

# Lobular capillary hemangioma of the nasal cavity in child

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## Abstract

Although the head and neck is not an uncommon region, the nasal cavity is extremely rare sites for lobular capillary hemangioma (LCH) in children. The authors report a case of an 11-year-old boy with LCH of the nasal cavity presenting with nasal obstruction and epistaxis. To our knowledge, on searching the English literature, only nine cases of hemangioma of nasal cavities have been reported in children since 1985. The authors feel that it should be considered in the differential diagnosis of lesion of the nasal cavity.

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## 1. Introduction

Lobular capillary hemangioma (LCH) or pyogenic granulomas are benign rapidly growing hemorrhagic lesion of unknown origin. LCH usually affects the skin and the oral mucosa and is well recognized by dermatologists and oral surgeons. Although not an uncommon lesion of the head and neck region, nasal cavity is extremely rare sites for LCH in children [1].

The occurrence of a unilateral rapidly growing intranasal mass in children is an alarming clinical sign, especially when associated with bleeding. Apart from the confusion, which the mass can cause, bleeding, which is often associated with such masses, can result in rapid hemodynamic imbalance [2]. Patients can therefore undergo extensive and unnecessary investigations if the diagnosis of LCH is not considered at the outset.

The purpose of this paper is to present the rare occurrence of LCH of nasal cavity in children.

## 2. Case report

An 11-year-old boy came to our institution with a 1-month history of right-sided nasal obstruction and epistaxis. He also complained of sneezing and rhinorrhoea.

Anterior rhinoscopic examination showed a pedunculated mass arising from the lateral wall of the right nasal cavity (Fig. 1). The mass bled easily with light touch and had an irregular surface. The postnasal space was clear and the rest of the otorhinolaryngological examination was normal. CT scan with contrast confirmed a mass that filled the right nasal cavity (Fig. 2A). MRI scan was performed and on T1, it was isointense to muscle and on T2, the mass was hyperintense with numerous small flow voids (Fig. 2B). The biopsy was performed with bipolar coagulation to prevent bleeding and the histological examination revealed as hemangioma.

Examination with transnasal endoscope under general anesthesia confirmed the presence of an irregular necrotic mass of about 2 cm × 3 cm × 3 cm arising from the inferior turbinate. No other mass was seen. The mass was excised completely via an elliptical incision at its base with Nd YAG laser to prevent bleeding. The blood loss was 100 ml.

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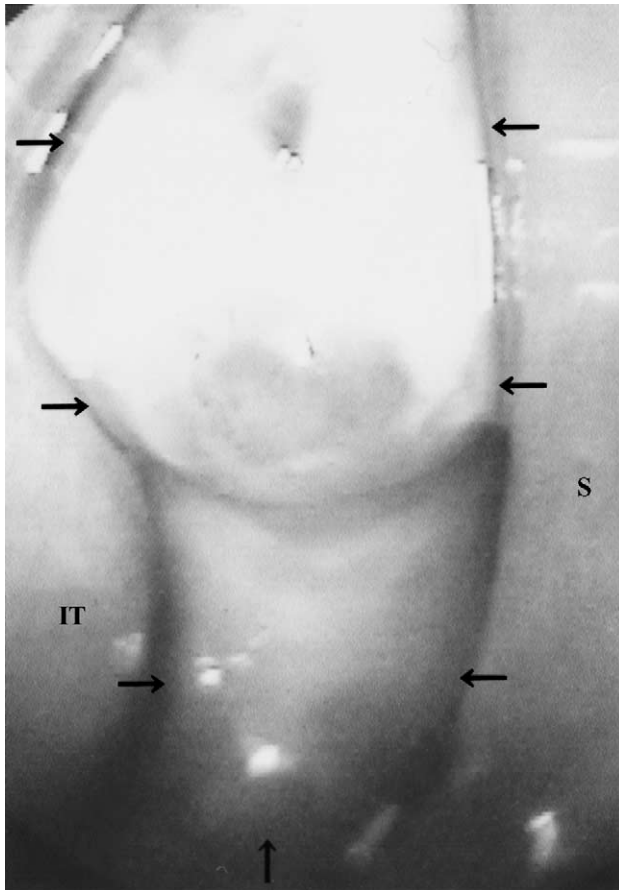


Fig. 1. Transnasal endoscope view of the right nasal cavity showed the tumor (black arrow), the nasal septum (S) and the inferior turbinate (IT).

The nasal cavity was packed with gauze and it was removed on the fourth post-operative day. He was discharged on the seventh post-operative day. Eleven months later, the patient was free of symptoms, and there was no evidence of recurrence.

Histological preparation with hematoxylin and eosin stain revealed keratinised squamous mucosa, beneath which there were lobules and anastomosing networks of capillary vessels in a fibrous stroma (Fig. 3A and B). The hemangioma had eroded through the squamous epithelium on one edge and was inflamed granulation tissue. The lesion was diagnosed as LCH of lateral wall of the nasal cavity.

### 3. Discussion

Although the histological findings of all of hemangioma are similar, with only minor variations, their clinical features, management and prognosis are different according to their location. The classic histological classification in capillary, cavernous and mixed hemangiomas has no clinical relevance [3].

In the capillary hemangiomas, the size of the primitive endothelial canals corresponds to the capillary caliber and in the cavernous hemangiomas; the canals are larger than the terminal vascular bed [2]. It has been reported that over 20% of the benign non-epithelial tumors involving the nasal cavity, paranasal sinuses and nasopharynx are capillary hemangiomas [2]. Mean age at diagnosis is 40 years and the most frequent presenting symptoms are nasal obstruction and epistaxis, which require an active therapy [2]. Most of them have as the primary site of origin the mucosa covering the anterior end of the nasal septum and less frequently the nasal turbinate [3]. Hemangiomas originating in the turbinate mucosa are often cavernous and grow in a lateral direction [4,5].

Hemangiomas are benign tumors that originate in the vascular tissues of skin, mucosa, bone, muscles and glands [6]. Head and neck hemangiomas are common, especially in children, constituting 7% of all benign tumors [7]. However, the nasal cavity is uncommon sites for hemangioma in

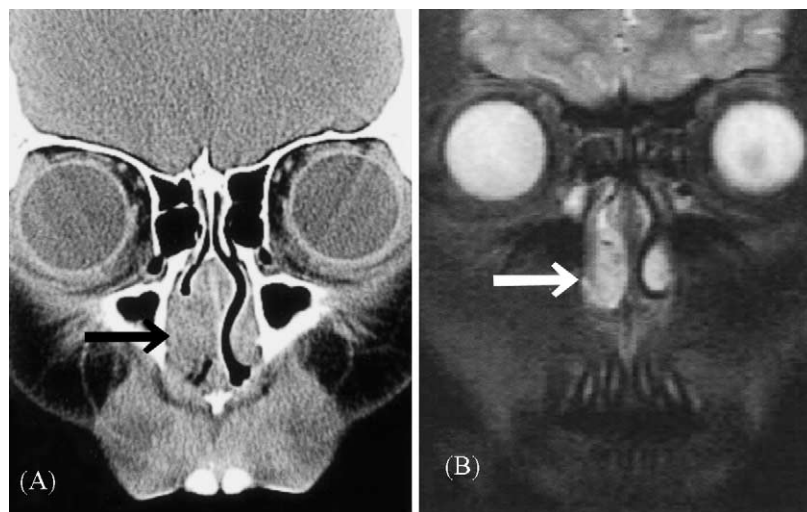


Fig. 2. (A) Coronal CT scan confirmed a mass of the inferior turbinate that filled the right nasal cavity (black arrow) and (B) T2-weighted coronal MRI demonstrated that the mass was hyperintense (white arrow).

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