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CASE REPORT

Capillary Hemangioma of the Lateral Nasal Wall: An Unusual Location

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ABSTRACT

Capillary hemangioma also known as lobular capillary hemangioma (LCH) or pyogenic granuloma is a benign, vascular lesion of unknown origin, composed of blood vessels and are probably developmental rather than neoplastic in origin. They usually affect skin and mucous membranes of the oral cavity and rarely nasal mucosa. LCH bleeds on manipulations due to high vascularity. Microtraumas and hormonal imbalance are the major etiological factors in its development. Total excisional surgery is sufficient for treatment of the LCH. Capillary hemangioma arising from the nasal cavity is rarely encountered in our practice and rarely reported in the literature. We are reporting this case of LCH of lateral nasal wall because of its unusual location.

Keywords: Capillary hemangioma, Epistaxis, Lateral nasal wall, Hormonal imbalance.

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INTRODUCTION

The term 'hemangioma' is a general term covering a variety of conditions that only bear little or no relationship between them except for the vascular lesions involved. Hemangiomas are benign neoplasms of vascular origin with endothelial proliferation. In the literature, the nose has been cited as an unusual site for this lesion. Intranasal lobular capillary hemangiomas (LCHs) were reported only in six children in English literature between 1985 and 2005.[1] LCH is a capillary rich, rapidly growing tumor of skin and mucous membranes. The occurrence of pyogenic granuloma during pregnancy has resulted in the popular term pregnancy tumor[2] or 'pyogenic granuloma gravidarum'.

CASE REPORT

A 48-year-old male patient was seen in the ENT outpatient department with history of episodes of epistaxis and persistent left nasal blockage for 3 months duration. He has no other nasal symptoms. Anterior rhinoscopy revealed a pink-purple colored fragile mass that completely filled the left nasal cavity and extended out of the nasal vestibule. Inferior and middle turbinates could not be seen. Nasal examination using a 0 degree nasal endoscope showed a mass arising from the left lateral wall near the middle meatus with blood clots surrounding it. Other ENT examinations were unremarkable with normal vital signs. The lymph nodes, liver and spleen were not palpable. Blood and biochemistry examinations were normal. Nasal discharge was sterile.

NCCT paranasal sinuses revealed a polypoidal soft tissue density mass lesion of slightly heterogeneous attenuation within the anterior part of left nasal cavity at the level of middle meatus. It is abutting the frontal process of left maxilla and the left nasal bone suggestive of pressure erosion/hyperemic deossification. The anterior part of nasal septum is minimally pushed to right side without any erosion. The anterior part of left middle and inferior turbinates are silhouetted by the lesion (Figs 1 and 2).

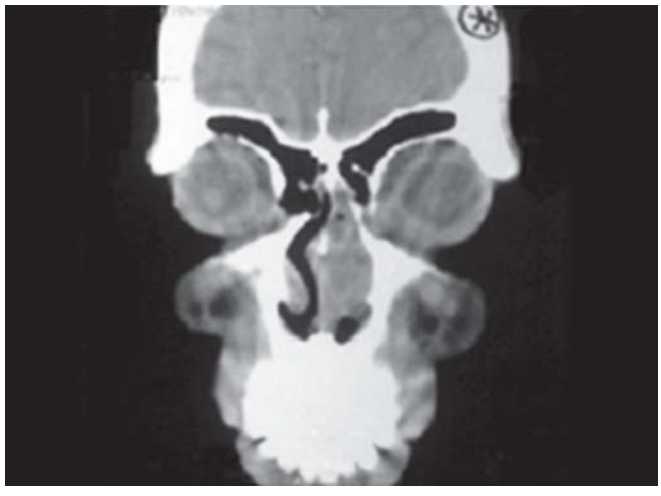

Fig. 1: Coronal section showing mass in left anterior nasal cavity

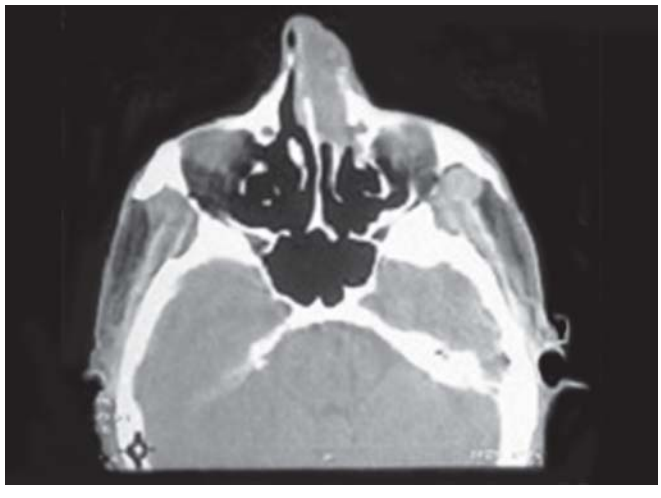

Fig. 2: Axial section showing mass in left anterior nasal cavity with erosion of frontal process of left maxilla

After discussing with the patient and with his consent, endoscopic excision of the mass was done under general anesthesia with local adrenaline infiltration in 1:100,000 concentration. Base of the mass was cauterized. A good surgical view was obtained using a 0 degree nasal endoscope with sufficient illumination. Proper hemostasis was achieved after packing of the excised site with gelfoam and antibiotic ointment.

Histopathological examination showing aggregates of closely packed thin-walled capillaries lined by flattened endothelium, some of which show blood within the lumen confirmed the diagnosis of LCH (Figs 3 and 4).

He was followed up after 2 weeks and there was no more history of nasal bleeding or blockage. A repeat nasal examination after 3 months revealed normal mucosa without any recurrence.

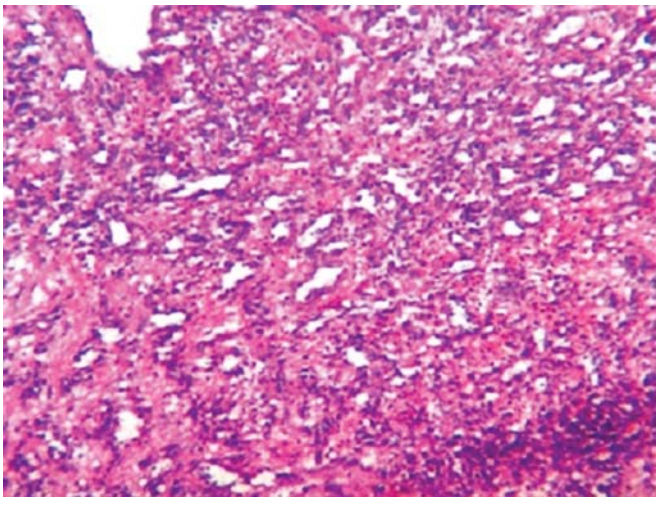

Fig. 3: Aggregates of closely packed thin-walled capillaries lined by flattened endothelium, some of which show blood within the lumen (×100, H&E)

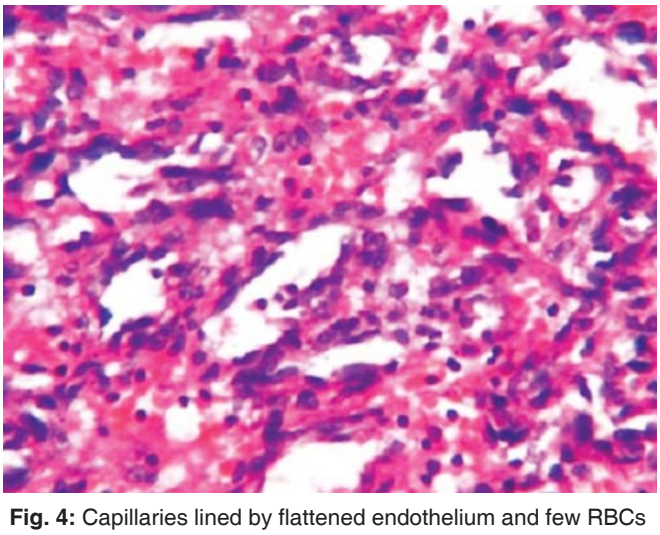

Fig. 4: Capillaries lined by flattened endothelium and few RBCs within the lumen (×400, H&E)

DISCUSSION

Capillary hemangioma is made up of small, narrow vascular channels lined by a single flat layer of endothelium and is surrounded by variable amounts of fibrous connective tissue which conform to the caliber of the normal capillaries. In contrast to cavernous hemangiomas that are formed by large cavernous vascular channels. The malformation results from a proliferation of arterial and venous vessels of various sizes with fistula formation between them. LCH is a common polypoid form of capillary hemangioma that occurs on mucosal surfaces, such as the oral and nasal cavity, the tongue, the conjunctiva, the duodenum or the colon. When it is seen in the nasal cavity, LCH mostly locates on the anterior portion of nasal septum (Little's area), less frequently on anterior side of inferior turbinate.[3,4] In this case LCH was arising from the lateral nasal wall of left nasal cavity. The most common presenting symptom of LCH of the nasal cavity is bleeding and/or obstructive symptoms.[5] It grows rapidly and ulceration is common in the early period of its development and is seen in both gender and almost in any age. However, it is more common in females and particularly in 3rd decade. Most important underlying causes for LCH are hormonal imbalance and excessive inflammatory response after local trauma to skin and mucosal membranes.[6]

The disease has been described under a variety of synonyms, including pyogenic granuloma, telangiectatic granuloma, granuloma pedunculatum or infected granuloma. The most frequent term applied in the literature is 'pyogenic granuloma'. In early descriptions, as the name pyogenic granuloma implies, it was regarded as a nonspecific response to pyogenic organisms. Mills[3] has claimed that the term 'pyogenic granuloma' is incorrect for the disease because it is neither infectious nor granulomatous in nature. The pathogenesis of LCH is uncertain. Usually a red-pink colored, hypervascularized, fragile, irregular and pedunculated mass is seen in the nasal examination.[7] Pain is not a frequent symptom. Our case had complaints of nasal blockage and recurrent epistaxis in the left side of the nose. Often the mass is ulcerated and covered with white to yellow exudate. The size of the lesion usually correlates with the duration and may range from few millimeters to several centimeters.[8]

Epistaxis is a common symptom and recurrent nasal bleeding requires precise clarification of the cause and exclusion diagnostics prior to therapy planning. It is important here to distinguish between locally induced bland epistaxis and symptomatic epistaxis.[9] In differential diagnosis, intranasal foreign body, infected nasal polyp, sarcoidosis, Wegener's granulomatosis, hemangiopericytoma, hemangiosarcoma, Kaposi's sarcoma, inverted papilloma and lymphoma should be considered.

Although there are various ways to treat and remove this lesion, the treatment of choice of LCH is still conservative local excisional biopsy.[8] Local cautery of the base is advocated for hemostasis, as well as to decrease the capacity for recurrence. Electrocoagulation, cryotherapy and laser therapy have also been reported in the successful management of these lesions. Nd:YAG laser has the well-recognized advantages of laser in removing vascular lesions (precision, hemostasis, reduced edema, inflammation and wound sterilization). Endoscopic surgery enables perfect examination of the lesion and adjacent tissues. It is important in diagnosis of the lesion before biopsy and to distinguish LCH from malignant tumors. Endoscopy is also helpful to excise tumor totally. In this case, the tumor and anatomic structures around it were visualized perfectly by nasal endoscopy and tumor was excised completely. Optimal bleeding control can be performed because of good visualization of the surgical area.

The clinical course of LCH is usually benign following local excision of the lesion, although severe bleeding can occur and recurrences have been reported.[8]

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