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Case Report

Masson's hemangioma of the larynx: a rare benign vascular lesion in an adult male

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ABSTRACT

Masson's hemangioma, also known as intravascular papillary endothelial hyperplasia (IPEH), is a rare benign vascular lesion. IPEH accounts for approximately 2% of vascular tumors and is most frequently reported in the skin and subcutaneous tissues of the head and neck, extremities, and trunk. Although laryngeal hemangiomas are predominantly observed in infants and typically involve the subglottic region, adult laryngeal hemangiomas are uncommon and more often arise in the supraglottic and glottic areas. We report a case of a 50-year-old male who presented primarily with respiratory distress. A tracheostomy had been performed previously to secure the airway. On examination a smooth nodular mass was observed in the medial part of the left aryepiglottic fold, extending to the arytenoid cartilage and post-cricoid region. Radiological evaluation confirmed findings. The patient underwent microlaryngeal excision of the mass. Histopathological examination was suggestive of hemangioma with papillary endothelial hyperplasia (Masson's hemangioma). This case emphasizes the importance of accurate histopathological evaluation to distinguish this benign entity from malignant vascular tumors. Complete surgical excision remains the treatment of choice and is associated with an excellent prognosis.

Keywords: Masson's hemangioma, Intravascular papillary endothelial hyperplasia, Vascular lesion

INTRODUCTION

Laryngeal hemangiomas, which are vascular endothelial tumors, are predominantly observed in infants and typically involve the subglottic region.[1,2] Adult laryngeal hemangiomas are uncommon and more frequently arise in the supraglottic and glottic areas.[2]

One type of hemangioma is Massons hemangioma also known as intra vascular papillary endothelial hyperplasia, initially described by Masson in 1923, he named it as 'hemangioendotheliome vegetant hemangioma and described it as an exuberant endothelial proliferation that requires differential diagnosis from angiosarcoma.[3]

There are three types of Masson's hemangioma: the primary form, which arises within a normal blood vessel; the secondary form, which develops in association with a pre-existing vascular lesion; and the extravascular form, which originates from an organizing hematoma.

To date, only few cases of adult laryngeal hemangioma have been documented worldwide. Herein, we present a brief discussion of a 50-year-old male patient diagnosed with Masson's hemangioma, a rare subtype of cavernous hemangioma.

CASE REPORT

A 50-year-old male with a medical history of diabetes and hypertension presented with progressive dysphagia, hoarseness, and respiratory distress persisting for three months. The patient reported episodes of aspiration. He had previously been evaluated at an outside hospital, where a tracheostomy was performed and a biopsy was taken; however, the results were inconclusive. On

examination, a 1.5×1 cm smooth, nodular mass was observed in the medial part of the left aryepiglottic fold, extending to the arytenoid cartilage and posterior cricoid region, with a broad base attachment. Left vocal cord mobility was restricted.

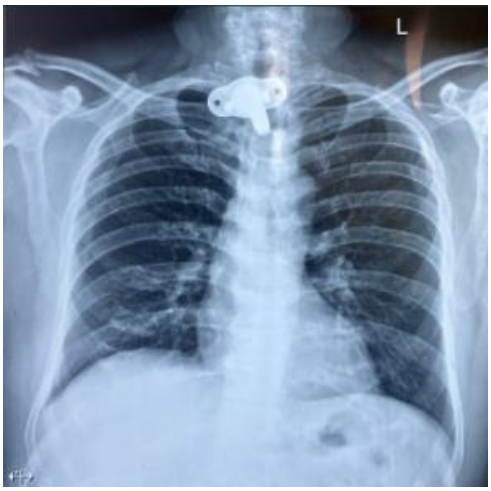

Figure 1: Chest X-ray PA view of patient.

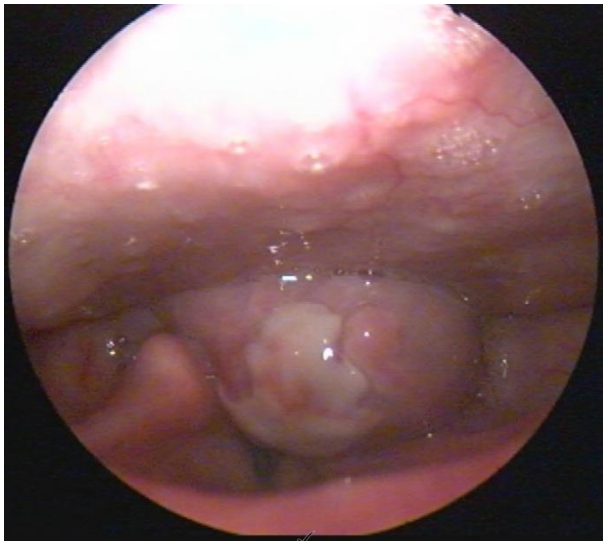

Figure 2: VLSCOPY image of the lesion intra-operatively.

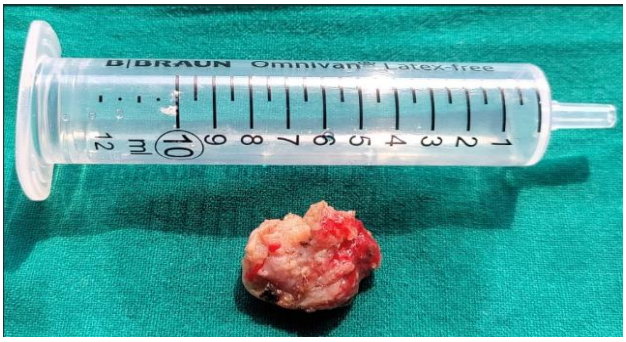

Figure 3: Post-operative image of the tumor and size comparism.

Initial evaluation at an external facility led to the placement of a tracheostomy to secure the airway. Contrast-enhanced computed tomography (CT) revealed a well-defined, smooth-marginated soft tissue lesion with subtle peripheral contrast enhancement involving the left aryepiglottic fold and left pyriform sinus, accompanied by cervical lymphadenopathy at levels IA, IB, and II.

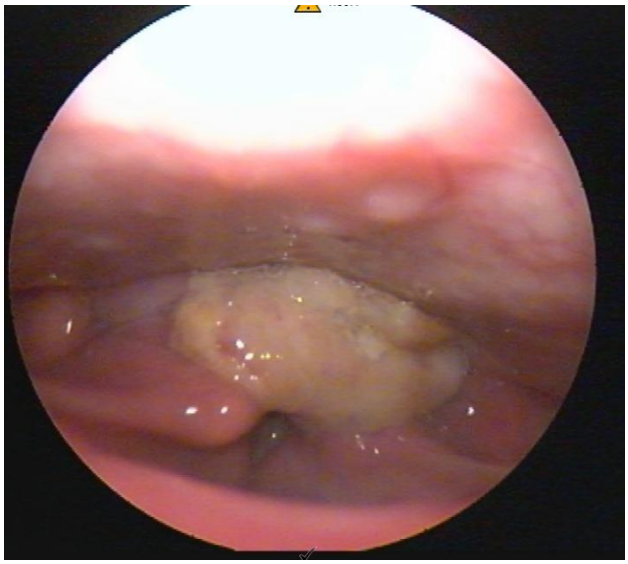

Figure 4: Post-operative VLSCOPY image (pod #7).

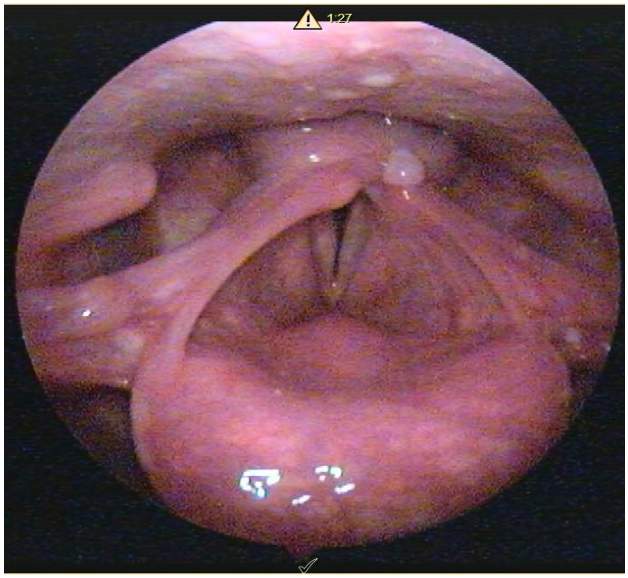

Figure 5: Post-operative VLSCOPY image (after 6 weeks).

The patient subsequently underwent microlaryngeal surgery, during which the entire laryngeal mass was excised. Histopathological examination confirmed the diagnosis of hemangioma with papillary endothelial hyperplasia (IPEH), also known as Masson's tumor. The tracheostomy tube was removed after one month, and the patient has been under regular follow-up for five months without any signs of recurrence.

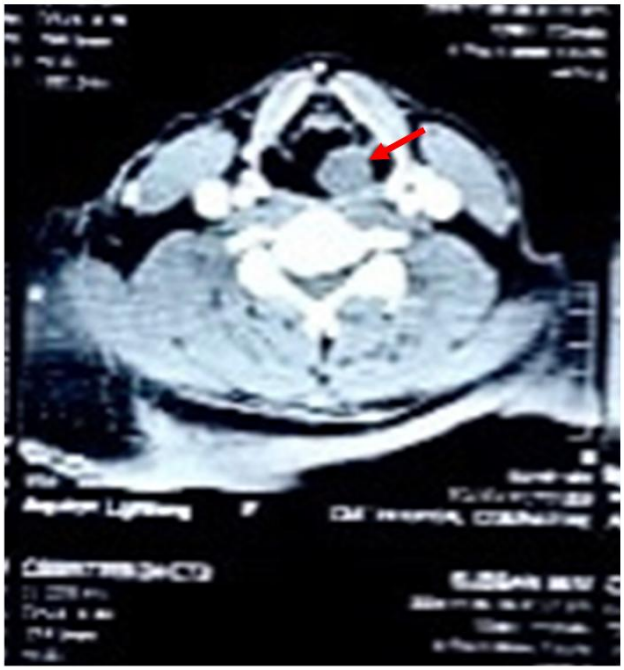

Figure 6: CT image axial section. Red arrow indicates the tumor.

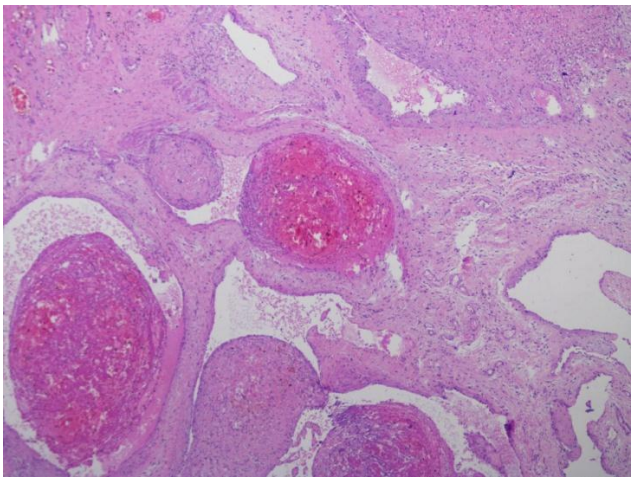

Figure 7: Biopsy image.

DISCUSSION

Masson's hemangioma (IPEH), is a rare, benign vascular lesion characterized by papillary proliferation of endothelial cells within the vascular lumen, often associated with thrombotic material.

It constitutes approximately 2% of vascular tumors and has a predilection for the skin and subcutaneous tissues, particularly in the head, neck, and extremities.[4,5]

IPEH most commonly affects the head and neck region (23%), lower extremities (17%), and fingers (16%).[4] Other reported sites include the trunk, lips, tongue, gingiva, buccal mucosa, orbit, parotid gland, masseter muscle, nose, sinuses, mandible, pharynx, and thyroid.[5,6]

Hashimoto et al described three forms of IPEH based on their occurrence and association with pre-existing vascular lesions.[7-9]

Primary (pure) form occurs within a dilated vascular space without preceding vascular lesions.

Secondary (mixed) form develops within pre-existing vascular lesions such as cavernous or capillary hemangiomas, pyogenic granulomas, arteriovenous malformations, lymphangiomas, and vascular hamartomas.

Extravascular form arises in a hematoma, typically following trauma, and is the least common variant.

Immunohistochemical (IHC) staining is essential for confirming the vascular origin of the lesion and differentiating IPEH from other vascular anomalies. IPEH typically shows strong positivity for endothelial markers CD31 and CD34, which are considered the most sensitive indicators of vascular differentiation.[8,9] In contrast, angiosarcomas, while also endothelial in origin, often present with more aggressive histological features, including necrosis, pleomorphism, and mitotic activity.

The treatment of choice for IPEH is complete surgical excision, which is typically curative. Recurrence is rare but may occur if the lesion is incompletely resected or if it arises from a pre-existing vascular lesion. Regular follow-up is recommended to monitor for any signs of recurrence.

CONCLUSION

This case highlights the importance of considering IPEH in the differential diagnosis of laryngeal masses, especially in patients presenting with dysphagia and hoarseness. Microlaryngeal surgery with complete excision remains the gold standard treatment, offering a favorable prognosis when performed appropriately.

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