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CASE REPORT

Capillary hemangioma of the nasal septum in children

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Abstract:

Lobular capillary hemangioma (LCH) is a benign vascular tumor, also known as, pyogenic granuloma. LCH appears on the skin, the oral mucosa, and, rarely, on the nasal mucosa. Trauma, hormones, viral oncogenes, microscopic arteriovenous malformations, and angiogenic growth factors have been implicated in the etiology of LCH lesions. LCH most commonly presents in the third decade of life but may present in persons of any age. It is considerably rare in children; only a few cases have been reported. Our patient was a 14 year old male who had experienced recurrent unilateral epistaxis and nasal obstruction for 1.5 months. The mass in his left nasal cavity was totally excised. The patient showed no recurrence during the 50-month postoperative follow up period.

Keywords: children, nasal, capillary hemangioma

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Introduction

Lobular capillary hemangioma [LCH] is a benign, rapidly growing, fibrovascular lesion, also known as, pyogenic granuloma. LCH in the nasal cavity is rare and, thus, not well known by otolaryngologists [1, 2, 3, 4]. LCH commonly appears on the skin and the oral mucosa. Nasal LCHs generally project from the entrance of the nasal cavity. The etiology of LCH is unclear. Local trauma, hormones, and viral oncogenes may play a role in the pathogenesis of the lesion. Based on previous reports, the most common cause of local trauma is nasal packing. The typical locations of nasal LCHs, on Little's area and on the

anterior tip of the conchas, further suggest trauma as an etiological cause [5].

Nasal lobular capillary hemangioma generally causes unilateral epistaxis and obstruction. Rarely, symptoms like rhinorrhea, facial pain, headache, and hyposmia may occur [1, 4, 6]. The lesions are solitary, generally smaller than 1 cm, and pale red in color. Clinical findings, imaging methods, and biopsy lead to diagnosis. The differential diagnosis includes sinonasal papilloma, capillary hemangioma, hemangiopericytoma, histiocytoma, leiomyoma, osteoma, squamous cell carcinoma, adenocarcinoma, melanoma, esthesioneuroblastoma, and

angiosarcoma [3]. Because LCH does not spontaneously regress, surgical excision is the treatment of choice. Recurrence is not common after the surgery [1, 3, 7, 8].

LCH is histopathologically characterized by polypoid, exophytic, and lobular proliferation of capillaries in the fibromyxoid stroma. The epithelium surrounding the lesion is ulcerous or atrophic [1, 9, 10].

In this case report, a patient with nasal septal LCH, which is not common in children, is presented.

CASE REPORT

The patient, a 14 year old male, was admitted to the clinic with recurrent unilateral epistaxis and nasal congestion that had persisted for 1.5 months. He had no history of nasal packing, digital trauma, or irritation. Anterior rhinoscopy revealed a pale reddish, hemorrhagic, pedunculated mass in the left nasal cavity. The mass was approximately 1 cm in diameter, originated from the base of the nasal septum, and extended 5 mm to the proximal caudal septum. On endoscopic examination, the nasal mucosa was slightly edematous, and purulent secretion in the nasal passage was minimal. There was adenoid tissue in the nasopharynx that did not obstruct the choanae. The patient was administered antibiotics as preparation for total excision under local anesthesia. The mass was totally excised after the infection had regressed. The tissues surrounding the mass were not eroded. The integrity of the septal cartilage was not compromised in the excision area [7-8mm] that did not have mucosal tissue after the surgery. After the excision, a tampon soaked in antibiotics was placed into the left nasal cavity. The tampon was removed two days after the surgery. Macroscopic examination of the excised material showed one pale red polypoid mass with a diameter of 1 cm [Figure 1]. The histopathologic diagnosis was lobular capillary hemangioma [Figure 2].

In the early postoperative period, the area on the septal cartilage without mucosal tissue was completely re-epithelialized, and on postoperative follow up, the patient showed no recurrence.

DISCUSSION

Lobular capillary hemangioma [LCH] is a benign, rapidly growing, and acquired vascular tumor that bleeds easily [1,3]. LCH can occur in all age groups, but only a few cases in infants and children have been reported [1,4]. Our patient was a 14 year old male who had symptoms for 1.5 months prior to admission. Özcan *et al.* noted in a previous case report that, after 20 days of antibiotics, infection regressed and minimal tumor regression also occurred [1].

Our patient's infection was treated with antibiotics, but the size of the tumor did not regress. Our patient did not have a history of recurrent sinusitis attacks.



Figure 1: The excised pale red polypoid mass.

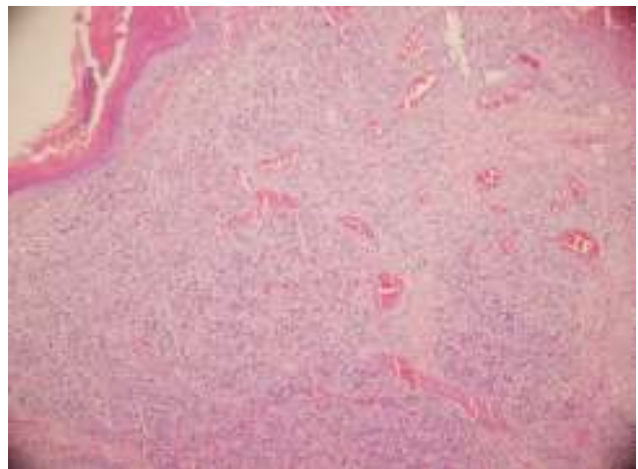


Figure 2: Lobular capillary hemangioma (pyogenic granuloma). Distinctive lobules of excisable dilated and congested capillaries (HEX100).

In the first large series study on LCH, published in 1950 by Kerr, less than 10% of the 280 patients with pyogenic granuloma were reported to have nasal LCH [7]. In a review of 73 patients with either oral or nasal cavity LCH, conducted by Mills *et al.*, only 21 patients had lesions in the nasal cavity [8]. In our patient, the tumor originated from the nasal septum.

The most common early symptoms of LCH are recurrent unilateral epistaxis and nasal obstruction. The lesion is generally solitary, reddish, pedunculated, and located in the anterior nasal septum. If the LCH lesion is a

hypervascular, small, red tumor, the diagnosis is relatively easy. Differential diagnosis is important for larger lesions. Large LCHs are not common, and their differential diagnosis includes angiofibroma, angiosarcoma, angiomatous polyp, hemangioma, hemangiopericytoma and paraganglioma. Imaging methods are preferred for tumors that cannot be examined endoscopically because the tumor extends to the skull base [4]. In this case report, the lesion originated from the base of the nasal septum and extended to the proximal caudal septum. On endoscopic examination, all surfaces of the tumor were visible, therefore, no imaging methods were used.

Endoscopic or open total excision is the treatment of choice for LCH [3, 5]. In a study by Puxeddu *et al.*, not only small lesions, but also, lesions that extended to the nasopharynx and larger lesions that lateralized the nasal septum, were excised endoscopically. The study suggested that, while small lesions in adults can easily be excised under local anesthesia, it is more appropriate to perform the surgery under general anesthesia for pediatric patients and in cases in which the lesion extends to critical areas, like the olfactory epithelium on the roof of the nasal cavity [4]. Transnasal resection was performed on our patient under local anesthesia. The amount of bleeding during the surgery was not significant. An anterior pack with nasal tampons soaked in antibiotics was inserted after surgery and removed after two days. In a follow up study of 40 patients for 58 months, Puxeddu *et al.* reported no recurrences [4]. In our study, on postoperative follow up, 50 months after surgery, our patient showed no recurrence.

CONCLUSION

Although LCH is rare in the pediatric age group, patients with recurrent unilateral epistaxis and nasal obstruction should be evaluated for LCH. If the whole lesion can be examined endoscopically, it is considered safe to excise the tumor without using imaging methods. Early diagnosis is important for the management of the disease.

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