

## Case Report

# Lateral nasal wall haemangioma in a young female: a rare case

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**Received:** 14 August 2020  
**Accepted:** 02 October 2020

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### ABSTRACT

Hemangiomas are benign tumours originating from vascular structures in the body. Histologically they are divided into capillary, cavernous and mixed types. Although it is very commonly seen in head and neck region, it is very rarely seen in the nasal cavity, nasopharynx and paranasal sinuses and it accounts for only 10% of all head and neck haemangiomas. In this patient the haemangioma was seen arising from the lateral nasal wall, of the right nasal cavity. So far in the literature very few such cases have been reported till date.

**Keywords:** Capillary haemangioma, Tumour, Nasal cavity, Sinuses, Endoscopy

### INTRODUCTION

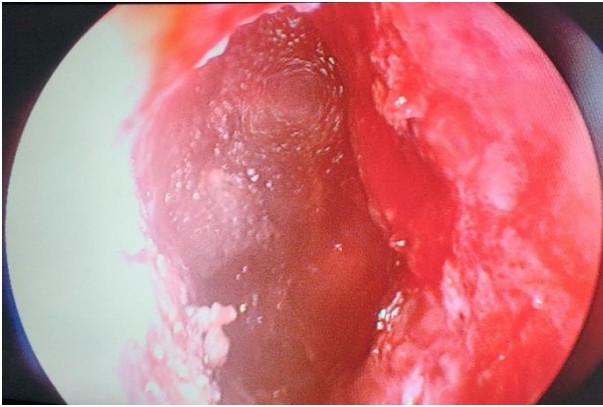
Haemangiomas are benign neoplasms of vascular origin with endothelial proliferation. Poncet et al first described it as human botryomycosis.<sup>1</sup> Nasal cavity haemangiomas are also called as lobular capillary haemangioma, pyogenic granuloma, capillary haemangioma, cavernous haemangioma, epulis gravidarum. This various name of this tumour show that the exact pathogenesis is still a continued debated. Some theories mention that capillary haemangioma has an association with injury and hormonal factors.<sup>2-5</sup> Haemangiomas occurs in all ages even though it is more commonly seen in children and adolescent males. The incidence of capillary haemangioma in females of child bearing age is 2 to 5 %.<sup>6</sup> The most common site of origin is the anterior septum but it has also been reported in other nasal sites like the middle turbinate, inferior turbinate, posterior part of the nasal septum, and vestibule. 65 % arise from the nasal septum, 18 % from the lateral nasal wall like in this case and 16 % from the vestibule.

Here we present an unusual case of a 26-year-old lactating female who presented to us with complaints of nasal obstruction and one episode of epistaxis whose contrast enhanced computed tomography of paranasal

sinuses (CECT PNS) revealed an intensely enhancing soft-tissue mass in the right nasal cavity most likely suggestive of sinonasal carcinoma or inverted papilloma whose endoscopic excision was planned electively.

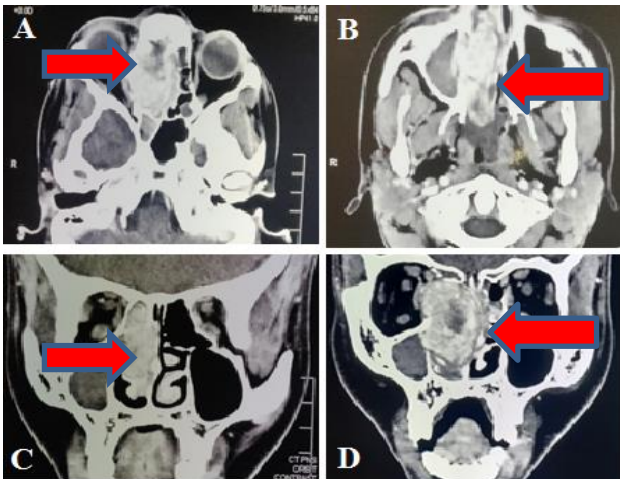
### CASE REPORT

The objective of the study was to analyse the incidence of A 26 years old female presented to our outpatient department with chief complaints of right sided nasal obstruction for 2 months and one episode of epistaxis. The obstruction was insidious in onset, gradually progressive not relieved by oral or local decongestants. She mentioned of one episode of epistaxis which was spontaneous in onset, scanty and not requiring any medical management or nasal packing. Extra nasal symptoms like right sided facial pain, epiphora and headache were also present but were intermittent and occasional. A diagnostic nasal endoscopy (DNE) was done which revealed a pinkish mass seen in the right nasal cavity which bled on touch with attachment seen on lateral nasal wall with free septal margins anteriorly (Figure 1). On the left side DNE findings were that of a deviated nasal septum with no other significant finding.



**Figure 1: DNE showing mass in right nasal cavity.**

The patient was then advised a contrast enhanced computed tomography of paranasal sinuses (CECT PNS) which showed a well-defined soft tissue mass involving the right nasal cavity and right ethmoid sinus with heterogeneous enhancement on post contrast study and non-enhancing necrotic areas within. Medially the lesion is seen causing thinning and erosion of the nasal septum and extension into the left ethmoidal air cells (Figure 2). Thinning and destruction of the medial wall of orbit is also seen with moderate destruction of right superior and middle turbinate. It is also seen extending minimally into the nasopharynx, superiorly into right frontal sinus and leading to widening of the right osteo-meatal complex and extension into right maxillary sinus. The sphenopalatine foramen is not widened and no spalying of pterygoid plates seen.



**Figure 2: CECT PNS cuts showing (A) Orbital extension (B) Erosion of septum (C) Widening of OMC and (D) Extension into maxillary sinus.**

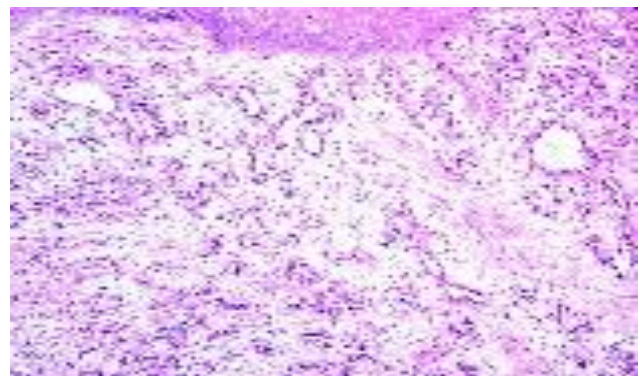
The lesion measures 60x28x41 mm in size. The differential diagnosis based on the above imaging features were likely suggestive of sinonasal carcinoma or inverted papilloma. A biopsy was taken from the mass for diagnostic purpose and for further plan of management.

Embolization was done pre operatively as it was a vascular enhancing lesion.

After pre anaesthetic evaluation the patient was prepared for endoscopic surgical excision of the nasal mass along with the aid of coblator under general anaesthesia. Intra operatively a friable pinkish mass was seen filling the right nasal cavity with extensions and attachments as described on CECT.

The periosteum over the right orbit was visualized which was intact and no orbital fat prolapse was seen. Nasopharynx was visualized and it was clear with no evidence of any residual mass. Anterior and posterior nasal packing was done post excision of mass. The mass was then subjected to histopathological examination (HPE). The packs were removed 48 hours post operatively.

On HPE features of capillary haemangioma were confirmed. (Figure 3) On follow up, nasal endoscopy revealed a well healing nasal cavity.



**Figure 3: Histopathology slide showing plenty of closely packed capillary sized vessels lined by single layer of plump endothelial cells with intervening stroma containing scant connective tissue (histopathology image source - pathology outlines).**

## DISCUSSION

Capillary haemangioma a rare, fast growing, non-neoplastic tumour presents as vascular malformations.<sup>7,8</sup> As mentioned previously it was first elaborated by Poncet et al botryomycosis hominis assuming that it emerged after a fungal infection.<sup>9</sup> Miller named these tumours as lobular capillary haemangioma seeing its histology features.<sup>10</sup> Ash and Old reviewed 3000 cases of nasal polyps, out of which 23 were found to be sinonasal hemangiomas.<sup>11</sup> Puxeddu et al drew the inference from a retrospective study of 40 patients that the most common site of haemangioma when found in nasal cavity is the anterior nasal septum followed by nasal vestibule, inferior turbinate, middle turbinate, and uncinat process.<sup>12,13</sup> In pregnancy, the prevalence of these tumours ranges from 0.5% to 5%.<sup>13</sup> Though it is seen that capillary haemangioma affects both genders equally after

an age of 40 years, still a female predominance is seen in the third decade of life compared to men who are more commonly affected when less than 18 years of age.<sup>14</sup>

In this patient the haemangioma was seen arising from the lateral nasal wall, of the right nasal cavity. So far in the literature very few such cases have been reported till date. Embolization of the feeding vessels was done as it was a vascular enhancing lesion. The procedure of embolization could also be used as an alternative method for patients unfit for surgery or for large tumours as preoperative preparation to reduce the amount of intra-op blood loss.

## CONCLUSION

Haemangiomas should be treated promptly as they have the tendency to cause bleeding problems and complications associated with it. Every patient presenting with a polypoidal mass and history of epistaxis should undergo diagnostic nasal endoscopy followed by radiological imaging like computed tomography to get a provisional diagnosis and plan the further management. Thus, this case has been reported as it had a potential of being miss diagnosed due the radiological findings and also to enlighten the perks of embolization in the management of such highly vascular nasal tumours.

The treatment of choice for nasal hemangiomas is endoscopic surgical excision. Various other surgical methods like laser ablation, cryotherapy, excisional surgery and electrocoagulation can be employed for this lesion. In our patient a combination of embolization, endoscopic surgical excision and coagulation using a coblator was used. Surgical excision of the lesion with histopathological examination for confirmation is and must remain the mode of choice of treatment for nasal hemangiomas.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: Not required*

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**Cite this article as:** Ansari A, Nair SU. Lateral nasal wall haemangioma in a young female: a rare case. Int J Otorhinolaryngol Head Neck Surg 2020;6:2139-41.