

Case Report

A case report of nasal lobular capillary hemangioma

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ABSTRACT

Nasal lobular capillary hemangiomas are rare and benign tumors of the paranasal sinuses. The aim is to study a case of nasal lobular capillary hemangioma. Here, a case of a 29-year-old male patient who presented to ear, nose and throat outpatient department (ENT OPD) with complaints of multiple episodes of epistaxis and left nasal obstruction for the past year. After proper radiological, cytological and hematological assessment, an excision biopsy from the mass of the left nasal cavity was performed which was suggestive of lobular capillary hemangioma. The patient has been operated on via lateral rhinotomy approach and nasal mass was found to be originated from the anterior ethmoidal artery, removed piecemeal and complete excision was done. Nasal lobular capillary hemangioma is quite a rare lesion of unknown etiology especially when it occurs in the nasal cavity. It should always be considered in the differential diagnosis of vascular lesions within the nasal cavity. Complete excision of the mass with a lateral rhinotomy approach gives an excellent outcome.

Keywords: Nasal lobular capillary hemangioma, Vascular lesions within the nasal cavity

INTRODUCTION

Nasal lobular capillary hemangiomas are very rare but benign. These occur in paranasal sinuses and nasal cavity. Nasal lobular capillary hemangiomas are rapidly growing hypervascular lesions.¹ These lesions show benign capillary proliferation with distinct lobular architecture and the stroma may be fibro-myxoid/oedematous with acute or chronic inflammation. The exact etiopathogenesis is unknown but is commonly seen during pregnancy, in patients on oral contraceptive pills, or in patients with a history of trauma. However, trauma, hormonal influences, viral oncogenes, underlying microscopic arterio-venous malformations, and the production of angiogenic growth factors have been suspected to act in the pathogenesis.² The most common location is the head and neck region. Nearly 76.9% of cases seen in children occur in this region with the gingiva, lips, and tongue being the most common sites and the nasal cavity a rare site of origin. It may be pedunculated or broad-based and can vary in size from a few millimeters to several centimeters. Nasal lobular

capillary hemangioma occurs in children 10 months of age to adults in their 7th decade with a mean age of occurrence being around the 4th decade and has no sex predilection. Lobular capillary hemangioma is more common in the third decade and females. But lobular capillary hemangioma may appear in all ages and in males as seen in our case.

CASE REPORT

We are presenting a 29-year-old male patient presented with complaints of multiple episodes of epistaxis and left-sided nasal obstruction for the past year. Epistaxis episodes were related to manipulation and touching of mass and stopped by pressure application. There was no known history of trauma or recent infection.

Clinical examination

Approximately 3×3 cm² lobular mass coming out of the left nasal cavity, irregular surface, soft in consistency,

bleed to touch. Right nasal cavity clear. Ear, throat, and neck examination is normal.



Figure 1: Frank nasal mass from left nasal cavity.

Cytological investigation

Excision biopsy under GA done s/o lobular capillary hemangioma.

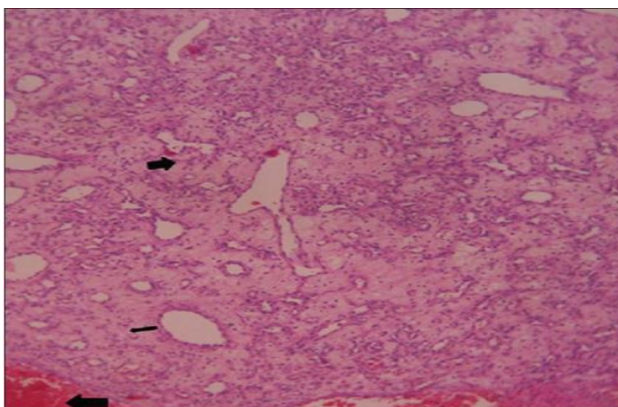


Figure 2: Hematoxylin and eosin stained tissue ($\times 10$ magnification) reveals lobules of small capillaries lined by flattened endothelium (thin black arrow) filled with blood, the surrounding stroma with hemorrhage (thick black arrow) at places.

Radiological investigation

CT PNS

Polypoidal heterogeneously enhancing soft tissue mass seen extending through the blocked and widened left fronto-ethmoidal recess into the left nasal cavity and the nasal ala with a small extension externally. Deviated nasal septum towards the right.

MRI neck (P+C)

An abnormal approximately $7.5 \times 3.2 \times 2.2$ cm well-defined lesion predominantly located along the left middle meatus in the nasal cavity and is partly encasing the left superior, inferior, and middle turbinates, abutting the anterior-mid

cartilaginous and bony nasal septum causing pressure erosion of these structures without osseous destruction or erosion and is extending anteriorly beyond the left nostril, occluding the left fronto-ethmoid and sphenoid-ethmoid recesses, left maxillary ostium and middle meatus with resultant hyperintense mucosal thickening on STIR sequences in left maxillary, ethmoid, frontal and sphenoid sinuses.

The posterior margin of the lesion is located approximately 1.8-2.0 cm anterior to the midline nasopharyngeal roof with the inferior margin of the lesion abutting the hard palate, nasopalatine and palate-maxillary articulations without osseous erosion or destruction of these structures.

1-2 mm sized small arterial twigs are seen probably arising from the left olfactory artery and internal maxillary artery. No other large feeders were seen.

DSA

Tumor blush with blood supply predominantly from left ophthalmic artery branches.

Treatment

After proper hematological investigations and pre-anesthetic check-up patient is taken for surgery.

Left side nasal mass excision done by lateral rhinotomy approach under general anesthesia.

The lateral rhinotomy approach is rapid and gives excellent access to the entire nasal cavity. Superiorly this extends to the skull base and inferiorly to the floor of the nose.

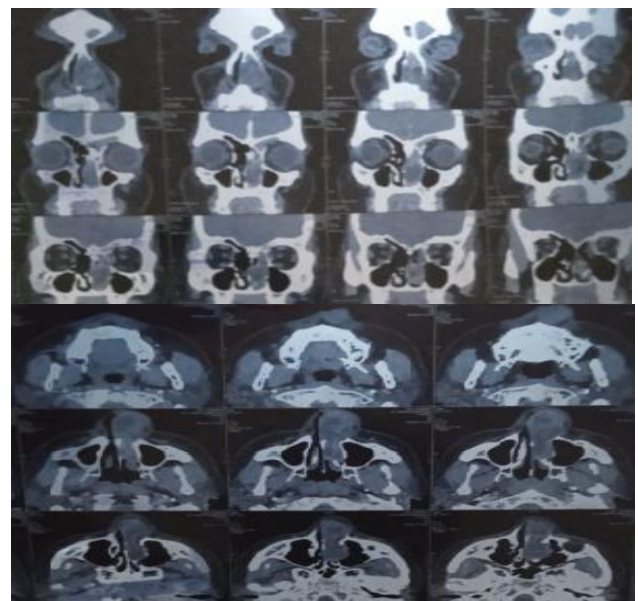


Figure 3: CT PNS- polypoidal heterogeneously enhancing soft tissue mass in left nasal cavity.



Figure 4: Incision for lateral rhinotomy approach.

The incision runs from the level of the medial canthus, midway between the canthus and nasal bridge in the nasomaxillary groove, curving around the lower ala into the nasal cavity. After accessing the nasal cavity, the nasal mass originating from anterior ethmoid air cells and part of the cribriform plate, was excised completely and sent for histopathological examination. Hemostasis was achieved and wound closure was done in layers.

Intra and postoperative blood transfusions were done.



Figure 5: Completely excised nasal lobular capillary hemangioma of approximately 9-10 cm.

DISCUSSION

Nasal lobular hemangioma can occur in age ranging from 10 months to 80 years of age. However, there is no gender predilection.

These types of lesions were first described in 1800 by Poncet and Dor.³ They were thought to be secondary to fungal infection. They are also called pyogenic granuloma as a misnomer due to characteristic microscopic features.⁴

Site of origin of nasal lobular hemangioma is nasal septum (from little's area) and/or from turbinates on roof of nasal cavity or in maxillary sinus.⁵ Recurrent nasal packing or any trauma can give rise to formation of granulation tissue further causing risk of hemangioma formation.⁶ Pregnancy

and use of oral contraceptive pills are strong factors affecting formations of such hemangiomas.⁷

For radiological evaluation CT of paranasal sinuses with contrast is preferred. Plain CT would reveal soft tissue in nasal cavity whereas CT with contrast reveals more detailed information on bony erosion and involvement of other soft tissue structures.⁸ MRI shows intermediate signal on T1 weighted and heterogeneous signal with flow void areas on T2 post gadolinium contrast.

Angiography is mainly used for localization of feeding vessel and aids in embolization further reducing risk of intraoperative bleeding.

Treatment includes preoperative embolization with large masses and further followed by complete excision of the mass.

CONCLUSION

Nasal lobular capillary hemangioma is quite a rare lesion of unknown etiology especially when it is present in the nasal cavity. It was previously termed pyogenic granuloma, which is now thought to be a misnomer because the lesion is neither infectious nor granulomatous. The description of the lesion by Miller as lobular capillary hemangioma was based on its characteristic histopathological findings. It should always be considered in the differential diagnosis of vascular lesions within the nasal cavity. Complete excision of the mass with a lateral rhinotomy approach gives an excellent outcome.

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REFERENCES

1. Patil P, Singla S, Mane R, Jagdeesh KS. Nasal lobular capillary hemangioma. J Clin Imaging Sci. 2013;3:40.
2. Kamath MP, Shenoy V, Kini J, Mukundan A. Lobular capillary hemangioma of the nasal septum – A case report. Egyptian J Ear Nose, Throat Allied Sci. 2014;15(3).
3. Poncet A, Dor L. De la botryomycose humaine. Revue de Chirurgie. 1897;18:996-9.
4. Mills SE, Cooper PH, Fechner RE. Lobular capillary hemangioma: the underlying lesion of pyogenic granuloma. A study of 73 cases from the oral and nasal mucous membranes. Am J Surg Pathol. 1980;4(5):470-9.
5. Miller FR, D'Agostino MA, Schlack K. Lobular capillary hemangioma of the nasal cavity. Otolaryngol Head Neck Surg. 1999;120(5):783-4.
6. Puxeddu R, Berlucchi M, Ledda GP, Parodo G, Farina D, Nicoli P. Lobular capillary hemangioma of nasal cavity: A retrospective study on 40 patients. Am J Rhinol. 2006;20(4):480-4.

7. Hassid S, Ghanooni R., on lobular nasal hemangioma in pregnancy. *J Laryngol Otol.* 2011;125;973.
8. Enciso. Intracranial physiological calcifications evaluated with cone beam CT. *Dentomaxillofac Radiol.* 2012;41(8):675-8.

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