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Case Report

A case report of nasal lobular capillary hemangioma and its management

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ABSTRACT

Nasal lobular capillary hemangioma is a benign vascular lesion marked by epistaxis and nasal obstruction. The nasal cavity is a relatively rare location as lobular capillary hemangiomas commonly occur in the oral cavity. They are termed as lobular capillary hemangioma based on the histopathological features of anastomosing capillary networks arranged in lobular architechture. We report a case of 40 year old female with history of left nasal obstruction and recurrent epistaxis since 2 months. Examination of nose revealed a protruding reddish coloured mass on the left side and CT scan of nose and paranasal sinuses showed the mass arising from the anterior part of nasal septum along with nasal spur. Patient underwent surgical excision of the mass along with spur removal under general anesthesia. Histopathology demonstrated vascular proliferative lesion consistent with hemangioma. The diagnosis of capillary hemangioma must always be taken into account while considering the differential diagnosis of bleeding mass in the nasal cavity.

Keywords: Nasal hemangioma, Epistaxis, Endoscopic excision

INTRODUCTION

Nasal lobular capillary haemangioma is a benign vascular lesion of unknown etiology with a characteristic histopathological feature of lobular architecture on microscopy.[1] Sinonasal hemangiomas are uncommon and constitute for about 10% of all hemangiomas of the head and neck region.[2] They account for less than 20% of all benign nasal cavity tumors.[3] They vary in size and shape and could be either pedunculated or broad based.[4] The most prevailing site of origin of the tumour is the locus valsalvae or little's area in the anterior portion of the nasal septum.[5] Other sites include lateral wall of nose, inferior turbinate, floor of nasal cavity and roof of the vestibule.[6] Capillary hemangiomas should always be considered in the differential diagnosis of bleeding mass in the nasal cavity. The following case report illustrates a 40 year old female patient who presented with recurrent epistaxis and left nasal obstruction due to a nasal mass which was subsequently confirmed as a lobular capillary hemangioma.

CASE REPORT

A 40 year old female patient presented with complaints of left sided nasal obstruction and recurrent episodes of epistaxis since 2 months. No other nasal symptoms were present. She was diagnosed with hypertension 2 months back and was on antihypertensive medication. On local examination of nose, a reddish polypoidal mass was seen protruding through the left nasal cavity causing partial obstruction to left nasal passage (Figure 1). On probe test, the mass was insensitive to touch, bleeds on touch and was able to probe around except on the medial aspect. Diagnostic nasal endoscopy revealed the mass to be arising from the anterosuperior part of the nasal septum (Figure 2). Deviation of nasal septum to left with bony spur inferiorly was also noted (Figure 3). Patient was

subjected to CT scan of nose and paranasal sinuses with contrast. CT scan showed a well defined lesion in the left nasal cavity anteriorly with intense post contrast enhancement measuring 7.8×5.3 mm suggesting a vascular origin (Figure 3 and 4). Endoscopic excision of the nasal mass with septal correction and spur removal was done under general anesthesia. There was no requirement of preoperative embolization or perioperative blood transfusion. On gross pathologic examination, the excised mass was reddish, smooth surfaced and polypoid measuring approximately 1×0.5 cm in size (Figure 6). Histopathological examination revealed features of lobular capillary hemangioma. It showed polypoid structure lined by stratified squamous epithelium, fibrocollagenous stroma with presence of plenty of proliferating capillaries lined by endothelium along with chronic inflammation (Figure 7). Post-operative period was uneventful with no recurrence seen.

Figure 1: A reddish polypoidal mass protruding from the left nostril.

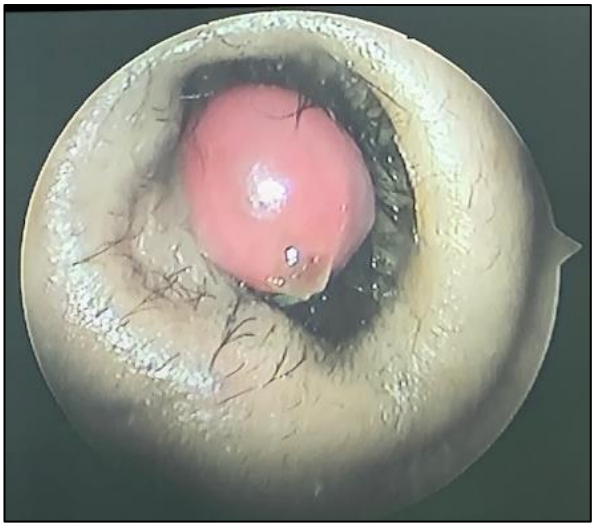

Figure 2: Diagnostic nasal endoscopy picture showing the polypoidal mass.

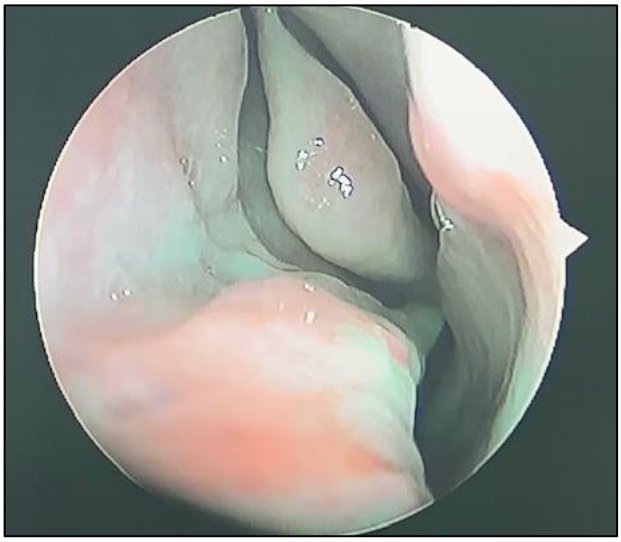

Figure 3: Diagnostic nasal endoscopy picture showing left septal spur inferiorly.

Figure 4 (A-D): Coronal section of CT scan showing the lesion.

Figure 5 (A-C): Axial section of CT scan showing the lesion.

Figure 6: Gross appearance of the excised specimen.

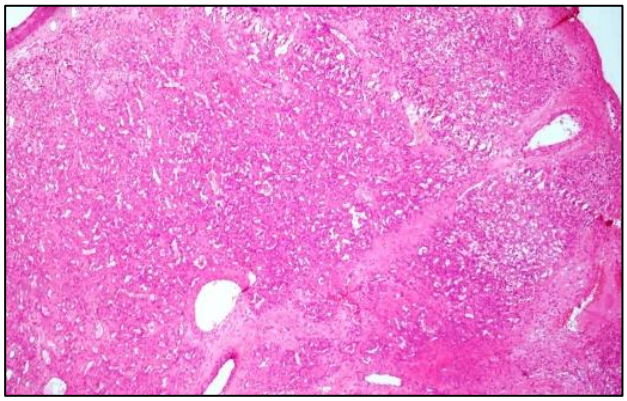

Figure 7: Histopathology showing features of lobular capillary hemangioma.

DISCUSSION

Lobular capillary hemangioma was first reported as human botryomycosis by Poncet and Dor in 1897 and it was presumed to be secondary to fungal infection.[7] In 1950, ash and old first described inflammatory hemangioma of the nasal septum known as bleeding polyp.[1,6] Later, the condition was termed as pyogenic granuloma by Hartzell in 1974, again a misnomer as the tumour is neither infectious nor granulomatous.[8] Miller proposed the term lobular capillary hemangioma based on its characteristic histopathological features.[9] According to Willis et al, every benign blood vessel proliferation is not a true tumour, but a hamartoma or congenital anomaly. It may occur due to opening of blood vessels previously closed by birth.[10]

Literature review shows oral cavity to be the most common site (62.4%) of involvement in the head and neck region. The most common sites are the gingiva, lips, tongue and buccal mucosa. Nasal cavity involvement is seen in 7-10% of cases with the anterior portion of septal mucosa and the tip of turbinate being the most frequently involved areas.[11] Sinonasal hemangiomas are benign vascular tumours and have been classified into three subtypes by Mulliken and Glowacki which includes capillary hemangioma (which originates predominantly from the locus valsalvae area of nasal septum), cavernous hemangioma (usually arises from the lateral wall of nasal cavity) and mixed forms.[6]

The pathogenesis of capillary hemangioma is ambiguous and uncertain. A review of the literature shows the possible etiology to be nasal trauma in the form of prolonged nasal packing, nasal intubation, habitual nasal picking, nasogastric tube, foreign body or nose piercing.[12] Study by Puxeddu et al described other possible etiological factors such as pregnancy and hormonal influence. Increased levels of estrogen and progesterone have been known to contribute towards the development of the tumour.[13] Nair et al suggested the septal hemangioma as a pregnancy tumour. Other suggested factors in the pathogenesis of these tumours include viral oncogenes, arteriovenous malformations and abnormal production of angiogenic growth factors.[14]

Lobular capillary hemangioma of the nasal cavity usually presents with recurrent unilateral epistaxis, nasal obstruction, nasal discharge and rarely with facial pain, alteration of smell and headache.[13] It is more common in the third decade and in females.[4,15] Most of the hemangiomas present as red to purple coloured mass with dimensions less than 10 mm with insidious onset. However, they can show variation in size filling the entire nasal cavity. Such masses have been termed as giant lobular capillary hemangioma.[13,16] The differential diagnoses of intranasal hemangioma include nasal polyp,

meningocele, meningoencephalocele, sarcoidosis, Wegener's granulomatosis, papilloma, Kaposi's sarcoma, hemangiosarcoma, squamous cell carcinoma and mucosal malignant melanoma.[17]

Radiological studies are necessary to evaluate the differential diagnosis, extent of the lesion and surgical possibilities. Contrast enhanced CT scan of nose and paranasal sinuses is the modality of choice used for imaging nasal lobular capillary hemangiomas. Usually, they reveal a soft tissue enhancing mass and helps to rule out bone erosion, invasion of adjacent structures seen in malignant tumours and intracranial extension.[18,19] Endoscopic surgical excision is the preferred method of treatment. There is no prerequisite for preoperative embolization or perioperative blood transfusion. Subperichondrial dissection which includes excision of the mass along with a margin of healthy mucosa and the underlying perichondrium followed by cauterization of base is necessary to prevent recurrence.[12] Literature shows the recurrence rate for haemangioma to range from 0-42%.[20] Various other surgical methods which have been used include electrocoagulation, cryotherapy and laser. The histopathological appearance is characterized by anastomosing capillary networks arranged in distinct lobules within a fibromyxoid stroma.[1] No malignant transformations have been recounted.[13]

CONCLUSION

Nasal lobular capillary hemangioma though rare should always be contemplated in the differential diagnosis of vascular lesions in the nasal cavity. Radiological evaluation followed by endoscopic excision is the preferred management with no requirement of preoperative embolization or perioperative blood transfusion. The recovery is good with excellent prognosis.

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