

Original Article

A cross sectional study on Prevalence of various etiological factors of epistaxis in a Tertiarycare Hospital in Andhra Pradesh.

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Abstract

Introduction : Introduction: Epistaxis is a common emergency pertaining to Otorhinolaryngology. It can be managed by conservative measures but occasionally may be a life threatening condition. Identification of the cause is important. Aims and Objectives: To analyze the etiology in patients with epistaxis. Methodology: A prospective study was done in a tertiary care hospital. The study period was from May 2014 to April 2015. Results A total of 96 patients had epistaxis; 58 were males and 38 were females. The most common cause of epistaxis was idiopathic (36.09%) followed by hypertension (28.38%), trauma (16.47%), and coagulopathy (8.33%). Conclusion: Hypertension, trauma and coagulopathy were the most common etiological factors among the patients in whom etiology was found although in most of the patients, etiology could not be found. Anterior nasal packing was the most common treatment method applied to these patients.

Key words: Epistaxis, idiopathic, hypertension, trauma, coagulopathy, Anterior nasal packing, anterior epistaxis, posterior epistaxis.

Introduction

Epistaxis is defined as acute hemorrhage from the nostril, nasal cavity, or nasopharynx. It is a frequent emergency department (ED) complaint and often causes significant anxiety in patients and clinicians¹. Its incidence is difficult to assess but it is expected that approximately 60% of the population will be affected by epistaxis at some point in their lifetime, with 6% requiring medical attention². Epistaxis can be classified as anterior and posterior epistaxis based on the site of origin³. The Kiesselbach plexus, or the Little area, represents a region in the anteroinferior third of the nasal septum, where all 3 of the chief blood supplies to the internal nose converge.. Usually there is profuse bleeding with difficulty in accessing the site of bleed so it poses challenge in the management. Anterior epistaxis is usually controlled by local pressure or anterior nasal packing while posterior epistaxis often requires posterior nasal packing or arterial ligation.

Epistaxis can be due to both systemic and local factors. Local causes include inflammatory, infective, traumatic, anatomical (deviated nasal septum, septal spur), neoplasm, and foreign body. Similarly, the systemic causes of epistaxis are hematological, hypertension and vascular heart disease, hepatic derangements, renal causes, and drugs for anticoagulation. However in majority (80–90%) of patients no identifiable cause is found and is labeled as

“idiopathic”⁴. Forceful nose blowing, excessive coughing in chronic obstructive pulmonary disease (COPD), straining in constipation and benign prostatic hyperplasia (BPH), and lifting heavy objects are aggravating factors for the epistaxis.⁵

AIMS AND OBJECTIVES

The aim of this study is to evaluate the patients with epistaxis according to the etiological factors.

If the etiology is known precisely, the management of a patient becomes easy. A set of principles and protocols can be laid down which can be adhered to cater every patient presenting as an ENT emergency with epistaxis

METHODS AND METHODOLOGY

Type of study: Descriptive cross sectional study

Study period: May 2014 to April 2015.

Study area: OPD Department of ENT

Study place: Alluri sitaramaraju academy of medical sciences, Eluru.

Sample size: 96 patients

Sampling technique: purposive sampling

Inclusion criteria: patients presenting to either ENT OPD or the Emergency room with epistaxis

Exclusion criteria: patients unwilling to be a part of the study

Data collection: personal interview with semi structured questionnaire

Data analysis: collected data analyzed and depicted in rates ratios and percentages

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All the patients presenting with epistaxis were included in the study, thoroughly investigated and followed up, as to the etiological factor

RESULTS

During the study period 96 patients with epistaxis were admitted to this hospital with age ranging from 5 to 90 years. Out of these patients 58 were males and 38 were females.

Fig no:1 sex distribution of patients.

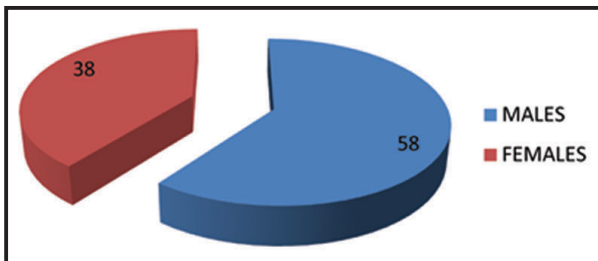
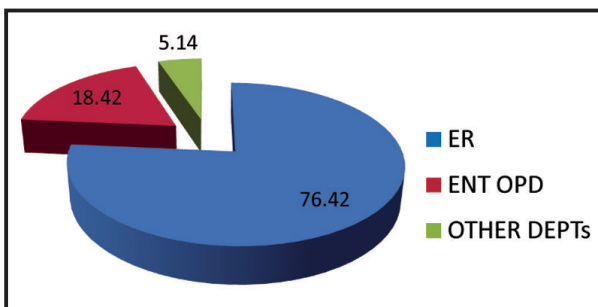
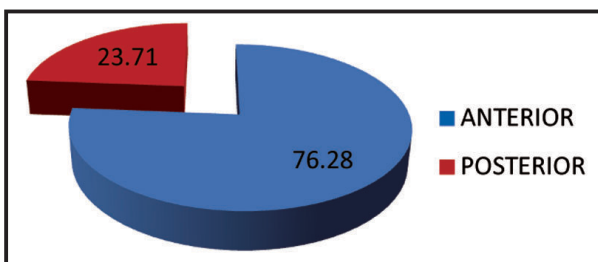


Fig no 2: source of patients



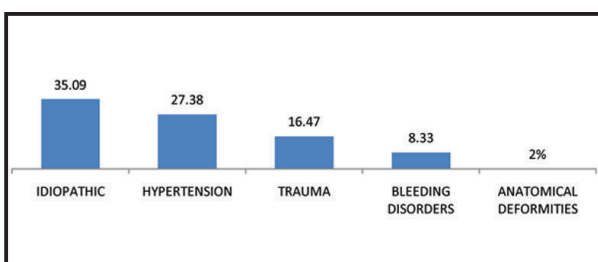
Among these patients 76.42% presented through ER, 18.42% presented in OPD, and 5.14% were received from other departments.

Fig no 3: Site of origin



According to the type of epistaxis based on site of origin 76.28% patients had anterior epistaxis and 23.71% patients had posterior type of epistaxis.

Fig.no 4: Common etiology of epistaxis.



Regarding the etiology, exact cause of epistaxis could not be ascertained in 35.09% patients, that is, idiopathic. Next common cause was hypertension 27.38% followed by trauma 16.47% and coagulopathy 8.33% and lastly anatomical deformities which are 2%.

DISCUSSION

Epistaxis is frequently encountered in ENT field, accounting for one of the most common emergency, seen in people of all ages. According to the site epistaxis may be divided into anterior and posterior. Anterior epistaxis occurs more frequently in children and adolescents. It is rarely serious as the bleeding point is well under vision and anterior. Its origin is usually arterial (kiesselbach's plexus) or occasionally venous (retrocolumellar vein). Posterior epistaxis occurs predominantly in the elderly due to cardiovascular causes and the site of bleeding is not visible by anterior Rhinoscopy as the site of origin is located more posteriorly posing a great difficulty to arrest. Age related and cardiovascular diseases related vessel derangements are probably responsible for the increased duration of bleeding. In this study, the age range of the patients varied from 5 to 90 years. Epistaxis was found to be more common in children younger than 10 years 26.42% and elderly people above 60 years of age 23.57% which is similar to the results of Pallin et al⁶. Males were affected more often than females with a ratio of 1.6. Similar findings have been noted in other studies^{7,8}. This may be because the males are more frequently involved in sports. The higher prevalence of epistaxis in children is probably due to nose picking which becomes a habitual disorder causing injury to the little's area that results into anterior epistaxis. Similarly the elderly people commonly have co-morbidities such as hypertension and diabetes mellitus which cause fragile and delicate vessels bleeding easily on usage of excessive force as in straining during micturition and defecation and constipation; excessive coughing in lung diseases. Rhino sinusitis, temperature changes, and dry heat, all of which cause excessive drying up of nasal mucosa and crusting, produce bleed while blowing nose or picking nose or with trivial trauma leading to anterior epistaxis⁹

Patient presenting with epistaxis should be thoroughly examined and history should be properly taken to identify the site and cause of bleeding. Most of our patients 35.09% with epistaxis did not have an identifiable cause¹⁰. Hypertension was the second most common cause of the

epistaxis in our patients which is similar to study by Varshney and Saxena¹¹. Nowadays Scott-Brown, 7th edition says that hypertension is not the cause of epistaxis but it prolongs the bleeding once it starts because in patients with hypertension there is arterial muscle degeneration that leads to defective muscle layer lacking the power to contract resulting in persistence rather than initiation of bleeding¹¹. Patients with epistaxis are anxious which might lead to transient hypertension, as the blood pressure was found to be higher in most patients on arrival to hospital. The severity of trauma is always varied, but however trivial or serious is the injury, Epistaxis might be seen Comorbidities found in some of these patients were cardiovascular diseases, diabetes mellitus, and liver and renal diseases. Similarly the aggravating factors found to be in association with increased pressure in the nose, by forceful micturition or straining on defecation.

Conclusion:

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- 2 Restoration of calcaneal height and width,
- 3 Decompression of the sub fibular space available for the Peroneal tendons
- 4 Realignment of the tuberosity in a valgus position
- 5 Reduction of the calcaneocuboid joint

Small subtalar incongruity of only 1 mm can lead to early arthritis of the corresponding joint. Operative methods of treatment ^{2,11,12} have included attempts at closed reduction or percutaneous manipulation, percutaneous screw fixation¹⁶, open reduction with internal fixation¹⁰, bone grafting or both¹⁵, and primary arthrodesis of the subtalar joint. In displaced Intraarticular fractures, open reduction and internal fixation, should be advised to achieve anatomical reduction, to decrease the complication of subtalar arthritis and joint incongruity^{3,6,7,9}. Because of the risk of early complications, the timing of surgery i.e. after local swelling subsides is of paramount importance. It is advisable to use lateral extensile approach¹⁵ because it provides wide exposure of the subtalar joint and allows more accurate exposure of the facet fragments and calcaneo- cuboid joint, easier decompression of the lateral wall and sufficient area laterally for plate fixation.

As lateral wall is subcutaneous, any implants on the surfaces can lead to early post-operative complications like wound dehiscence, necrosis of wound edges, and early superficial infections. Use of percutaneous screw fixation can be opted for intra articular fractures with less derangement of Bohlers angle, which also results in less post operative swelling and considerably yields good functional outcome.^{17,18} The functional outcome in our study was assessed by using Creighton Nebraska scoring system.

Conclusions:

We conclude that cc screw is better where the fracture was not grossly comminuted, displaced and Bohlers angle was near to normal.

In grossly comminuted displaced intraarticular fractures having deranged Bohlers angle, open reduction and internal fixation with plates is superior and advisable.

CLINICAL ASSESSMENT BY CREIGHTON NEBASKA SCORE

1. PAIN ON ACTIVITY

No pain while walking or ignores pain	15
Mild pain while walking, takes Aspirin	10
Moderate pain when walking takes Codeine	5
Severe pain when walking with severe limitation	0

2. PAIN AT REST

No pain at rest	15
Mild pain at rest	10
Moderate pain at rest	5
Severe pain at rest	0

3. ACTIVITY

Unlimited walking and standing	20
Walks 5-10 blocks, stands intermittently for >30 min	15
Walks 1-5 blocks, stands, < 30 min.	10
Walks less than one block, walks indoors only	5
Cannot walk	0

4. RANGE OF MOTION

25-30 DEGREES (80-100%)	20
20-25 Degrees (60 – 80%)	15
15-20 Degrees (40-60%)	10
10-15 Degrees (20-40%)	5
0-10 Degrees (0-20%)	0

5. RETURN TO WORK

Full time, same job	20
Full time, with restriction	15
Full time, with job change	10
Part time, with restriction	5
Cannot walk	0

6. SHOE CHANGE

No change	5
Changes (Increase)	0

7. SWELLING

None	5
Mild	3
Moderate	2
Severe	0

Total fractures score includes the sum (points for all 7 parameters)

Interpretation, min score:0 max score: 100

Total Score

90-100	Excellent
80-89	Good
65-79	Fair
<64	Poor