

Epistaxis in Ido Ekiti, Nigeria: A 5-year review of causes, treatment and outcome

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ABSTRACT

Background: Epistaxis is a common otorhinolaryngological emergency worldwide. This study determined the pattern, causes/risk factors, treatment and outcome of nasal bleeding in Ido Ekiti, Nigeria. **Materials and Methods:** This was a retrospective study of patients managed for epistaxis in the Federal Medical Centre, Ido Ekiti, Nigeria, from January 2005 to December 2010. Information on demographic characteristics, clinical presentation and management of epistaxis was obtained from the hospital medical records. **Results:** A total number of 69 patients with epistaxis were seen out of which 57 with complete data was studied. The male to female ratio was 1.7:1. Their ages ranged from 2 to 81 years, with a mean age of 44.1 years \pm 20.9 SD. There were bimodal peak age groups at 21-30 and 61-70 years. Idiopathic causes of epistaxis accounted for 42.1% followed by trauma, associated hypertension, tumors, septicemia and anticoagulant therapy. The right nasal cavity was involved in 57.9%. Anterior bleeding accounted for 43 (75.4%). Majority of our patients were managed with anterior nasal packing. Surgical measures carried out included resection/clearance of nasal tumors. About 8.8% of patients had blood transfusion. **Conclusion:** Idiopathic and trauma from road traffic injuries were the most common causes/risk factors for epistaxis in this study. Majority of our patients were managed conservatively with anterior nasal packing.

Key words: Causes, epistaxis, treatment

INTRODUCTION

Epistaxis is defined as bleeding from the nasal cavity.^[1] It is a common condition and could present as a life-threatening emergency. Prompt and appropriate first-line management is important to minimize associated morbidity and mortality. Simple cases are however usually self-limiting and are controlled by external compression of the nose alone.^[2] Epistaxis affects people of all age groups.^[3] In children, it is common between the age of 2 and 10 years. Occurrence is unusual in infants in the absence of a coagulopathy or nasal pathology such as choana atresia or neoplasm.^[4] About 60% of the general population would have experienced at least

one episode of epistaxis in their lifetime but only 6% seek medical attention.^[5,6]

Epistaxis can be unilateral or bilateral. Both external and internal carotid arteries supply the nose. These arteries intercommunicate in rich plexuses. There are two areas that are often implicated in nose bleeds - Kiesselbach's plexus in the little's area (giving rise to anterior bleeds) and Woodruff's plexus (giving rise to posterior bleeds). Anterior bleeding is usually easier to access and is therefore less dangerous unlike posterior epistaxis which is more difficult to treat as visualization and accessibility is more difficult.

There is no study on epistaxis in Ido Ekiti, Nigeria. The aim of this study was to review the pattern, the causes/risk factors, modality of treatment and outcome of nasal bleeding in patients who were treated at Ido Ekiti, a suburban setting in South Western Nigeria.

MATERIALS AND METHODS

A 5-year retrospective study of patients with epistaxis treated at the Federal Medical Centre, Ido Ekiti, Nigeria

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from January 2005 to December 2010 was carried out. Records of all patients with epistaxis who were seen and treated in the Accident and Emergency unit, ENT clinic and referrals from other wards of the same hospital were retrieved from the hospital medical record department. The information extracted included demography, causes/risk factors, duration between onset of bleeding and presentation, quantity of blood loss, side affected, laboratory investigations, mode of treatment and treatment outcome. Inclusion criteria include all patients with complete records/data. Patients with epistaxis secondary to nasal/paranasal surgeries or incomplete records/data were excluded.

Ethical approval to conduct this study was obtained from the hospital ethical and research committee. A simple descriptive analysis of the data obtained was carried out using SPSS version 14.0.

RESULTS

Of the total 69 patients seen during the study period, 57, comprising 36 (63.2%) males and 21 (36.8%) females had complete data and were analysed. Otolaryngological patients seen during the study period was 1893. Their ages ranged from 2 to 81 years, with a mean age of 44.1 years \pm 20.9 SD. The age groups 21-30 and 61-70 years were found to be most at risk of epistaxis [Table 1]. The causes/risk factors of epistaxis is shown in Table 2. Idiopathic tops the list, accounting for 24 (42.1%). Twenty-one (36.8%) cases were due to trauma; 5 (8.8%) patients had tumor (one nasal granuloma, one benign polyp, two nasopharyngeal carcinoma, and one sino nasal tumor) while another 5 (8.8%) had associated high blood pressure. Similarly, 1 (1.8%) patient had septicaemia and another 1 (1.8%) had anticoagulant therapy. Bleeding involved the right nasal cavity in 33 (57.9%) patients and left nasal cavity in 14 (24.6%) patients, while 10 (17.5%) patients had bilateral involvement. Anterior epistaxis occurred in 43 (75.4%) patients and posterior epistaxis occurred in 10 (3.5%) patients, while the remaining four were not sure of the bleeding site. Majority, 36 (63.2%), of our patients reported at our center after 24 h: 16 (28.1%) patients within 6 h and three (5.3%) patients within 12 h [Figure 1].

Thirty-nine (68.4%) patients had no previous history of epistaxis, while 18 (31.6%) patients had between 1 and 3 admissions for epistaxis. Present bleeding was the first episode in 30 (52.6%) patients and the second and third episodes in six (10.5%) patients. Fourteen (24.6%) of our patients were not sure of the number of episodes

they had in the past, and one patient has had recurrent nasal bleeding since childhood.

Table 3 shows the various forms of treatment that were instituted. Twenty patients were managed with anterior nasal packing. Thirty-two patients had more than one form of treatment. Five (8.8%) patients had blood transfusion.

DISCUSSION

We observed an age range of 2-81 years (mean:

Table 1: Age and sex distribution of patients with epistaxis

Age range of patients (years)	Male N (%)	Female N (%)	Total N (%)
1-10	1 (1.8)	2 (3.5)	3 (5.3)
11-20	3 (5.3)	1 (1.8)	4 (7.0)
21-30	13 (22.8)	5 (5.3)	16 (28.1)
31-40	5 (8.8)	1 (1.8)	6 (10.5)
41-50	4 (7.0)	1 (1.8)	5 (8.8)
51-60	3 (5.3)	2 (3.5)	5 (8.8)
61-70	4 (7.0)	7 (12.3)	11 (19.3)
71-80	3 (5.3)	3 (5.3)	6 (10.5)
>80	0 (0.0)	1 (1.8)	1 (1.8)
Total	36 (63.2)	21 (36.8)	57 (100.0)

Table 2: Risk factors/causes of epistaxis

Risk factors/causes	Frequency N (%)
Idiopathic	24 (42.1)
Trauma	21 (36.8)
Road traffic injury	
Fall from height	
Assault	
Tumors	5 (8.8)
Nasal granuloma	
Benign polyp	
Nasopharyngeal carcinoma	
Sinonasal tumor	
Associated high blood pressure	5 (8.8)
Septicemia	1 (1.8)
Drug (anticoagulant)	1 (1.8)
Total	57 (100.0)

Table 3: Treatment options applied to patients with epistaxis

Treatment options	Number of patients
Anterior nasal packing	20
Chemical cautery	13
Blood transfusion	5
Electrocautery	5
Reduction of fractured nasal bone	4
Foley's catheter balloon	2
EUA+biopsy of nasopharynx	2
Surgical resection of nasal tumor	2
EUA+suturing of laceration	1
Others (observation, decongestant, Etamsylate, etc.)	15

NB: Some patients had more than one form of treatment applied; EUA: Examination under anaesthesia

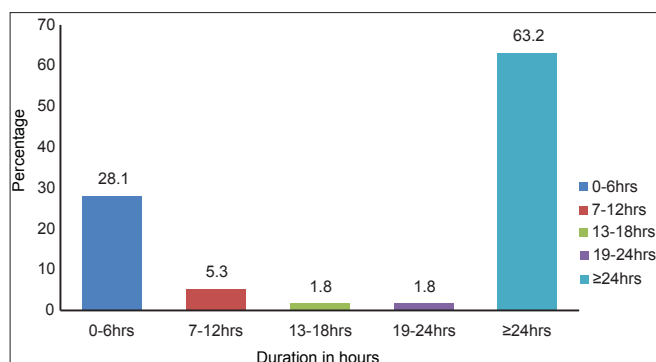


Figure 1: Duration of bleeding before presentation

44.1 years) and bimodal age presentation with peaks at age groups 21-30 and 61-70 years in the current report. These findings are similar to previous reports^[7,8] though studies performed in most part of the country showed bimodal age presentation in adolescents and young adults.^[7,9-11] The relatively small sample size and higher proportion of traumatic epistaxis recorded in the current study might account for these differences. Epistaxis has however been reported in the elderly^[12] with bimodal age groups: Those younger than 10 years and those aged 70-79 years. The slight male dominance 1.7:1 in the current report is similar to the results of the Iseh *et al.*^[13] and most other authors.^[7,14-16] Male preponderance in epistaxis may be attributed to the high incidence of injury in the young males because of their frequent involvement in high-risk activities compared to the females.^[8] The causes of epistaxis observed in the present study are similar to reports from other centers in Nigeria.^[10,11,13,16,17] Idiopathic cause is a diagnosis of exclusion and every effort should be made to determine the cause of epistaxis in such patients with further investigations.^[10] Trauma was the second most common cause of epistaxis in this study. This contrasts reports from some centers where trauma, idiopathic and hypertension in decreasing order were most common cause of epistaxis.^[9,14,15] In the current report, about 8.8% had associated hypertension, which forms the third most common risk factor. Hypertension was reported as a major cause of epistaxis in some previous reports.^[5,8] Nonetheless, no causal relationship between hypertension and epistaxis had been established. However, bleeding tends to be more severe among patients with concomitant hypertension. Tumors including nasopharyngeal carcinoma, sinonasal tumor, benign polyps and nasal granuloma constituted 8.8% of our patients.

Majority, 43 (75.4%), of our patients had anterior epistaxis, which is similar to the findings in previous

studies.^[16,17] Anterior epistaxis is more common in children and young adults, whereas posterior epistaxis is more common in older individuals. Posterior epistaxis usually presents in a severe form and is also more difficult to control and quantify because patients usually swallow the blood. It was reported in 3.5% of the patients in this study.

Majority of our patients presented in our center after 24 h. The delay might be due to factors such as previous attempts to stop the nasal bleeding at home with local herbs or at other medical facilities and lack of access to a good road network, which is worsened during the raining season, as noted in the previous studies.^[11,17]

Most of the patients in this study had their epistaxis controlled with minimal intervention. However, treatment of severe epistaxis involved various modalities depending upon its site, severity and etiology.^[5] Anterior nasal packing with gauzed glove finger and posterior nasal packing with the use of balloon Foley's catheter are frequent in severe epistaxis. Nasal packing has the advantage of easy placement and removal. It can be done without recourse to the operating room. It is relatively cheap and affordable.^[7]

In summary epistaxis is a frequent otolaryngologic emergency with idiopathic and trauma from RTIs being the leading causes of in the current study. Simple conservative management modalities are effective if epistaxis is not severe.

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