

Hypertension: A Common Cause of Epistaxis in Adults

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This is a study of one hundred cases of epistaxis in adult age group who presented to the department of ENT Unit-I Mayo Hospital Lahore during 1998 – 1999. Hypertension was found to be the most common cause of epistaxis i.e, 45 cases out of 100 (45%). The majority of these hypertensive patients were between the ages of 40 and 80 years. All the cases were managed by anterior nasal packing, antihypertensive therapy and other supportive measures.

Key words: Epistaxis, Nose bleeding, Hypertension.

Epistaxis is a common complaint facing the otolaryngologist. Up to 60% of the population will have at least one episode of epistaxis in their lifetimes¹. Epistaxis is considered to be an emergency in ENT practice. The vast majority of patients who suffer from arterial epistaxis, bleed from the nasal septum and chiefly from the area (Little's area) where anastomosis of the nasopalatine, greater palatine, anterior ethmoidal and coronary arteries takes place². The venous bleeding, which is common in young persons, arises from the vein which lies immediately behind the columella at anterior edge of little's area.

The aetiological factors for epistaxis include trauma, upper respiratory tract infections, hypertension, postoperative nose or sinus infections, tumours, disorders of blood vessels and clotting mechanisms. A rise in blood pressure is one of the factors responsible for epistaxis. Hypertension tends to perpetuate epistaxis once it sets in. There is still a worldwide belief in the association between hypertension and epistaxis³⁻⁷.

The purpose of this study was to evaluate the patients with epistaxis for different aetiological factors especially hypertension

Material and Methods

This study was carried out in the Department of ENT Unit-I, Mayo Hospital Lahore during 1998-1999. One hundred patients with epistaxis were admitted randomly through emergency and outpatients departments. A complete history and a thorough physical examination was carried out on every patient with epistaxis. Routine investigations such as blood examination, urine examination and X-Ray chest were performed in all cases while specific investigations such as C T Scan, biopsy etc, were carried out where indicated.

The patients were managed according to the cause of epistaxis. All the hypertensive patients were managed by doing anterior nasal packing and giving antihypertensive drugs and other supportive therapy. The selection of antihypertensive drugs was done after taking opinion from a physician or a cardiologist.

Results

One hundred patients presenting with epistaxis were

included in this study. The age of the patients ranged from 20-80 years. Out of 100 patients, 74 were males and 26 female patients (Table 1). The relative proportions of various aetiological factors showed that hypertension was the commonest cause of epistaxis in adult patients (Table 2). Out of 100 cases, 45 (45%) had hypertension, responsible for their nose bleeding. In 25 patients, trauma was the cause of epistaxis, while in 17 cases, epistaxis was due to upper respiratory infections. Eight cases were grouped as idiopathic as no cause of epistaxis could be ascertained. The miscellaneous causes included blood dyscrasia in one case, nasopharyngeal angiofibroma in two cases and maggots in two cases.

Out of 45 hypertensive patients with epistaxis, 35 were male (77.7%) and 10 were female (22.3%). The majority of these hypertensive patients belonged to the age ranging from 40—80 years. Table 3 shows the age distribution of hypertensive patients. Blood pressure of every patient was recorded at the time of admission.

The highest blood pressure at the time of admission was 260/150 mm Hg, while the lowest value was 150/95 mm Hg. The mean systolic pressure in our study was found to be 190 mm Hg and the mean diastolic blood pressure was 130 mm Hg.

In 25 patients (55.5%) there was no previous history of epistaxis while 10 patients (22.3%) had one episode, 7 cases (15.6%) had 2 episodes, 2 cases (4.4%) had 3-5 episodes and only one case (2.2%) had more than five episodes of nose bleeding in the past (Table 4).

Table 1:- Sex Distribution of Patients with Epistaxis

Sex of patients	No of patients	Percentage
Male	74	74%
Female	26	26%

Total No of cases = 100

Table 2:- Aetiological Factors of Epistaxis

Aetiology	No of patients	%age
Hypertension	45	45%
Trauma	25	25%
Infection	17	17%
Idiopathic	8	8%
Miscellaneous	5	5%

Total No of cases = 100

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Table 3:- Age Distribution of Hypertensive Patients

Age group	No of patients	Percentage
20-30 years	2	4.5%
31-40 years	4	8.9%
41-50 years	9	20%
51-60 years	13	28.9%
61-70 years	10	22.2%
71-80 years	7	15.5%

Total No of cases = 45

Table 4:- Previous Episodes of Epistaxis in the hypertensive patients.

Previous episodes	No of patients	%age
No previous episode	25	55.5%
1 episode	10	22.3%
2 episodes	7	15.6%
3-5 episodes	2	4.4%
More than 5 episodes	1	2.2%

Total No of cases = 45

Discussion

Hypertension is a common cause of bleeding from the nose in the middle and old age. Medium and small size arteries of nose in these patients have progressive replacement of the muscle tissue in tunica media by collagen tissue. Hence when these blood vessels rupture, bleeding continues for a long duration because of loss of contractility. Maxillary artery, like other large blood vessels of the body is prone to calcification of Monkeberg type. The resulting lack of elasticity may contribute to the pathogenesis of small vessels rupture by producing a local systolic hypertension⁸.

Structural abnormalities in vessels in nasal cavity, similar to those observed in cerebral circulation, were described by Shaheen in postmortem studies of hypertensive patients. The association between optic fundi abnormalities and epistaxis has also been reported⁹⁻¹⁰. In majority of cases bleeding arises from maxillary artery. Bleeding from anterior ethmoidal artery is uncommon as this artery supplies only 7% of the nasal mucosa¹¹.

A previous study carried out on younger patients revealed trauma to be the most common cause of

epistaxis¹².

In our study, hypertension was found to be a common cause of epistaxis in adult age group and majority of patients belonged to age ranging from 40-80 years. The prevalence of epistaxis in hypertensive patients in our study is comparable to that reported previously¹³.

The bleeding from nose in these patients was controlled by appropriate anterior nasal packing and control of blood pressure and other supportive therapy.

References

1. Small M, Murray J, Maran A. A study of patients with epistaxis requiring admission to hospitals. *Health Bull (Edinb)* 1982; 40: 20-29.
2. Shaheen OH. Epistaxis in the middle-aged and elderly. Thesis. London. University of London, 1967.
3. Riseman JEF, Weiss S. Symptomatology of arterial hypertension. *Am J Med. Sci* 1930; 180: 47.
4. Abelson TI. Epistaxis. In: Paparella MM, Shumrick DA, Gluckman TL, Meyerhoff WL. *Otolaryngology*. 3rd ed, vol3, W.B. Saunders Co; Philadelphia, 1991: 1831- 1841
5. Stopa R, Schonweiler R. Causes of epistaxis in relation to season and weather status. *HNO* 1989; 37: 198- 202.
6. Pollice PA, Yoder MG. Epistaxis, a retrospective review of hospitalized patients. *Otolaryngol Head Neck Surg* 1997; 117: 49-53.
7. Viducich RA, Blanda MP, Gerson LW. Posterior epistaxis; clinical features and acute complications. *Ann Emerg Med*, 1995; 25: 592-596.
8. Shaheen O.H. Epistaxis. In: Scott Brown's *Otolaryngology*, fifth edition, volume rhinology. Bill T. R; and Mackay, I. S. (eds) 1987; Butterworths, London, pp. 272 & 277.
9. Shaheen OH. Arterial epistaxis. *J Laryngol Otol* 1975; 139: 17- 34.
10. Ibrashi F et al. Effect of atherosclerosis and hypertension on arterial epistaxis. *J Laryngol Otol* 1978; 92: 877- 881.
11. Golding- Wood, PH. Maxillary artery ligation. In: Rob and Smith's *operative Surgery*, 4th edition, volume nose and throat. Ballantyne, JC and Harrison DFN(eds) 1986; Butterworths, London, pp. 122.
12. Manzoor Ahmad, Muhammad Amjad and Azhar Hameed. Aetiological factors in epistaxis. *JCPSP* 1997, Vol.7(3):108-109.
13. Bugti IF et al. Hypertension : A common cause of epistaxis. *pecialist*. 1994 ;11(1) : 43-45.