

A Case Series on Haemangiomas of Middle Turbinate

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ABSTRACT

Haemangiomas are benign tumours that form from vascular structures in the body. They frequently occur in the head and neck region, but they are rare in the nasal cavity and Paranasal sinuses. The cause is unknown, but it could be related to trauma or hormonal imbalance. Depending on the dominating vessel size during microscopy, it can be one of two forms (capillary or cavernous). These neoplasms in the nasal cavity are mostly capillary and arise from the nasal septum, and they are more common in youngsters. Cavernous haemangiomas that develop on the lateral wall of the nasal cavity and are more common in the elderly. A series of four instances with a tumour developing from the middle turbinate were referred to our institution. A thorough endoscopic excision was done since it allowed for greater visualisation of the tumour. Although haemangioma is a rare diagnosis, it should always be considered when diagnosing a bleeding mass emerging from the middle turbinate.

Key words: Haemangiomas, Paranasal sinuses, Vascular lesions

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INTRODUCTION

Haemangiomas are benign vascular lesions that frequently affect the epidermis and oral mucosa, with involvement of the middle turbinate being uncommon [1-3]. Haemangiomas are benign capillary proliferations with a characteristic lobular structure that mostly impact the tongue, lips, oral mucosa, and gingiva microscopically [4]. Although the exact etiopathogenesis of haemangiomas formation is unknown, they are classified as either capillary or cavernous based on the prominent vessel size upon microscopy. Haemangiomas are benign vascular lesions that frequently affect the epidermis and oral mucosa, with involvement of the middle turbinate being uncommon [2,3]. These neoplasms are primarily capillary and arise from the nasal septum, and they are more common in youngsters when they arise from the middle turbinate. The male population has a larger incidence during childhood and adolescence, but the female population has a higher incidence during the third and fourth decades, which coincides with child-bearing age. Cavernous haemangiomas, on the other hand, are more common in the elderly and are more likely to be discovered on the lateral wall of the nasal cavity. Progressive unilateral nasal blockage, on and off epistaxis, mucopurulent discharge, epiphora, facial pain, headache, and hyposmia are all common symptoms.

Radiological imaging, such as CT or MRI, was used to confirm vascular pathology in three patients that were

clinically identified as haemangioma of the middle turbinate. Clinically, one example was misinterpreted as an inverted papilloma when it was a sinonasal cavernous haemangioma. Patients underwent endoscopic surgical excision of tumours after extensive investigations and anaesthetic fitness, with the specimen sent for histological evaluation. Patients were provided post-operative treatment and were followed up for two months.

CASE 1

The patient reported to the OPD with a one-year history of bilateral nostril block and recurrent epistaxis. There has been no history of trauma or bleeding diathesis. There is no history of nose picking, migraines, or head heaviness. There were no other comorbidities in the patient's case.

The external contour of the nose was normal upon examination. Anterior rhinoscopy revealed a left-deviated nasal septum with a low spur with no contact zone. The nasal cavity on both sides was normal. There was no mass in the nasopharynx on posterior rhinoscopy.

A diagnostic nasal endoscopy (DNE) revealed a huge middle turbinate on the right with polypoid alterations, a deviated nasal septum with spur on the left and muco-purulent discharge in both nasal cavities.

Following this, a CT PNS was performed, which indicated asymmetry of the medial wall of the right middle turbinate, as well as abnormal erosion of the lamella (Figure 1). Following normal diagnostics, the patient was scheduled for surgery. A partial turbinectomy was performed, and the specimen was sent for histological analysis.



Figure 1: CT PNS showing bulky middle turbinate.

Micro fragments of fibro collagenous tissue admixed with mucous glands and spicules of bone enclosing cavernous vascular spaces lined by endothelial cells loaded with RBCs and fibrinous material were discovered on histopathological examination. The image looks like a cavernous haemangioma (Figure 2).

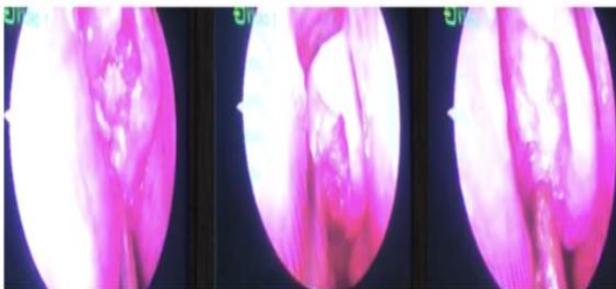


Figure 2: Intra-op images of the procedure.

CASE 2

For the previous 6 months, the patient had been suffering from recurring epistaxis and nose block.

There had been no previous trauma, bleeding diathesis, headaches, or head heaviness in the patient. There were no comorbid conditions in this patient.

The external contour of the nose was normal upon examination. Anterior and posterior rhinoscopy were both normal.

A diagnostic nasal endoscopy (DNE) revealed a reddish tumour emerging from the septum, which bled on touch (Figure 3).

After standard investigations, the CT PNS was performed, and the patient was taken in for surgery. There were no complications during the procedure or afterward.

Endothelial growth was found in abundance, with a characteristic histopathological appearance in which the capillaries were dilated and organised in lobules. The image looked like a lobular capillary haemangioma.

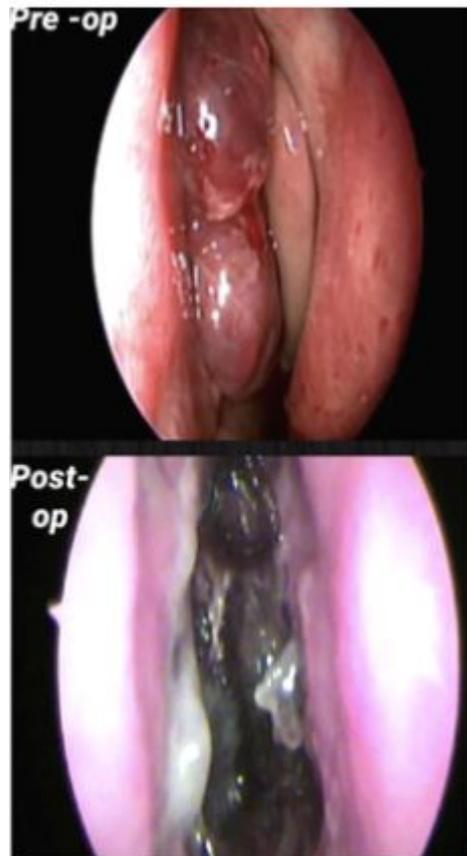


Figure 3: Pre-op & post-op image.

CASE 3

For the last five months, a 45-year-old male patient had complained of repeated bouts of nose bleed and nasal block. There is no evidence of recent infection or trauma. A reddish polypoidal tumour in the left nasal cavity, which bleeds freely when touched, was discovered during a nasal endoscopy. It looks to be coming from the postero-superior septal mucosa and is partially obstructing the left nasal cavity. A soft tissue mass emerging from the poster superior section of the nasal septum was discovered on a CT scan of the nasal and Paranasal sinuses, with no relationship to the cerebral contents (Figure 4).



Figure 4: CT PNS.

There was no expansion of the PNS or neighbouring tissues, and no bone injury was observed. A biopsy of the tumour revealed a diagnosis of capillary haemangioma. The nasal mass was entirely removed using an endoscopic surgery approach under general anaesthesia, with no need for preoperative embolization or

perioperative blood transfusion. The mucous septum, perichondrium, and part of the muco periosteum were all resected in this procedure.

On gross pathologic examination,

Mass was smooth in appearance

Pinkish gray polypoidal mass measuring 1 X 1.5 cm in size

On histopathological examination, a polypoidal mass protruding above the surrounding mucosa was seen. 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. The patient had an uneventful postoperative course, and there is no recurrence till date.

CASE 4

Since 1.5 years, a 37-year-old male patient has had intermittent swelling of the left side of his face and epistaxis. Anterior rhinoscopy revealed a large soft tissue mass nearly completely filling the left nasal cavity, as well as active mucoid discharge and few blood clots. A contrast enhanced MRI scan revealed a well-defined non-bone erosive mass arising from the left middle meatus and displacing the nasal septum contra laterally within and limited to the left nasal cavity. It was discovered to be obstructing the left maxillary ostium, resulting in mucosal thickening and secretion retention in the left maxillary sinus. On T1W, the muscles appeared iso to hypo intense, but heterogeneously hyper intense on T2WI. The diagnosis of an inverted papilloma was made based on this distinctive imaging pattern.

On histopathology, a punch biopsy of the nasal mass revealed mostly fibrin blood clots, as well as tiny fragments with dilated, ectatic channels lined by endothelial cells and positive for the vascular marker CD31. There were no inverted papilloma-like morphologic features. As a result, histopathology confirmed that the lesion was a cavernous haemangioma. No evidence of any epithelial neoplasia or malignancy was seen in the biopsy. The tumour was completely removed following an endoscopic assisted modified medial maxillectomy. The postoperative stay in the hospital was uneventful, despite some minor intraoperative bleeding (Figure 5).

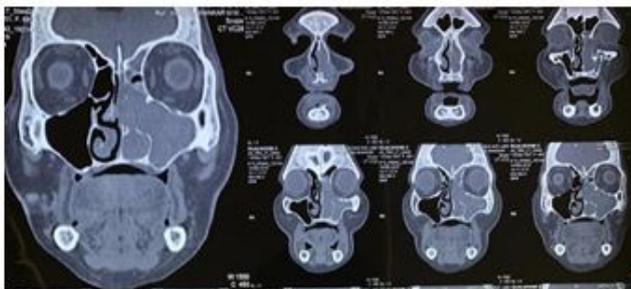


Figure 5: CT PNS.

DISCUSSION

Blood vessels or lymphatic's cause vascular lesions in the head and neck region [1]. Haemangiomas are benign vascular tumours made up of freshly developed vessels lined by endothelial cells. Despite being the most frequent soft tissue tumour in the head and neck, they are very uncommon in the nasal cavity and Paranasal sinuses. They are classified into three kinds based on the major vessel size at microscopy: capillary, cavernous, and mixed. The most common type of haemangioma in the nasal cavity is an angioma, which is made up of capillary-sized vessels, occurs most often in the nasal septum or vestibule and is more common in children, while haemangiomas are corpora cavernosa that occur more frequently from the side wall. Of the nasal cavity, which appears around the fourth decade and contains large vascular compartments covered with endothelium [5-7].

Haemangioma of the middle turbinate is characterised by recurrent unilateral epistaxis, nasal obstruction, and nasal discharge, as seen in our study. It can also cause facial pain, a change in smell, and a headache in rare case

To confirm vascular pathology, radiological imaging such as CT or MRI is required. A CT scan can be used to rule out bone erosion or malignant transformations. Because of greater soft tissue resolution and less artifact, MRI is superior to computed tomography in the diagnosis of sinonasal cavernous haemangiomas. Cavernous haemangiomas appear on computed tomography as a soft tissue density circumscribed mass that enhances heterogeneously after contrast injection. Non enhancing areas correspond to the areas of necrosis and haemorrhage. The tumor's anatomical location and extent are usually revealed using contrast CT scanning. The underlying bone is normally normal but may be altered by neighbouring long-standing pressure from the increasing bulk [8-10]. CT scans are thought to be more typical of cavernous haemangiomas. A capillary haemangioma is a group of capillary balls that are separated by connective tissue stroma. Cavernous haemangioma should be treated because they will never undergo involution. Itoh et al. first described the MR features of the cavernous haemangiomas [10]. They show low signal intensity T1-weighted images and very high signal intensity on T2-weighted images compatible with low flow vascular structure. The MR characteristics of cavernous haemangiomas were initially characterised by Itoh et al [10]. T1-weighted pictures reveal low signal intensity, whereas T2-weighted images show very high signal intensity, which is consistent with a low-flow vascular anatomy.

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 are among the differential diagnosis for hemangiomas of middle turbinate.

Hemangiomas in the head and neck, particularly in the face, ear, and nose, should be treated since they can cause

bleeding and complications such as infection. Hemangiomas can be treated medically with steroids, interferon, and vincristine. The use of these agents is restricted due to a considerable number of harmful adverse effects.

For the treatment of nasal hemangiomas, surgical excision is the preferred method. Excisional surgery, laser ablation, cryotherapy, and electrocoagulation have all been used to treat similar lesions [11].

CONCLUSION

Haemangiomas are frequent in the head and neck area; however they are uncommon in the nasal cavity and the Paranasal sinuses. Haemangiomas should be treated since they can cause bleeding complications. Above a 6-month period, endoscopic surgical excision with confirmation by histological evaluation was preferred over alternative treatment options, with no recurrence.

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