors were: arterial hypertension 22(36%), trauma 10(16%), coagulopathy 3(5%), nasal tumor (nasoangiofibroma) 1(3%) and patients in whom no prevailing factor was identified 24(40%).

## CONCLUSION

Although epistaxis is a common otorhinolaryngological emergency and varied in its manifestation, the cause remains obscure in many cases labelled as idiopathic, finger nail trauma being the second most common cause in patients between 21–37 years of age and upper respiratory tract infection being the third most common cause besides idiopathic and hypertension the fourth most common cause which is amendable to treatment with excellent results and moreover it is more common in male patients of age group between 47–61 years with frequent episodes of epistaxis.

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