

Endoscopic Sphenopalatine Artery Cauterization in Recurrent Posterior Epistaxis: An Experience at Dhulikhel Hospital, Kathmandu University Hospital

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INTRODUCTION

Epistaxis is one of the most common emergencies encountered by the ENT (Ear, Nose and Throat) surgeons. As Compared to anterior Epistaxis, the posterior Epistaxis being the challenging management problem.

With the advent of Rigid endoscope, the treatment of posterior Epistaxis become more easier and comfortable as compared to past where we have to keep the posterior pack for the control of bleeding. Thus, causing considerable discomfort and even cause the mucosal trauma and necrosis. Whereas in elderly, there is significant risk of nasal airway obstruction and complication such as hypoxia, cardiac arrhythmia or even death.^{1,2} Similarly, in case of failure of conservative management, internal maxillary artery ligation via transantral approach and also the ligation of ethmoidal and external carotid artery was the treatment option.

Since the endoscopic sinus surgery became the widespread popularized method and with the deeper anatomical knowledge of nose and paranasal sinuses, the endoscopic cauterization of Sphenopalatine artery became the one of the alternative option.^{3,4}

Zero degree Rigid endoscope is mainly used for the endoscopic cauterization of the Sphenopalatine artery which causes the interruption of the nasal vasculature at a point distal enough to prevent direct, retrograde and anastomotic blood flow from ipsilateral and contralateral carotid systems.⁵

Patient Selection

All the patients with posterior Epistaxis were initially managed with classical posterior and anterior nasal packing. The patient was admitted in the ward and all the basic investigations for the diagnosis of cause of epistaxis was carried out. The patients who bled even after posterior packing were taken to the operation theatre.

Surgical procedure

The surgery was carried in general anesthesia. The anterior as well as posterior pack was removed once patient was intubated. Then, the rigid Hopkins II endoscope (Karl Storz) 0 degree with 4 mm diameter and 18 Centimeter in length was used to identify the bleeding vessel after decongesting the nasal mucosa with 0.5% oxymetazoline soaked ribbon gauge, and thus controlling the bleeding. In case of

uncontrolled Epistaxis, 1ml of 1:80,000 adrenaline with 2% xylocaine injected at the greater palatine foramen in the roof of hard palate thus involving the pterygopalatine fossa. Likewise, the middle turbinate is medialised and then 0.5ml of 1:80,000 adrenaline with 2% xylocaine was injected around the location of the Sphenopalatine artery that is into the submucosa of the posterior lateral wall of the middle meatus to be able to easily dissect the mucoperiosteal flap.

An L shaped incision is given in the lateral nasal wall 1 cm anterior to the insertion of the middle turbinate, continuing through the insertion of the inferior turbinate. The mucoperiosteal flap is raised both cranially and at dorsal direction until reaching the ethmoidal crest. Just behind which lies the Sphenopalatine foramen as shown in fig 1. The mucoperiosteal flap is further dissected making tension at the medial direction from where we can see the neurovascular bundle of sphenopalatine arising from the foramen. The Sphenopalatine artery is then diathermised with the bipolar diathermy as shown in fig 2 and 3. The flap is replaced back to its normal position and the surgical is kept overlying area. No intranasal pack was kept. The patient was observed for the same day and then discharged the next day with antibiotics and oxymetazoline. Follow up was done in Out patient clinic.

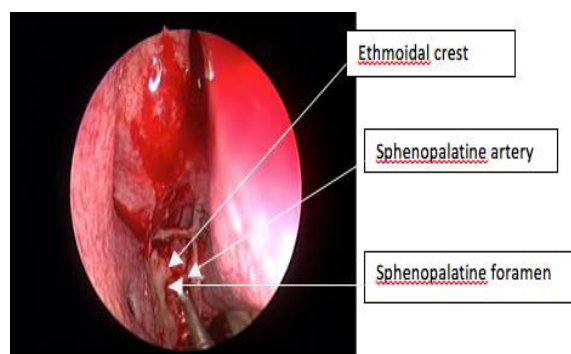


Figure 1. Showing the elevation of mucoperiosteal flap, identifying the ethmoidal crest, Sphenopalatine foramen and the Sphenopalatine artery.

RESULTS

This study is going in the department of Otorhinolaryngology and head and neck surgery of Kathmandu University Hospital, Dhulikhel. Till now we did cauterization in 12

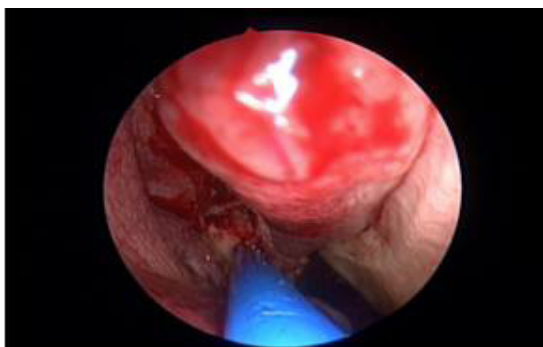


Figure 2. Showing the cauterization of sphenopalatine artery with bipolar diathermy.

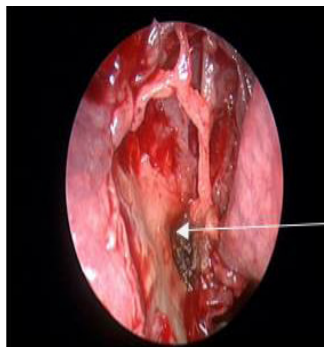


Figure 3. Showing the sphenopalatine artery after cauterization.

patients (11 male and 1 female). Among them 10 patients underwent unilateral Sphenopalatine artery cauterization whereas 2 patients underwent bilateral Sphenopalatine artery cauterization. The mean age of patients was 45.5

years with age range from 30 to 68 years. Out of 12 patients, 3 patients had developed synechia required release of it. However, the success rate in controlling the epistaxis was 100%. Since the result of controlling the Epistaxis is quite good, we are regularly performing the surgery.

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