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Case Report

Nasal hemangioma as a cause of epistaxis: a case report

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ABSTRACT

Hemangioma is a benign, rapidly growing solitary lesion that usually occurs in the skin and mucous membrane. The exact etiology of such a lesion is unknown, but thought to be due to trauma and hormonal factors. Sinonasal hemangiomas are rare. Bleeding and nasal obstruction with mass sometimes filling the nasal cavity are the usual clinical presentation of such a lesion. We report a case of 42-year-old female with right nasal hemangioma presented with on and off epistaxis and progressive right-sided nasal obstruction. Examination of nasal cavity physically combined with endoscopy revealed a polypoid, reddish colored mass in the nasal cavity on the right side arising from septum. Endoscopic subperichondrfial excision was done under local anaesthesia. The histopathology showed vascular proliferative lesion, consistent with hemangioma. Endoscopic excision is preferred as it helps in better visualization. Subperichondrial excision helps to reduce bleeding also, prevent the recurrence. Although rare, the diagnosis of hemangioma must always be kept in mind while discussing the differential diagnosis of a bleeding mass in the nasal cavity.

Keywords: Hemangioma, Epistaxis, Nasal obstruction, Endoscopic surgery, Biopsy, Nasal tumor

INTRODUCTION

Hemangiomas, are benign head and neck tumor which constitute less than 20% of all benign nasal cavity tumors.[1] Hemangiomas are considered by some authors as hamartomas or congenital vascular anomalies.[2] Poncet and Dor in 1897 described them initially as human botryomycosis.[3,4] The exact etiology of hemangiomas remains obscure. Traumatic and hormonal factors are thought to be the main etiological factors. Hemangiomas frequently affect cervical-facial regions mainly localizing to the gingiva, oral mucosa, tongue and lips.[5] Microscopically these are benign capillary proliferations with a distinctive lobular structure. The size and shape of these lesions vary measuring from a few millimeters to several centimeters and may be pedunculated or broad based.[4]

Sinonasal hemangiomas are rare and account for only about 10% of all hemangiomas of the head and neck regions.[2] Anterior portion of the nasal septum is the usual site of origin, the exact location being locus Valsalvae or area of little and in the nasal vestibule.[2,4] Ash and Old in 1950 first reported inflammatory hemangioma of the nasal septum, known as "bleeding polyp". Other sites include lateral wall of nose, inferior turbinate, the floor of the nasal cavity and the roof of the vestibule.[1,7]

A higher incidence in the male population is noticed during childhood and adolescence but in women, it is more frequently found in the third and fourth decade, coinciding with the child-bearing age.[8] Hormonal factors related to pregnancy may facilitate their development; hence Nair et al defined the septal hemangioma as a pregnancy tumor.[9]

Patients with sino nasal hemangiomas presents often with unilateral nasal obstruction, recurrent epistaxis, mucopurulent rhinorrhea, epiphora, facial pain and headache or hyposmia.[8] Progressive painless swelling and nasal deformity were other reported features.[4] Bleeding and anemia are the main problems associated with these diseases.[4]

The size of sino nasal hemangioma varies considerably, from below 10 mm[5] to 80 mm (giant hemangiomas). These often mimic malignancy, and the diagnosis should be confirmed by histologic examination.

Hemangiomas should be included in the differential diagnosis of a bleeding mass filling the nasal cavity. Our case also illustrates that these lesions do not require any special precaution like preoperative embolization and can be completely and effectively resected with endoscopic surgery.

CASE REPORT

A 42-year-old female presented with progressive right-sided nasal obstruction and episodes of on off epistaxis for the past 4 months. There were no other nasal symptoms. There was a history of self inflicted finger injury in the affected nostril before the first episode. Patient was subjected to detailed clinical evaluation including anterior rhinoscopy and diagnostic nasal endoscopy. Examination revealed a reddish polypoid mass in the right nasal cavity which bled readily on touch. It was seen to be originating from the anterior portion of the septum extending to vestibule and partially obstructing the right nasal passage anteriorly (Figure 1). On probe test, the mass was insensitive to touch, bled during touch and was able to probe around except on the medial aspect where it was found to be attached to septum. Rest of the nasal cavity was free of the lesion. The endoscopic findings were normal on the left side. Since there were minimal mucopurulent secretions within the nasal cavity on ipsilateral side, the patient was put on oral treatment with amoxicillin clavulanic acid, antihistamines, nasal decongestants for 5 days. After treatment we subjected the patient to CT scan of nose and paranasal sinuses with contrast. Imaging showed the presence of a polypoidal lesion originating from the anterior nasal septum extending to the vestibular region as a whole. This lesion also showed richly vascularity (Figure 2). Thus, the most likely diagnosis of capillary hemangioma of the nasal septum was made.

Endoscopic resection of the tumor was planned under local anaesthesia. Local infiltration with 1% lignocaine with adrenaline was given on adjacent part of septum. The tumor was pedunculated on the cartilaginous nasal septum. An incision was made on the septum just anterior to the mass, followed by another two incisions superiorly and inferiorly. Incision deepened and mucoperichondrial flap was elevated adjacent to the mass. Flap along with adjacent mass was elevated, posterior to the mass, both superior and inferior incision were joined and the mass excised. Thus, complete excision carried out along, with attached nasal septal mucosa and perichondrium. Further, the site of attachment was cauterized to minimize the chance of recurrence and bleeding. At the end of the procedure there was no bleeding, and the residual septal mucosa was normal. Preoperative embolization or perioperative transfusion was not required.

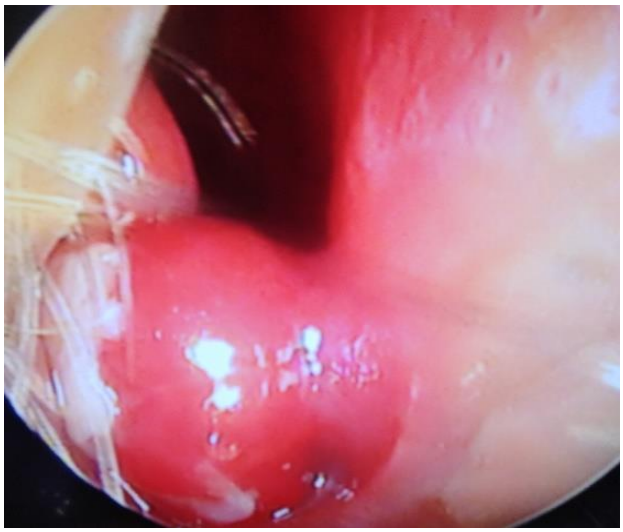

Figure 1: Right nasal cavity showing polypoidal fleshy mass arising from septum.

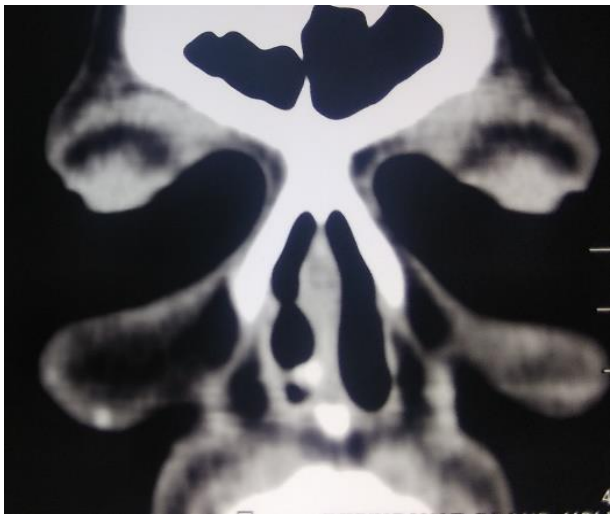

Figure 2: Contrast CT showing vascular mass arising from septum.

On gross pathologic examination, mass was smooth surfaced, grayish-pink polypoid measuring approximately 0.5 cm in size (Figure 3).

The specimen was sent for histopathological examination, which showed stratified squamous epithelial lining and underlying neoplasm composed of proliferated vascular spaces lined by endothelial cells which was consistent with hemangioma (Figure 4).

Figure 3: Excised specimen, gross appearance.

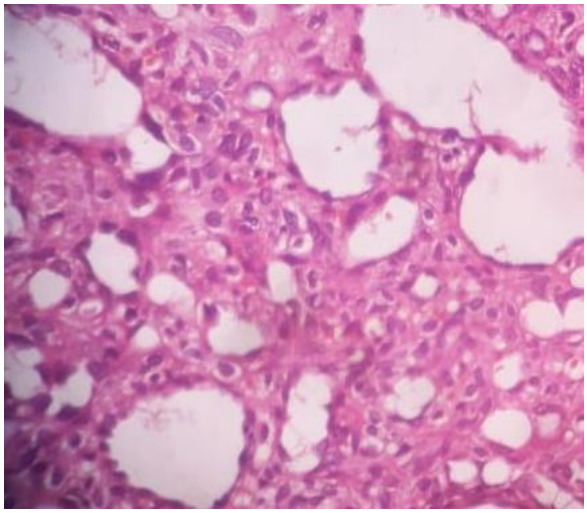

Figure 4: Histopathology showing features of hemangioma.

The patient's recovery was uneventful. One month after surgery, the septal mucosa was completely healed with no evidence of synechiae. After 6 months follow up, there was no recurrence of the lesion seen and finally the patient discharged from OPD.

DISCUSSION

Hemangiomas or bleeding polyp of the sino-nasal region are benign vascular tumors.[7] Their exact etiology is not well known. Mulliken and Glowacki in 1982 defined hemangiomas as fast-growing vascular tumors and have them classified into three subtypes: capillary hemangioma (which originates predominantly from the hypervascular septal region called locus Valsalvae), cavernous hemangioma (usually located at the side wall of the nasal cavity) and mixed forms.[7]

A review of the literature shows the possible causes as repeated trauma or microtrauma associated with prolonged nasal packing or nasal intubation.[10] A large series of hemangiomas of the nasal cavity by Puxeddu et al described other possible etiological factors: pregnancy and hormonal influence.[11,12] Other authors also share this point of view by defining hemangioma as a pregnancy tumor.[9] Other proposed factors in the development of these tumors include oncogenic viruses, abnormal production of angiogenic growth factors or cytogenetic abnormalities etc.[9] In our study there was a history of self inflicted finger trauma.

Normally hemangiomas of nasal septum have dimensions below 10 mm[5]. Our study also showed 0.5 mm lesion which is concurrent with above studies. However, lesions of considerable volume occupying the entire nasal cavity called "capillary hemangiomas giants" have also been reported.

Hemangioma of the nasal cavity usually presents with recurrent unilateral epistaxis, nasal obstruction, nasal discharge similar to our study. It can also rarely present with facial pain, alteration of smell, and headache.

The bleeding polyp often mimics malignancy, and before any treatment, those other diagnoses (particularly the malignant tumors) must be eliminated and the extent of lesion should be evaluated. We consider an adequate radiological evaluation as essential in the evaluation of a suspected lesion of vascular nature before proceeding for surgical excision. In our case we did contrast Ct scan of nose and paranasal sinuses which showed vascular mass originating from septum with no erosive or destructive process.

The differential diagnoses of intranasal hemangioma include nasal polyp, antrochoanal polyp, meningocele, meningoencephalocele, sarcoidosis, Wegener's granulomatosis, simple granulation tissue, papilloma, Kaposi's sarcoma, hemangiosarcoma, squamous-cell carcinoma, mucosal malignant melanoma, and lymphoma.[13]

Spontaneous involution usually occurs in common hemangioma (50% before 5 years of age and 70% before 7 years"), where as a bleeding polyp will persist.[14] The treatment of choice is surgical excision including a margin of healthy mucosa and the underlying perichondrium. Failure to include the perichondrium can lead to a high risk of recurrenee.[15-19]

In our case we did meticulous precautions including good local infiltration, endoscopic visualization of the mass and careful subperichondrial dissection which resulted in minimal bleeding intraoperatively and no post operative bleeding. The use of endoscopy allowed us to identify planes of dissection very well. The patient did not present any complications in the postoperative phase and not showed any signs of recurrence.

CONCLUSION

Sinonasal hemangioma though rare should always be considered in the differential diagnosis of vascular lesions within the nasal cavity. Endoscopic excision is the appropriate management even for extremely large lesions with no requirement of preoperative embolization or perioperative blood transfusion. Subperichondrial dissection which includes, excision of the mass along with attached septal mucosa, mucoperichondrium followed by cauterization of base is essential to prevent the recurrence of the lesion.

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