

Full Length Research Paper

Epistaxis in Kaduna, Nigeria: A review of 101 cases in a resource constrained setting

A. S. Labaran, E. Musa, A. M. Kodiya*, G. M. Mohammed and B. M. Ahmad

National Ear Care Centre, Kaduna, Nigeria.

Accepted 17 December, 2013

Epistaxis is defined as hemorrhage from the nostril, nasal cavity, or nasopharynx. Sufferers and clinicians may develop significant anxiety despite the fact that majority of patients may be treated successfully by the first attending physician. The objective of this study was to review the incidence, common etiological factors and management modalities of epistaxis in a resource constrained setting. It is a retrospective review of 101 patients seen with epistaxis over 7 years at National Ear Care Centre, Kaduna from January 2002 to December 2008. The age of patients reviewed ranged between 2 and 75 years. An incidence of 0.5% was recorded and slight male preponderance with a male:female ratio of 1.4:1. Dry-hot and cold harmattan weather had the highest prevalence. Trauma and infections were the main etiological factors identified, but over 40% had no discernable cause. About 25% presented with active bleeding and 10.98% required admission. All were managed conservatively. Less than 2% had blood transfusion. Epistaxis is a common rhinological emergency that requires prompt intervention to reduce morbidity and prevent mortality. Conservative intervention was a satisfactory approach in this study.

Key words: Epistaxis, resource constrained, conservative management.

INTRODUCTION

Bleeding from the nose and nasopharynx is a common symptom of diverse conditions which may present as mild recurrent bleeds or severe life threatening rhinological emergency and may pose a challenge to even a skilled otolaryngologist (Nnnennia, 2004).

Globally, the true incidence remained unknown, but it is estimated that 60% of the population will at least have an episode of epistaxis in their life time and 6% of them will seek medical attention (Saubrah and Saxena, 2005). A slight male preponderance with 55% male and 45% female has been reported (Nnnennia, 2004; Saubrah and Saxena, 2005; Gerald, 2008). It is rare in neonates but common among children and young adults and peaks in the sixth decade giving a bi-modal age presentation (Saubrah and Saxena, 2005; Gerald, 2008). Epistaxis is said to be commoner in the cold winter and during the hot

dry climate.

The nasal mucosa is richly supplied by branches of both the external and internal carotid arteries with rich anastomoses. The Kiesselbach's plexus is responsible for most anterior epistaxis accounting for 85 to 95%, but easy to identify and treat. Posterior epistaxis which constitute 5 to 15% are often more severe, difficult to locate and treat.

A structured clinical classification into either primary or secondary, childhood or adult and anterior or posterior epistaxis is preferred over the traditional classification based on local and systemic causes (Gerald, 2008). This is because majority of cases have no identifiable cause.

The goals of therapy in epistaxis are to control haemorrhage, reduce hospital stay and limit complications in a cost effective way. The best treatment modality to

*Corresponding author. E-mail: dockodiya@yahoo.com.

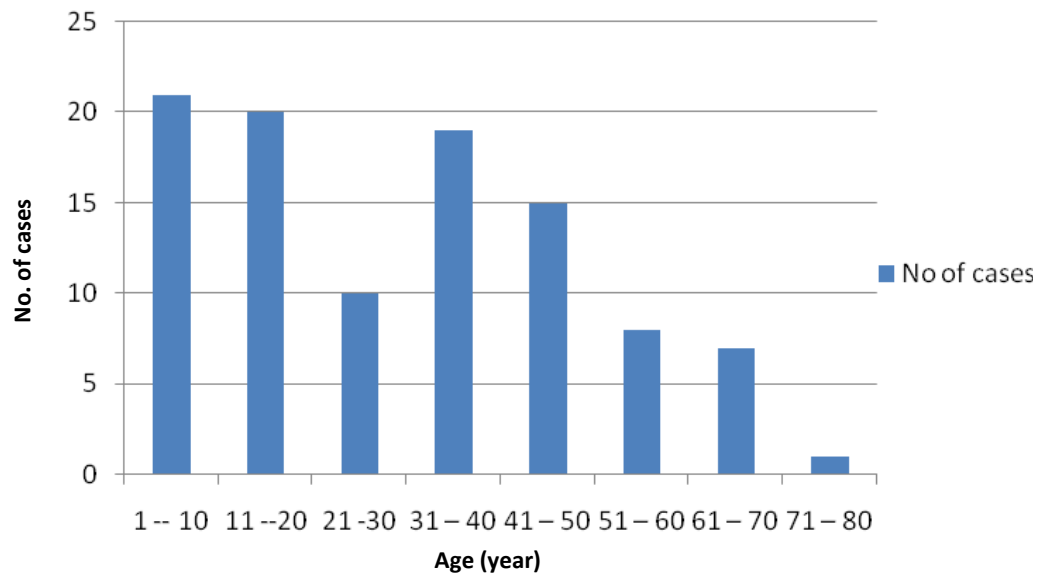


Figure 1. Age distribution.

achieve these goals is however a matter of great debate (Nnnennia, 2004; Saubrah and Saxena, 2005). Resuscitation where indicated is mandatory. Specific treatment can be conservative or surgical. Conservative methods include cauterization and nasal packing. Surgical methods involve ligation of feeding vessels and septoplasty. However, modern approaches include endoscopic ligation and embolization. This study presents our experience in managing epistaxis in a resource constrained setting.

MATERIALS AND METHODS

This is a retrospective review of 101 patients seen over a period of 7 years at the National Ear Care Centre, Kaduna from January 2002 to December 2008. This period coincided with the time when the centre used one site for administration, another hospital for clinics and admission and yet another hospital for theatre space.

Out-patient and in-patient registers were used and medical records of patients seen during the period under review were retrieved. Parameters extracted include demographics, concomitant medical conditions, drug history, month of presentation, trigger of bleeding, treatment modality, complications, length of hospital stay and examination findings. The data was analyzed using simple statistical methods.

RESULTS

A total of 20,308 patients were seen at the centre during the period under review. Of this number, 101 patients (0.5%) had epistaxis as a presenting complaint.

Figure 1 shows age distribution of patients with epistaxis. Age ranged from 2 to 75 years, with mean of 30.4 years. Peak presentations were recorded among age groups 1 to 10 years (40.6%) and 31 to 40 years

(33.6%). Only 11 patients (10.89%) required admission. Of this number, 2 had blood transfusion. Hospital stay ranged 2 to 4 days with an average of 3 days.

Table 2 shows the associated aetiological factors. Idiopathic causes accounts for about 46% and trauma (15.8%), while infections constitute 11.9%.

Table 3 shows treatment modalities offered to the 25 cases with active epistaxis at presentation. Of this number, 52% had anterior nasal pack, 16% had both anterior and posterior nasal packs, while 32% benefitted from cautery.

DISCUSSION

In spite of the anxiety generated by nose bleeding, cure can be achieved by the first attending physician if prompt and appropriate intervention is made. Epistaxis is a common symptom in ENT practice (Nnnennia, 2004; Saubrah and Saxena, 2005; Gerald, 2008; Ijaduola and Okeowo, 1983). In this study, its incidence was 0.5%. The age ranged from 2 to 75 years with mean age of 30.49 years and male to female ratio of 1.4:1. These findings agree with that of Mgbor (2004) who also reported similar findings in a study carried out in Enugu, South Eastern Nigeria. Bimodal age presentation with peaks at age groups 1 to 20 and 31 to 40 years was observed. Adult epistaxis has been reported to be commoner in the sixth decade of life (Saubrah and Saxena, 2005; Gerald, 2008); this is in contrast with the findings in this study of fourth decade. Perhaps this may be due to small proportion of the aged in this environment owing to low life expectancy. Increased incidence in cold harmattan months and the hot/dry months have been reported (Gerald, 2004) which agrees with the findings of

Table 1. Distribution by month of presentation.

Month of the year	No. of cases	Percentage
January	8	7.92
February	6	5.94
March	8	7.92
April	11	10.89
May	2	1.98
June	5	4.95
July	9	8.91
August	7	6.93
September	6	5.94
October	13	12.87
November	14	13.86
December	10	9.90

Table 2. Distribution by aetiologic factor.

Aetiological factors	No. of patients	Percentage
Idiopathic	45	45.55
Trauma	16	15.84
Hypertension	13	12.87
Infections	12	11.88
Tumours	5	4.95
Blood dyscrasias	4	3.96
Chronic liver disease	3	2.97
Foreign Body	1	0.99
Drug induced	1	0.99
Deviated nasal septum	1	0.99
Total	101	100

Table 3. Treatment modalities.

Treatment modality	No. of cases	Percentage
Anterior nasal packing	13	52
Anterior and posterior nasal packing	4	16
Cauterization	8	32
Total	25	100

this study as shown in Table 1. This also agrees with the report of Bhatia and Varughese (1987) in Jos who attributed the increased incidence to high wind velocity and dryness which favour crust formation in the nasal cavity.

There must be a committed search for the bleeder as well as a deliberate effort to find the cause of epistaxis (Gerald, 2008; Dounil et al., 1999; Jeselius, 1974), because too many cases of epistaxis are grouped as idiopathic or primary which may not necessarily be so. In this study, 45.55% of the cases were idiopathic. This is similar to findings of Mgbor (2004). With more resources/

better equipment and careful examination, this figure may likely decrease. Trauma, infections and tumours were noted as shown in Table 2. Varshney and Saxena (2005) however reported cardiovascular diseases (including hypertension and arteriosclerosis), infection and trauma in decreasing importance as leading cause of secondary epistaxis in their study. In this series, about 13% of patients had hypertension without any identifiable cause of epistaxis, but it was observed that 3 patients who had epistaxis secondary to trauma and 1 patient due to blood dyscrasias also had hypertension. Bleeding was also more severe among the hypertensives. It is possible that

with committed search one could find the real cause of epistaxis in these hypertensives. Elima and Knopfholz (2000) reported that epistaxis is unlikely to be a hypertensive emergency. Also, a number of large studies have failed to show causal relationship between hypertension and epistaxis (Lubianca-Neto et al., 1998).

The bleeding point if found is cauterized either with silver nitrate or electro cautery. Failure to find the bleeding point leads to anterior nasal pack with paraffin gauze, gloved finger or rarely merocel when available. Fifty two percent were successfully managed with anterior nasal packs alone, 16% with posterior nasal pack using Foleys catheter inflated with air in addition to anterior nasal pack with paraffin gauze under local anaesthesia. All patients with nasal packs were given prophylactic antibiotics. Nasal packs were removed between 24 and 48 h. Most patients were discharged home on the third day of admission. There was no mortality recorded and this is similar to Urashi et al. (2004).

Epistaxis is a common symptom which presents often as recurrent minor bleeds, but not infrequently as acute severe episode requiring emergency care. Thorough patient evaluation is mandatory for appropriate management. More purposeful search for etiological factors by the attending surgeon and identification of bleeding point must be encouraged. Conservative management was very effective despite resource constrain.

REFERENCES

- Bhatia PL, Varughese R (1987). Pattern of Otolaryngological diseases in Jos Community. *Nigeria Med. J.* pg 67-73
- Dounil OM, Robertson G, McGarry GW (1999). A new bipolar diathermy probe for the out patient management of adult epistaxis. *Clin. Otolaryngol.* 24:537-41.
- Gerald WM (2008). Epistaxis, In: Valerie J Lund (ed.), *Scott-Brown's Otorhinolaryngology' Head and Neck Surgery, Seventh Edition*, Hodder Arnold. 2(13)126:1596-1607.
- Ijaduola GTA, Okeowo PA (1983). Pattern of epistaxis in the tropics. *Centr. Afr. J. Med.* 29:-80.
- Jeselius DH (1974). Epistaxis: a clinical study of 1,724 patients: *J. Laryngology Otology* 88:317-22.
- Lima E, Knopfholz J (2000). Co30 Relationship between epistaxis and arterial pressuric blood levels: is epistaxis a hypertensive emergency? *Am. J. Hypertens.* 13(S2):220A.
- Lubianca-Neto JF, Bredemeier M, Carvalhal EF, Arruda CA, Estrella E, Pletsch A, Gus M, Lu L, Fuchs FD (1998). A study of the association between epistaxis and severity of hypertension. *Am. J. Rhinol.* 12:269-72.
- Nnnennia CM (2004). Epistaxis in Enugu: A 9 year Review. *Nigerian J. Otorhinolaryngol.* 1(1):11-14.
- Saubrah V, RK Saxena (2005). Epistaxis: A Retrospective clinical study. *Indian Journal of Otolaryngology and Head and Neck Surgery* 57: 2.
- Urashi R, Raizade RM, Chaturvedi VN (2004). Efficacy of conservative treatment modalities used in epistaxis, *Indian J. Otolaryngol. Head Neck Surgery* 56(1):20-22.