Chapter-09

ETIOLOGY OF EPISTAXIS AND ITS MANAGEMENT: A REVIEW

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ABSTRACT

Epistaxis is a Universal problem that can affect the most people. The maximum number of cases are self-confined and do not want some medical invasion but epistaxis may take part in actively morbidity and even end of life in very unique circumstances. If Epistaxis does not resolve with first aid measures or episodes are frequent, patient grant permission needs assessment and treatment by an ENT specialist, either in the person being treated for medical problem dispensary or by way of unscheduled emergency admission to the hospital. Here, an analysis of the management of epistaxis in the person being treated for a medical problem and during an emergency admission in both pediatric and adult sufferers. And focus the key concern in etiology and Management covering the average and rare circumstances that are associated with epistaxis.

Keywords: *Epistaxis, Kiesselbach area, nasal polyp*

1. INTRODUCTION

Epistaxis arises from the Greek word ***Epistazein*** means 'bleeding from the nose' and is a merger of two words '***epi'*** meaning '***upon in addition'*** and '***stazein'*** meaning ***'to drip'.*** Epistaxis also called a nosebleed. Epistaxis more usually occurs in children age 2-10 and older adults age 50-80. (*Lahav Constantini 2023).* Bleeding from the blood vessels of the nose is called epistaxis or *nose bleed* it is not a disease but also its sign of the any other disease. It has been reported in the various studies that epistaxis occurs in 60 percent of the general population. The incidences of epistaxis are found in the males as compare to the females. (Pollice et al.1997, Petruson, B. 1974, Schaitkin et al.1987, Rubin Grandis et al. 1999). There are two types of epistaxis depending on their origin anterior and posterior. In 90% to 95% of cases, bleeding from the Kisselbach area (or Little's area) occurs in the area of anterior portion of the nasal septum and usually involves one nostril. and in 5% to 10% of cases it occurs posteriorly in the posterior region of the nasal cavity. (Beck R et al. 2018).

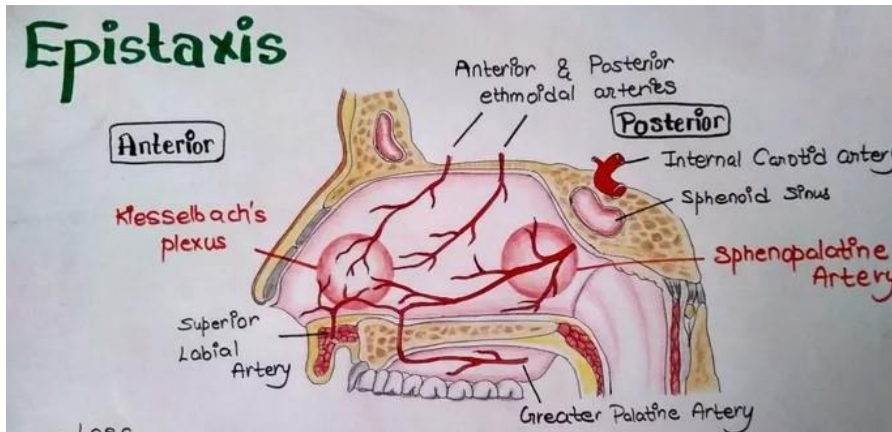

Figure-1: Blood Supply of Nose Drawn by Jyoti kumari 2019

i. **Causes**

- **Traumatic:** Finger nail trauma, Nasal fracture/contusion, foreign body in the nose, Iatrogenic (as nasogastric tube, surgical interventions)
- **Neoplastic:** Juvenile nasopharyngeal angiofibroma, Tumors of the nasal cavity and paranasal sinuses
- **Hematological:** Thrombocytopenia, Hemophilia A and B, Von Willebrand disease, Liver failure
- **Structural:** Mucosal dryness, Septal perforation, Hereditary hemorrhagic telangiectasia
- **Drug-related:** Anticoagulants and antiplatelet drugs, Glucocorticoid nasal sprays, Nasal consumption of drugs
- **Inflammatory:** Allergic rhinitis, Acute infectious diseases. (Diamond L. 2014).

ii. **Differential Diagnosis**

- Trauma
- Nasal tumor
- Blood clotting disorders
- Rhinitis
- Nasal Polyps

- Foreign body in the nose
- Drug toxicity (Warfarin, NSAIDs) (Tabassom A et al 2022)

2. MANAGEMENT

Management of epistaxis can be divided into medical, conservative and surgical treatment and arterial embolization.

i. Medical Treatment

Medical cure acts in two together a curative and protective form. Hypertension and added hematologic causes for epistaxis must be recognized and rectified originally. Once these environments are rectified, the majority of bleeds are relieved accompanying mild direct pressure in the form of a nose pinch (Fatakia A. et al 2010).

Initial administration contains compression of the nostrils use of direct pressure to the septal portion. And blocking affected nostrils with gauze or cotton that has been wet in a topical decongestant. Direct pressure allows be applied regularly for at least 5 minutes and for until 20 minutes. tilting the head forward prevents blood from pooling in the posterior pharynx through preventing nausea and Airway blockage. Hemodynamic balance and ventilating pipe patency should be confirmed.

Fluid resuscitation endure be initiated if volume depletion is doubtful after the bleeding stops (Corry J et al 2005). Moreover, nasal washing by normal saline and the installation of topical lotion in effected nostril constitute a humidified nasal condition that can prevent additional episodes of epistaxis.

If bleeding perseveres, a topical nasal decongestant for the purpose of vasoconstriction maybe used. Care must stop living to not persist topical decongestant use continually as it can enhance physiologically habit-forming (Fatakia A. et al 2010).

ii. Conservative Treatment

Conservative medicine involves cautery and nasal packing. Nasal cautery maybe acted chemically or thermally. Chemical cautery uses topical application of silver nitrate, while Bovie electrocautery is used in thermal cautery. If the bleeding location is anterior and clear then cautery may be acted at the bedside or in the clinic location later acceptable topical anesthesia.

More posterior sites can demand general anesthesia and an operating room setting. Nasal packing is acted by way of anterior or posterior nasal packs. When medical cure and cautery break down, recognition of anterior nasal bleeds is accepted by

use of an anterior pack. Physician advantage and the patient's comfort level decide the choice of packing device.

Rapid rhino epistaxis device bear be coated in antibiotic ointment layer and support sufficient pressure against the origin of bleeding. It should continue occupied merely 1-3 days to prevent toxic shock syndrome or different types mixed infections. Oral antibiotics endure be executed for as long as the packs stay in the nose. After installation of an anterior pack, epistaxis should stop and examination bear show no lively bleeding down the posterior oropharynx.

After successful placing of an anterior pack, patients may be sent home and carefully handled on an outpatient basis. If epistaxis starts in the contralateral nose or bleeding down the posterior oropharynx worsens later application of an anterior pack, the addition of a posterior pack concede possibility be necessary. Posterior packs contain double-balloon nasal packs as well as Foley catheters.

The aim of the posterior pack is to seal the nasopharynx at the choanal entrance and provide a support against that to place an anterior pack. Double-balloon structures provide both an anterior and posterior balloon. When utilizing a Foley catheter, the installation of anterior packing material solidly against the exaggerated Foley balloon is necessary. Similar common standard must be trailed when using posterior packs to prevent infection.

One essential difference is that the installation of an anterior and posterior pack demands medical care secondary to potential complications. Specifically, identifying a pack in the nasopharynx can prompt the nasopulmonary reflex, developing in interruption of activity and dysrhythmias (Fatakia A. et al 2010). Therefore, patients should be monitored in an ICU or accompanying continuous pulse oximetry and telemetry. If bleeding starts repeated after packing removal, then instruct surgical treatment required where possible (Beck R et al. 2018).

iii. Surgical Treatment

Surgical treatment for epistaxis has principally existed replaced by the use of arterial embolization. Procedures used for bleeds that are refractory to therapeutic and conservative cure involve, anterior ethmoid artery, and external carotid artery ligation. (Fatakia A. et al 2010).

iv. Arterial Embolization

Arterial embolization acted by interventional radiologists is an almost new method used to embolize distal branches of the IMA. Under local anesthesia, diagnostic

angiograms are acted to evaluate the vascular anatomy. A large amount of bleeds will show up as blushes and maybe selectively embolized. Potential difficulties involve transient hemiparesis, facial paralysis, sightlessness, columellar necrosis, stroke, and death, but these are rare, when operations are acted by professional surgeons. Finally, a general law is that the more proximal the embolization, the better the possibility for postembolization complications.

v. Unani Treatment

For external use: -

1. Local application on forehead and nose, powder of Gile Multani and Amla khushk mixture of same quantity kneading dough with water.
2. Amla powder mix in goat milk and apply on forehead and head.
3. Almond oil with pumpkin seed oil mix in same quantity, massage of head and drip in nose.

For internal use: -

1. Sheera tukhm kaahu 6gm, sheera kishneez khushk 4gm, sugar 18gm, mix and take morning, noon, night.
2. Sheera baikh injbaar 4gm, sharbat habbul aas 4gm, sheera tukhm khashkhaash 4gm, sheera tukhm baartang 4gm, luaab behdaana 3gm mix sharbat anaren 25ml and take morning, noon, night. (Anzar H et al 2014)

3. CONCLUSION

Epistaxis is a problem usually met by ENT specialist. The majority of cases are surely treated, but few can present as deadly. Knowledge of the vascular anatomy is critical to deciding the location of the bleeding. Once the location is recognized, appropriate medical, conservative, or surgical cure can ensue. (Fatakia A. et al 2010).

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