

PROFUSE EPISTAXIS: AN ARGUMENT FOR CONSERVATIVE MEDICAL MANAGEMENT

M Kurien, R Raman, K Thomas

ABSTRACT

A review of 10 years' experience of all patients with profuse epistaxis requiring hospitalisation in a tertiary care centre in India is presented. There were 106 patients among which only 72% of cases had associated medical illness. Hypertension (44%) and bleeding diathesis (11%) were found to be the most frequently associated aetiological medical conditions noted in this study. Although there is controversy regarding the optimum treatment in profuse epistaxis in literature, our experience suggests that it can be successfully managed with conservative medical management alone and surgical intervention with its potential complications may not be necessary in most cases.

Keywords: epistaxis, hypertension, therapy,

SINGAPORE MED J 1993; Vol 34: 335-336

INTRODUCTION

Epistaxis is a common affliction usually self-limiting with minimal loss of blood. However, if it does not stop and continues to bleed profusely, the patients need professional help and it can even be life-threatening. There have been various controversies in the West regarding the management of profuse epistaxis⁽¹⁻³⁾. The medical therapy recommended are vasoconstrictors, cautery, and nasal packs which can be either anterior or posterior. Surgical management include arterial ligations (external carotid, anterior ethmoidal or maxillary artery). Surgical interventions have been noted to be associated with increased temporary and permanent morbidity like facial numbness, pain, periorbital cellulitis, oroantral fistula, septal perforation and myocardial infarction with cardiac arrest^(1,3).

In this paper we describe our experience in the past ten years with profuse epistaxis requiring hospitalisation, the factors responsible, their management and outcome.

MATERIALS AND METHODS

The records of all patients admitted for profuse epistaxis in the Christian Medical College Hospital, Vellore, India, from March 1982 to February 1991 were retrospectively reviewed. Patients with epistaxis following facial trauma were excluded from the study. Nasal examination to locate the site of bleeding and to note the physical abnormalities of nasal septum or mucosal surface was undertaken. After the bleeding was controlled, a thorough medical history, examination and a battery of standard laboratory tests to check for bleeding diathesis functions were done. They were then analysed for age, sex associated medical problems, nasal abnormalities including site of bleeding, method of treatment, complications, duration of hospital stay and outcome.

Treatment included intravenous administration of fluids, blood transfusion, sedation (if indicated) and specific treat-

ment of aetiological conditions. Local treatment included nasal decongestants, cauterisation of bleeding points with silver nitrate when visualised, or nasal packing. Three types of nasal packs were used in the patients. They were: (1) anterior pack; or (2) insertion of Foley's catheter nasally followed by inflation of the bulb in the naso-pharynx along with the anterior pack; or (3) posterior pack. The nasal packs were of gauze impregnated with bismuth iodine paraffin paste (BIPP).

RESULTS

There were 106 patients, 32 females and 74 males. The average age was 40 years (range 4-85 years). Twenty patients were less than 20 years old, 74 patients between 20-60 years and 12 patients above 60 years.

Seasonal Occurrence

Bleeding occurred more frequently in the less humid weather conditions. Forty-five cases were admitted (42%) during November to February (cold and dry seasons). There were 40 cases during March to June (hot and dry season) and only 21 (20%) during July to October (rainy season).

Aetiological Factors

Thirty cases (28%) had no identifiable factors while 76 cases (72%) had associated medical illness (Table I). Hypertension was seen in 47 patients (44%). On admission 19 cases (18%) had systolic blood pressure over 160 mmHg. Diastolic pressure greater than 110 mmHg was seen in 12 patients (11%). Only 3 patients had severe hypertension over 180/120 mmHg at the time of admission. Bleeding diathesis were seen in 12 patients. Details of type of disorders are given in Table I.

Associated nasal deformities

Twenty-two patients had markedly deviated nasal septum or a nasal spur. Four other patients had ulceration of the middle turbinate. Only 10 of these patients had prominent bleeding from these sites, among which 7 were hypertensive.

Hemogram

At the time of admission 74 had normal pack cell count (PCV) above 30%, while 32 patients had less than 30%. Of the latter group eight patients had less than 20% PCV at admission. Thirty-eight patients (36%) received blood transfusion during admission for acute blood loss, the average transfusion requirement being two units of whole blood per patient (range 250 ml - 2000 ml).

The details of the site of bleeding with the treatment instituted are given in Table II. Repacking was necessary for eight patients. There was only one mortality in the group of patients studied. This 68-year-old lady died due to myocardial infarction

Department of ENT
Christian Medical College & Hospital
Vellore - 632004
S India

M Kurien, MS (ENT)
Reader

R Raman, MS (ENT)
Professor and Head

K Thomas, MD
Reader Med - II

Correspondence to: Dr M Kurien

Table I - Patients with associated medical conditions

<i>Associated systemic illness</i>	
Hypertension	41
Hypertension with diabetes	6
Chronic renal failure	2
Cirrhosis with portal hypertension	4
Acute hepatitis	2
<i>Diseases with haemorrhagic tendencies</i>	
Aplastic anaemia	2
Idiopathic thrombocytopenic purpura	1
Von Willebrands disease	4
Glanzmanns thrombasthenia	2
Congenital hypofibrinogenemia	1
Haemorrhagic dengue fever	1
Aspirin induced	1
<i>Local causes</i>	
Acute rhinitis with sinusitis	7
Post-operative dacrocysto rhinostomy	2
Total	76

within 4 hours of admission. She had a post nasal pack and her epistaxis was under control with a PCV of 24 at the time of her death. No other complications were noted in the patients in this study. The mean duration of hospital stay was 6.2 days (range 2-15 days).

DISCUSSION

The present study shows that systemic hypertension is the most common precipitating factor for severe epistaxis requiring hospitalisation seen in up to 44% of cases. Most of these (89%) had mild hypertension of less than 110 mmHg diastolic blood pressure. This may suggest that even though hypertension is associated with severe epistaxis the magnitude of hypertension may not have a direct relationship to the severity of epistaxis. Many workers have recognised this association in the literature⁽³⁻⁵⁾. However there have been some dissenting views as Weiss⁽⁶⁾ has reported this association in only 7-14% of hypertensive patients.

Our experience also supports other reports that severe epistaxis is more often seen during dry weather conditions. Eighty percent of our admissions occurred during the months of November to June when the humidity is less than 68%. In the West it is in the winter months that maximum epistaxis occurs and this also has been implicated to low humidity^(2,5).

Though 21% of our cases had associated marked septal deviation or a septal spur, only 9% had prominent bleeding from those sites. Septal deviation is not an unusual anatomical variation and the association could have been by chance alone. In this setting it is difficult to implicate this in the aetiology of epistaxis without controlled clinical studies.

Epistaxis was managed successfully in all our 106 cases by conservative medical management. This included treatment of the primary cause along with local treatment (Table II). Eight cases (7.5%) had to be repacked and one case died of myocardial infarction within 4 hours of admission. There were no other major complications noted in the other patients. A

Table II - Site of bleeding and treatment given

Site of bleeding	No. Of Patients	Local treatment given				No. Of Patients with Blood transfusions
		V/C	AP	F + AP	AP + PP	
Generalised (anterior) + (posterior)	18	-	4	4	10	8
Anterosuperior	25	2	21	-	2	11
Anteroinferior	10	3	7	-	-	3
Posterior	6	-	1	2	3	4
Little's area	38	17	19	1	1	12
Lateral wall	9	7	1	-	1	0

V/C = Vasoconstrictor/Cauterisation with silver nitrate.

AP = Anterior nasal pack.

F + AP = Foley's catheter and anterior nasal pack.

AP + PP = Anterior and posterior nasal packs.

review of the literature shows that in severe epistaxis surgical intervention is associated with higher morbidity, cost and with a longer hospital stay⁽¹⁻³⁾, without improved prophylaxis against further epistaxis⁽³⁾. However, none of the workers have shown differences in mortality by more radical approaches to the treatment of severe epistaxis.

The results of the present study seem to suggest that in all our patients with profuse epistaxis, control of bleeding was achieved exclusively by medical therapy. Certainly this is not what is recommended in the Western literature. However, there are no similar studies reported from the tropics and Asian countries. It is possible that the spectrum of epistaxis may differ from those noted elsewhere in the literature and may explain the fact that medical therapy is so remarkably successful in our country.

CONCLUSION

A ten-year study of profuse intractable epistaxis requiring hospitalisation in a tertiary care centre in India is presented. This showed that hypertension and platelet dysfunction are the most frequent medical conditions associated with this malady. Bleeding was controlled in all the cases by conservative medical management alone. There was one death due to myocardial infarction in an elderly lady. It is concluded that risky surgical interventions may not be necessary in most cases of severe epistaxis in our setting.

REFERENCES

- McDonald TJ, Pearson BW. Follow-up on maxillary artery ligation for epistaxis. Arch Otolaryngol 1980; 106: 635-8.
- Small M, Maran AGD. Epistaxis and arterial ligations. J Laryngol Otol 1984; 98: 281-4.
- Schaitkin B, Strauss M, Houck JR, Hershey PA. Epistaxis: Medical versus surgical therapy: A comparison of efficacy, complications and economic considerations. Laryngoscope 1987; 97: 1392-6.
- Juselius H. Epistaxis: A clinical study of 1724 patients. J Laryngol Otol 1974; 88:317-27.
- Jackson KR, Jackson RT. Factors associated with active refractory epistaxis. Arch Otolaryngol Head Neck Surg 1988; 114:862-5.
- Weiss NS. Relation of high blood pressure to headache, epistaxis and selected other symptoms. N Engl J Med 1972; 287:631-3.