



NASAL SEPTUM LOBULAR CAPILLARY HEMANGIOMA -A RARE ENTITY CASE SERIES

Otolaryngology

Dr Upasana Puri MS ENT, Govt Medical College, Amritsar

Dr Vrinda Narula* MS ENT, Govt Medical College, Amritsar *Corresponding Author

ABSTRACT

Lobular capillary hemangioma is a benign, rapidly growing lesion of the skin and mucous membranes. It may rarely present as a mass that entirely fills the nasal cavity with an unknown etiology. It is more common in the third decade and in females presenting with symptoms such as nasal obstruction and epistaxis. We present a retrospective case series of four such patients who presented with recurrent epistaxis and nasal obstruction.

KEYWORDS

Lobular capillary hemangioma ; Nasal septum; Epistaxis; Endoscopic surgery

Introduction

Lobular capillary hemangioma (LCH), is a benign, rapidly growing lesion, usually solitary which occurs in the skin and mucous membranes of unknown etiology. It was first described as human botryomycosis by Poncet and Dor in 1897.^{1,2} It is known by other names such as Pyogenic granuloma, Eruptive hemangioma, Granulation tissue type hemangioma, Granuloma gravidarum, Lobular capillary hemangioma and Pregnancy tumour^{3,4}. The term is a misnomer as it is neither infectious nor granulomatous. LCH is a benign capillary proliferation with a microscopically distinctive lobular structure that affects the skin and mucous membranes of the oral cavity and nasal region. The oral cavity has been reported to be a common site of involvement, while it is rarely located in the nasal cavity.² It may be pedunculated or broad-based and can vary in size from a few millimeters to several centimeters.² The most common etiologic factors are trauma and hormonal factors (seen in pregnancy or in patients on oral contraceptive pills).² We emphasize that in the differential diagnosis of a bleeding mass filling the nasal cavity, the rarely seen LCH must be included. Our case-series also illustrates that these lesions do not require preoperative embolization and can be resected completely and effectively with endoscopic surgery.

Case Series

We did a retrospective case series of four patients, in the age group of 19-37 years of age who presented with the complaints of recurrent epistaxis and nasal obstruction since varied time intervals. The risk factors were specially enquired about.

The details of the four cases are as follows

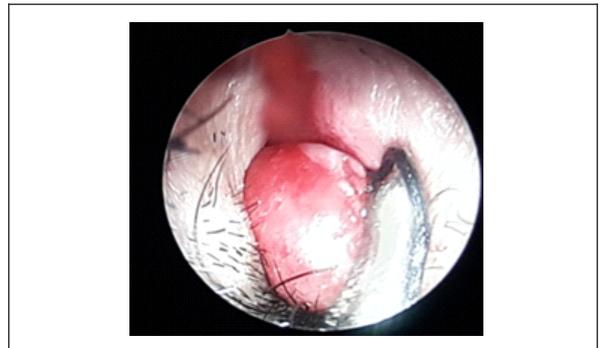
S. No.	Age	Sex	Risk Factors	Chief Complaints	Duration of Complaints
1.	19 yrs	Female	No contraceptive use/hormonal trt No pregnancy No comorbidities	<ul style="list-style-type: none"> Recurrent epistaxis Nasal obstruction 	4 months
2.	25 yrs	Male	No history of any trauma/ recent infection No comorbidities	<ul style="list-style-type: none"> Multiple episodes of epistaxis Nasal obstruction 	1 month
3.	27 yrs	Male	No history of any trauma/ recent infection No comorbidities	<ul style="list-style-type: none"> Nasal obstruction Recurrent epistaxis 	2 months
4.	37 yrs	Male	No history of any trauma/ recent infection No comorbidities	<ul style="list-style-type: none"> Recurrent epistaxis Nasal obstruction 	4 months

The clinical examination is tabulated as under:

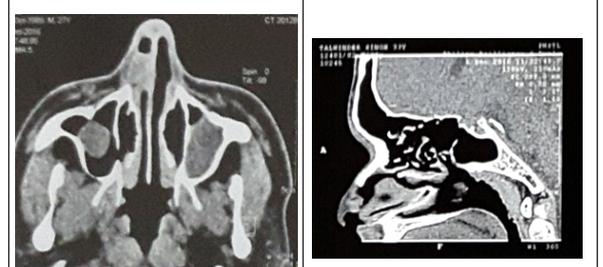
	Location Of Lesion	Anterior Rhinoscopy+ Endoscopy	Probing
Case 1	Left nasal cavity	a small lobulated pinkish mass filling the left nasal cavity, bleeding on touch	Bleeds on touch
Case 2	Right nasal cavity	a reddish pink mass occupying whole of right sided nasal cavity. It was seen to be originating from the antero-inferior portion of the septal mucosa and extending posteriorly obstructing the right nasal passage	Bleeds on touch

Case 3	Right nasal cavity	A reddish-pink mass present in the right nostril anteriorly occupying whole of the right sided nasal cavity.	Bleeds on touch
Case 4	Right nasal cavity	A small pinkish mass in right nasal cavity seen to be arising from nasal septum, no posterior extent	Bleeds on touch

All the cases had undergone a CT scan examination of the nose and PNS with 3 mm Axial, coronal and sagittal cuts, before being operated upon.



Case 3: Pinkish mass seen in right side nasal cavity.



Case 3: CT scan shows a soft tissue lesion along the right nasal septum anteriorly, measuring 20X7 mm obstructing the nasal vestibule with no posterior extension into the nasal cavity or maxillary, frontal and ethmoidal sinuses were normal and the OMU were clear the right.

Case 4: CT scan revealed a small soft tissue density arising from the nasal septum on the right side with no bony erosion, no posterior extension. The maxillary, frontal and ethmoidal sinuses were normal and the OMU were clear the right.

Figure 1: Clinical findings and HRCT findings

All four patients were taken up for the removal of the mass under General Anaesthesia endoscopically. The nasal mass was excised completely under general anesthesia using an endoscopic surgery technique with no requirement of preoperative embolization or perioperative blood transfusion.

The nasal mass in all four cases was excised and removed in total and

their attachment point to the nasal septum was cauterized.

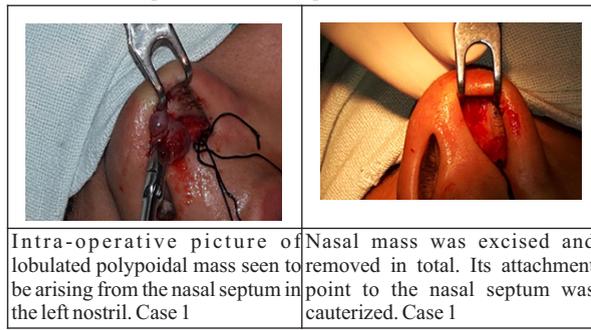


Figure 2: Intra operative findings pictures of Case 1.

The gross features and histopathological reports are listed as under:

S. No.	Gross Specimen Measurements	Gross Specimen Features	Histopathological Reporting
Case 1	1x0.9 cm	Smooth lobulated	Lobular Capillary Hemangioma
Case 2	approximately 3 × 2.7 cm	smooth-surfaced, grayish-pink polypoidal mass	Lobular Capillary Hemangioma
Case 3	1.5 cm x 1.4 cm	Smooth,reddish glistening with concavity in base (point of attachment to nasal septum)	Lobular Capillary Hemangioma
Case 4	1.2 x 0.8cm	Smooth, polypoidal and pedunculated	Lobular Capillary Hemangioma

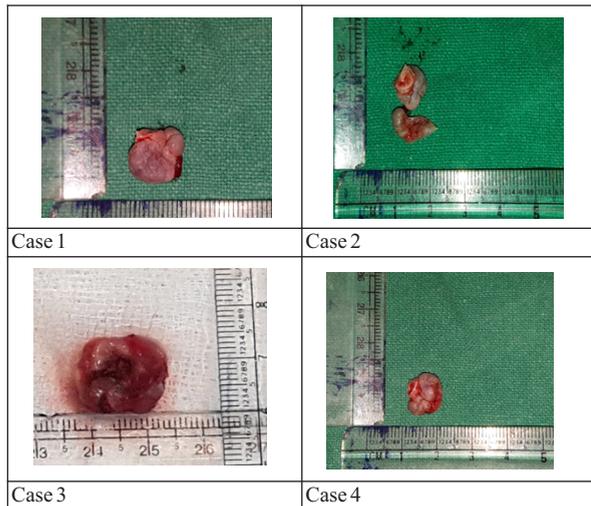


Figure 3: Gross specimens excised during operation.

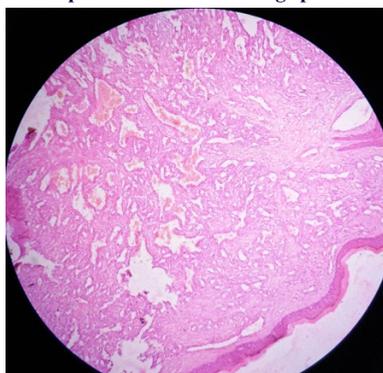


Figure 4: Histopathological examination revealed features suggestive of Lobular capillary hemangioma.

Pseudo stratified ciliated epithelium covered the entire lesion, and some parts were eroded. Lobules of dilated and congested capillaries were noted. There was profound inflammatory cell infiltration.

Discussion

Lobular capillary hemangiomas was first describe by Poncet and Dor in the year of 1897 where they referred to these tumors as small vascular tumors in the fingers of 4 patients⁵. They called these lesions botryomycosis hominis and thought it to arise secondary to fungal infection. First case of pyogenic granuloma of the nasal cavity was described in 1940 by Frank I, and Bland M. In 1980, Mills et al., termed pyogenic granuloma as lobular capillary hemangioma due to its characteristic microscopic features.⁶

Grossly, these appear as raised or polypoidal mass with surface ulceration, which may or may not be present. Histologically, LCH has characteristics consistent with polypoidal, circumscribed, exophytic and lobular proliferation of capillaries in a fibromyxoid stroma. While large vessels and surrounding aggregates of small-size capillaries form the lobules, overlying epithelium is ulcerated or atrophic.⁷ This tumor is often misdiagnosed as angiofibroma, which contains marked cellularity when compared with the nasal lobular capillary hemangioma.

Nasal lobular capillary hemangiomas generally rise from the nasal septum (predominantly from the Little area) and/or from turbinates on the roof of the nasal cavity or in the maxillary sinus.⁸ Lobular capillary hemangiomas are commonly seen in females and usually in the 3rd decade.^{9,10} The exact etiology is still unknown and no definite evidence about the mechanism for the development of LCH has so far been defined. Recurrent nose picking or nasal packing may play a role in development of lobular capillary hemangioma^{10,11}. Lobular capillary hemangioma is commonly found in pregnant women and female on oral contraceptive pills and shows a strong association with trauma and hormonal influences on its development.⁷ Interestingly in our patients, none of these potential etiologic factors were present.

Lobular capillary hemangioma of the nasal cavity usually presents with recurrent unilateral epistaxis, nasal obstruction, and nasal discharge and rarely with facial pain, alteration of smell, and headache.¹¹ On endoscopy, the lesion is usually seen as a red to purple solitary mass, with a predilection for the anterior portion of the nasal septum.¹³ The differential diagnosis of intranasal LCH includes nasal polyp, antrochoanal polyp, meningocele, meningoencephalocele, sarcoidosis, Wegener’s granulomatosis, papilloma, Kaposi’s sarcoma, hemangiosarcoma, squamous cell carcinoma, and mucosal malignant melanoma.¹⁴

Total excision of the lesion is recommended and is best done by endoscopic surgery techniques^{8,11}. This provides better visualization of the mass and surrounding anatomy, thus allowing the surgeon to remove the mass completely. All patients can be managed without preoperative embolization unlike other vascular tumors.¹⁰ Recurrences are rare, and no malignant potential have been reported.^{2, 8,11}

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

Conclusion

Keeping in view a series of these case reports, in such a small span of 9 months, it is recommended that Lobular capillary hemangioma constitutes one of the important/ common entity while discussing the differential diagnosis of a unilateral nasal mass and especially in cases of a unilateral bleeding mass in the nasal cavity.

References

1. M.U. Akyol, E.G. Yalciner, A.I. Doğan , Pyogenic granuloma (lobular capillary hemangioma) of the tongue, *Int J Pediatr Otorhinolaryngol*, 58 (2001), pp. 239–241
2. C. Ozcan, D.D. Apa, K. Görür , Pediatric lobular capillary hemangioma of the nasal cavity, *Eur Arch Otorhinolaryngol*, 261 (2004), pp. 449–451
3. James, William D.; Berger, Timothy G.; et al. (2006). *Andrews' Diseases of the Skin: Clinical Dermatology*. Saunders Elsevier. ISBN 0-7216-2921-0.
4. Rapini, Ronald P.; Bologna, Jean L.; Jorizzo, Joseph L. (2007). *Dermatology: 2-Volume Set*. St. Louis: Mosby. ISBN 1-4160-2999-0.
5. Poncet A, Dor L, Botryomycose Humaine *Rev Chir (Paris)* 1897;18:996.
6. 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;4:470–9.
7. M. Kapella, E. Panosetti, P. Rombaux, M. Delos, B. Weynard , Lobular capillary

- hemangioma of the nasal cavity: observation of three specific cases , *Acta Otorhinolaryngol Belg*, 55 (2001), pp.241–246
8. Miller FR, D'Agostino MA, Schlack K. Lobular capillary hemangioma of the nasal cavity. *Otolaryngol Head Neck Surg*. 1999;120:783–4.
 9. Ozcan C, Apa DD, Görür K. Pediatric lobular capillary hemangioma of the nasal cavity. *Eur Arch Otorhinolaryngol*. 2004;261:449–51.
 10. Puxeddu R, Berlucchi M, Ledda GP, Parodo G, Farina D, Nicolai P. Lobular capillary hemangioma of the nasal cavity: A retrospective study on 40 patients. *Am J Rhinol*. 2006;20:480–4. [PubMed]
 10. Lee HM, Lee SH, Hwang SJ. A giant pyogenic granuloma in the nasal cavity caused by nasal packing. *Eur Arch Otorhinolaryngol*. 2002;259:231–3.
 12. Delbrouck C, Chamiec M, Hassid S, Ghanooni R. Lobular capillary haemangioma of the nasal cavity during pregnancy. *J Laryngol Otol*. 2011;125:973–7.
 13. J.W. Ochi, D.B. Kearns, A.B. Seid, S.M. Pransky, H.F. Krous, Do angiomas of the nasal septum exist?, *Int J Ped Otorhinolaryngol*, 90 (1990), pp. 169–173.
 14. R. Simo, J. de Carpentier, D. Rejali, W.J. Gunawardena , Pediatric pyogenic granuloma presenting as a unilateral nasal polyp , *Rhinology*, 36 (1998), pp. 136–138.