

## Management of Acute Idiopathic Epistaxis During General Anesthesia

Aamir Bashir<sup>1</sup>, Muhammad Naveed Azhar<sup>1</sup>

**ABSTRACT:** Spontaneous epistaxis during general anesthesia is a rare emergency. It is a potentially life-threatening situation which can compromise airway, breathing & circulation. Usually, mild epistaxis can occur during nasal manipulation and usually resolve spontaneously with external nasal compression. In this case, there was no obvious cause of epistaxis and it didn't respond to external nasal compression and xylometazoline. We are presenting a case of 27 years' old who developed Idiopathic Spontaneous Epistaxis which failed to resolve with conventional measures and required intervention by maxillofacial surgery team at a tertiary care cancer center in Lahore, Pakistan.

**KEYWORDS** Idiopathic epistaxis, general anesthesia, management

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### Case Report

**Author Affiliations:** Author affiliations are listed at the end of this article.

**Corresponding Author:** Dr Aamir Bashir, Shalamar Medical and Dental College, Lahore  
Email: dr.aasi@gmail.com

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Epistaxis can occur during general anesthesia due to multiple reasons like iatrogenic nasal trauma with NGT & ETT, nasal tumors, coagulopathy, foreign body or vascular lesion. Epistaxis can be divided into anterior & posterior on the basis of anatomical origin, with the majority being classified as 'anterior', arising from an anastomotic network of vessels in the nasal septum known as Little's Area. The majority of these bleeds are self-limiting or settle with xylometazoline and external nasal compression.

### CASE REPORT

A 27 years old male patient without any significant past medical history presented for cystoscopy & transurethral resection for carcinoma of urinary bladder. General anesthesia was induced with intravenous medication followed by insertion of I-Gel # 4 and maintenance on sevoflurane, oxygen & air. After few minutes, his SpO<sub>2</sub> dropped and there was difficulty on manual bag ventilation. There was small amount of blood coming out from the nostrils. FiO<sub>2</sub> turned to 100% and planned for endotracheal intubation. After getting EtO<sub>2</sub> > 90%, Suxamethonium was given & I-Gel was removed. There was a big clot of blood in oropharynx which was removed with Magill forcep (Fig.1), suction was done with Yankauer and immediately intubated with cuffed ETT # 7.5mm. Before starting IPPV, ETT was suctioned with nelton drain, which was dry, then patient was put on IPPV. ETT confirmed with capnography, bilateral chest rise and auscultation of four quadrants of chest. After securing the airway, Xylometazoline 0.05% spray was instilled in each nostril followed by external nasal compression for 5 minutes. After removal of external nasal compression, oropharynx was examined with Laryngoscope, there was persistent blood coming out from nasopharynx.

Throat pack was put in, external nasal compression was applied again and maxillofacial surgery team was called for their assessment. The maxillofacial surgery team performed nasal endoscopy but there was no obvious source of bleeding but laryngoscopy revealed fresh blood coming from nasopharynx. It was decided to do anterior and posterior nasal packing after which bleeding stopped. At the end of surgical procedure, patient was extubated fully awake. After monitoring in post anesthesia care unit for 2 hours, he was shifted to ward. There was no more bleeding from the mouth. Postoperative discussion with patient revealed he never had any epistaxis throughout his life. No coagulation abnormalities were identified from routine laboratory investigation. Nasal pack was removed after 24 hours and patient discharged to home.

**Fig.1:** Blood clot retrieved from oropharynx before



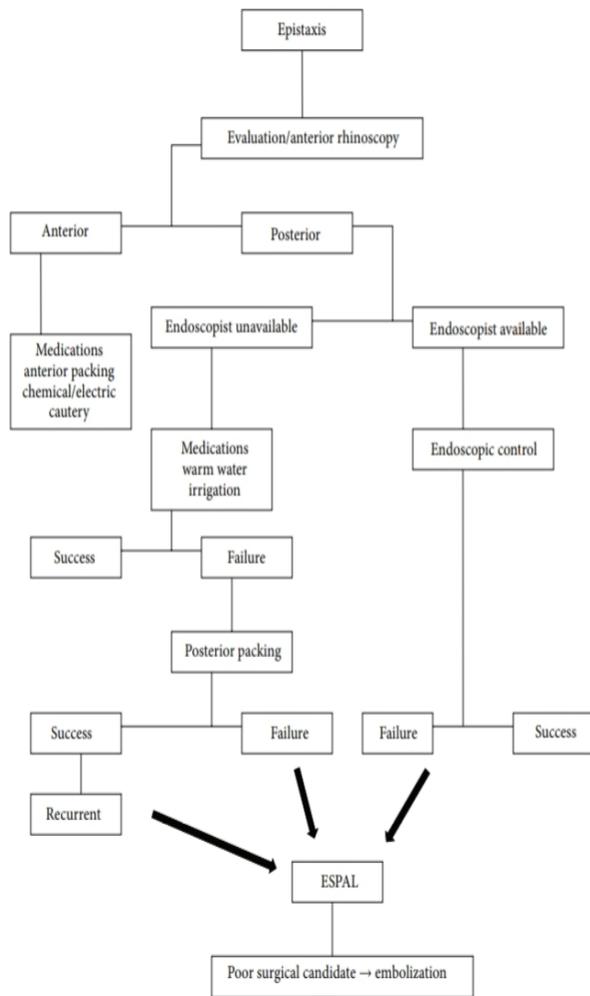


Fig. 2: Algorithm for management of epistaxis

**DISCUSSION:**

Intraoperative spontaneous epistaxis, although rare, may result in significant anesthetic complications, most important is airway compromise. The differential diagnosis includes; vascular lesion or tumor, nasal foreign body, nasopharyngeal angiofibroma, bleeding diathesis like haemophilia VIII, haemophilia IX and Von Willebrand Disease, & vascular disruption at the anterior nasal arteries Kiesselbach plexus etc. With an estimated 60% of the population believed to suffer an episode of epistaxis, the burden of this condition is significant. Despite this prevalence, only 10% of cases are believed to require medical input<sup>1</sup>. Of the cases that are brought to medical attention, the majority are anterior bleeds and few require surgical intervention<sup>2</sup>.

Kiesselbach’s plexus is comprised of multiple arteries that are the branches of internal carotid artery including: the anterior and posterior ethmoidal arteries, sphenopalatine artery, superior labial artery, and the greater palatine artery<sup>3</sup>. The most common cause is from the anterior nasal arteries from the dry nasal mucosa, nose picking, mucosal hyperemia and chronic excoriation.

During general anesthesia, it is rare to develop epistaxis without nasal manipulation and unknown coagulopathy. Various measures including external nasal pressure, nasal packing, use of Xylometazoline and phenylephrine has been used for its treatment<sup>4,5</sup>. Selected cases may require surgical interventions like Endoscopic ligation of the sphenopalatine artery (ESPAL) and various others modalities<sup>6</sup>.

**CONCLUSION:**

We concluded that, epistaxis in anesthetized patient can lead to significant compromise of airway. It should be considered and managed promptly. Most of the cases usually settle with conservative measures, however, selected patients may require surgical interventions.

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Authors Affiliations: A Bashir: Department of Anesthesia, Shalamar Medical and Dental College Lahore, Pakistan;

M N Azhar: Department of Anesthesia, Shaukat Khanum Memorial Cancer Hospital Lahore, Pakistan

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**REFERENCES**

1. Petruson B, Rudin R. The frequency of epistaxis in a male population sample. *Rhinology*. 1975;13:129–33
2. Schlosser RJ. Clinical practice. Epistaxis. *N Engl J Med* 2009;360:784–9
3. Kotecha B, Fowler S, Harkness P, et al. Management of epistaxis: a national survey. *Ann R Coll Surg Engl* 1996;78:444–6
4. Groudine SB, Hollinger I, Jones J, DeBouno BA, isher DM. New York

guidelines on the topic use of phenylephrine in the operating room. The phenylephrine advisory committee. *Anaesthesiology*. 2000;92:859–864

5. Rudmik L, Smith TL. Management of intractable spontaneous epistaxis. *Am J Rhinol Allergy*. 2012; 26:55–60
6. Henri Traboulsi, Elie Alam, and Usamah Hadi. Changing Trends in the Management of Epistaxis. *International Journal of Otolaryngology* 2015. 1-7.