

Case Report

Hemangioma of the Nasal Septum in a Middle Aged Female

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Abstract

Introduction: Hemangioma is a benign, rapidly growing solitary lesion, occur in the skin and mucous membrane. Etiology of such a lesion is unknown, but it could be due to trauma and hormonal factors. According to several reports, a common site of such a lesion is oral cavity. Rarely, it involves the nasal cavity. Symptoms caused by such a lesion are bleeding and nasal obstruction.

Presentation of case: A 44-year-old female presented with progressive right-sided nasal obstruction and off and on epistaxis. Examination of nasal cavity physically combined with endoscopic examination revealed a large, reddish color mass in the nasal cavity on the right side. CT scan of the nose and paranasal sinuses also showed a soft-tissue mass originating from the anterior part of the nasal septum. (CT scan was asked to rule out the possibility of bony erosion that can be found at the base of the lesion and also hemangiomas capture the contrast in the bright lobular region.) Complete excision carried out along, with attached nasal septal mucosa and perichondrium under general anesthesia. Preoperative embolization or perioperative transfusion was not required. The histopathology reported as a benign vascular proliferative lesion, consistent with lobular capillary hemangioma. The patient's recovery was uneventful. Patient attended regular OPD follow up for more than six months. During this period no recurrence of the lesion seen and finally the patient discharged from OPD.

Discussion: Use of MRI as an investigation tool is indicated especially if the lesion is extremely large and originate from nasal roof in order to rule out any intracranial relation. Excision of lesion confined to the anterior nasal septum is recommended endoscopically as there is no need of preoperative embolization or perioperative blood transfusion.

Keywords: Lobular capillary hemangioma; Endoscopic surgery; Nasal septum; Progressive nasal obstruction;

Epistaxis

1. Introduction

Hemangiomas, are benign head and neck tumor constituting less than 20% of all benign nasal-cavity tumors [1]. Some researchers, however, do not classify them as neoplasms but instead as hamartomas or congenital vascular anomalies [2]. Hemangiomas occur commonly in the skin and mucous membranes. The exact etiology of such lesion remains obscure. Poncet and Dor in 1897 [3, 4] described them initially as human botryomycosis. In general, it is present as a single lesion. However, in pediatrics, it may present occasionally as multifocal lesions and are associated with a high risk of visceral (intrahepatic) localization [5]. Hemangiomas are benign capillary proliferations with a distinctive lobular structure microscopically affecting mainly the tongue, lips, oral mucosa and gingiva [6]. Nasal cavity is affected rarely [3, 4]. It varies in size and shape measuring from a few millimeters to several centimeters and may be pedunculated or broad-based [4]. Trauma and hormonal factors are considered to be the etiological factors. Anterior part of nasal septum which is commonly known as Little's area [2] is thought to be the common site of its origin. Other sites of the nasal cavity which can be affected are nasal vestibule [3]; and the lateral wall [7]. According to some reports hemangiomas seen in the intraosseous part of the inferior turbinate [1], nasal floor, and vestibular roof [8].

Older individuals, especially 50 years and above are affected equally, but incidental ratio in children and adolescent is higher in males. Hemangiomas in females are most frequently found in their 30s, a range that coincides with child-bearing age [8]. The close association between hemangiomas and child bearing age of the female is thought to be due to hormonal imbalance. Because of this association, Nair et al. define the septal hemangioma as a pregnancy related tumor [9]. Patients commonly present with progressive unilateral nasal obstruction, off and on epistaxis, mucopurulent discharge, epiphora, facial pain, headache, and hyposmia [8]. Some cases reported with progressive, painless swelling and nasal deformity [5]. The common problem associated with such disease is bleeding, which if prolonged, may lead to anemia [5]. Size of hemangiomas varies between 10 mm up to 80 mm in diameter according to some report.

2. Case Presentation

A 44-year-old female presented to the Ear, Nose and Throat Department of King Saud Medical City with complaints of off and on epistaxis, and progressive nasal obstruction for the last four months. There was no history of any sort of nasal trauma. During this period, she did not receive any sort of treatment related to epistaxis and nasal obstruction. Anterior rhinoscopy along with endoscopic examination revealed a large, reddish polypoidal mass in the right nasal cavity, which bleeds on touch. Mass originated from the anterior part of nasal septum extending up to nasal vestibule, causing complete obstruction of right side of the nasal cavity. CT scan of nose and paranasal sinuses revealed a soft-tissue mass arising from the anterior part of nasal septum, without any intracranial relation. According to CT scan involvement of bone and para nasal sinuses not seen. Complete excision of nasal mass carried out endoscopically along with adjacent mucosa and perichondrium under general anesthesia without preoperative

embolization or perioperative transfusion. The excised polypoidal mass was approximately $2.5 \times 2 \times 1.5$ cm in size (Figures 1 and 2). Histopathology reported the mass as a benign vascular proliferative lesion, consistent with lobular capillary hemangioma. The patient's recovery was uneventful. She attended OPD regularly as a follow up case for more than six months. During this period no recurrence of the lesion seen and finally the bpatient discharged from OPD.



Figure 1: Posterior surface of the hemangioma.



Figure 2: Anterior surface of the hemangioma.

3. Discussion

Hemangiomas are benign vascular tumors [7]. Exact etiology is not known, but according to some literature repeated nasal trauma or micro trauma associated with nasal packing because of epistaxis or nasal intubation could be considered the etiological factors of nasal hemangiomas. [10]. According to Puxeddu et al. [11, 12] who conducted one of the largest studies on nasal cavity hemangiomas, indicated pregnancy and hormonal imbalance as possible etiological factors. Other factors like oncogenic viruses, an abnormal production of angiogenic growth factors, or cytogenic abnormalities could also play a major role in the development of these tumors [9]. Mulliken and Glowacki defined hemangiomas as rapidly growing vascular tumors and classified them into three subtypes: capillary hemangioma (predominately originating from anterior part of nasal septum, called Little's area), cavernous hemangioma (usually located on lateral nasal wall) [7], and mixed forms. In our case as the diagnosis confirmed histologically, as a Lobular capillary hemangioma, it is a benign lesion of skin and mucous membranes. According to some literature such lesions were once termed pyogenic granulomas; however, now it is thought to be a misnomer, as the lesion is neither infectious nor granulomatous [13]. On the basis of histopathological findings Miller's [13] described the lesion as a lobular capillary hemangioma.

It is unusual for the lesion to involve the nasal cavity, but when it does occur, it frequently involved anterior portion of the septal mucosa and the turbinate [3, 13]. In the present case, the lobular capillary hemangioma was on the anterior part of the nasal septum. The mechanism for the development of the lobular capillary hemangioma remains unknown. However, trauma, hormonal influences, viral oncogenes, underlying microscopic arteriovenous malformations, and the production of angiogenic growth factors may play roles in the pathogenesis [12]. In our patient, none of these etiological factors were identified. Diagnosis of lobular capillary hemangioma is not difficult if it is in its usual form as a hyper vascularized mass in the anterior portion of the nasal cavity. Anterior rhinoscopy along with endoscopic examination will reveal it as a red or purple, single, hyper-vascularized mass predominantly involving the anterior part of nasal septum. We do recommend MRI provided if the hemangioma is giant or if it is originating from the nasal roof in order to rule out any intra cranial involvement [12, 14].

The differential diagnoses of intranasal lobular capillary hemangioma include 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 [15]. Histologically Lobular capillary hemangioma has characteristic features consistent with polypoid, circumscribed, and lobular proliferations of capillaries in a scanty fibrous stroma. The superficial portion is ulcerated and encrusted [16]. Recommended choice of treatment is complete endoscopic surgical excision [4, 13, 17]. Endoscopic surgery is recommended because of better visualization of the lesion and allowing the surgeon to remove the mass completely without an external incision. To obtain complete cure, complete excision should be done. Normally recurrence is not there, but it is possible if care is not taken during its excision along with underlying mucosa and perichondrium.

In our case, the lobular capillary hemangioma involved the anterior portion of the nasal septum. The mechanism for the development of the lobular capillary hemangioma remains unknown. However, it is believed that some etiological factors may play a role in the pathogenesis of lobular capillary hemangioma like trauma, hormonal influences, viral oncogenes, underlying microscopic arteriovenous malformations, and the production of angiogenic growth factors. [12]. None of these etiological factors were identified in our case. Diagnosis of lobular capillary hemangioma is not difficult if it is in its usual form as a hyper vascularized mass in the anterior portion of the nasal cavity. Anterior rhinoscopy along with endoscopic examination will reveal it as a red or purple, single, hyper-vascularized mass predominantly involving the anterior portion of the nasal septum. We do recommend MRI provided if there is giant hemangioma or if it is originating from the nasal roof in order to rule out any intra cranial involvement [12, 14].

4. Conclusion

Hemangiomas can affect any part of the body. Generally nasal involvement seems to be uncommon. It should be considered among the differential diagnosis of vascular lesions within the nasal cavity. It is difficult to manage hemangiomas therapeutically, especially larger ones. As we know there are different treatment options available regarding hemangiomas like cauterization, electro dissection laser and surgical excision, best treatment option of

nasal hemangioma is endoscopic surgical excision provided if it arises from the anterior part of the nasal septum. In our case endoscopic excision was done successfully.

Consent

Approval was obtained from the patient to publish the details of this case.

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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