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Case Report

An Unusually Large Cavernous Hemangioma of Retropharyngeal Space: A Rare Case

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Hemangiomas rarely occur in the retropharyngeal space with only several cases reported in the current literature. This article reports the hemangiomas of retropharyngeal space. A 55-year-old woman was referred to our institution for dysphagia. Computed tomography and magnetic resonance imaging of the neck and spine revealed a large, well-circumscribed, dense mass that extended from the retropharyngeal space to the sides of the neck. Patient underwent direct excision of the lesion. Complete regression of symptoms was observed after surgery, with no lesions found on routine 24-month follow-up. Although hemangiomas are relatively common in the head and neck, those that originate in the retropharyngeal space are very rarely observed. These benign tumors have the potential to compress adjacent tissues or organs and thereby produce associated symptoms like dysphagia and dyspnea. We present the reported case of larger hemangiomas of the retropharyngeal space and detail their management.

Key words: Retropharyngeal space – Cavernous hemangioma – High aerodigestive way compression

Hemangiomas occur in any tissue with vascular component including skin, mucosa, muscles, glands, and bones, but the head and neck region is the most common location (60%).[1] However, hemangiomas of the retropharyngeal space are extremely rare in the English literature, with only 2 cases be reported to date.[2,3] Hemangiomas histopathologically have been divided into 3 types: capillary, cavernous, and mixed capillary.[4] We present here a case of cavernous hemangiomas occurring in the retropharyngeal space.

Case Report

A 55-year-old woman presented to the Department of Ear, Nose, Throat, and Head and Neck Surgery at

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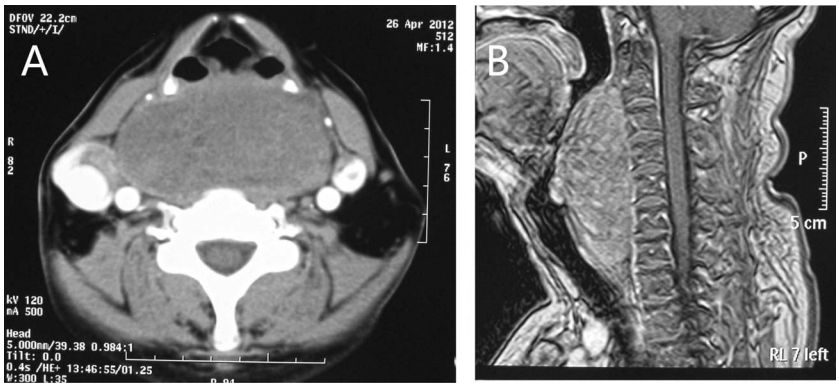

Fig. 1. Computed tomography and magnetic resonance imaging. (A) Retropharyngeal space occupied by an extremely large mass (arrow) extending to the sides of the neck. (B) The mass (arrow) extended from the level of soft palate to sternum.

the Second Affiliated Hospital of Harbin Medical University with a history of persistent, difficult swallowing of 2 months' duration and high aerodigestive way compression like slight dyspnea on exertion. The patient gave a 10-year history of foreign body sensation in the throat and felt painless swelling on both lateral sides of the neck simultaneously for 1 year. She had no history of trauma or chronic infection. The results of a physical neck examination revealed a wider neck and palpable painless whole neck swelling without local mass. A laryngoscopy showed a retropharyngeal mass that was reducing the space of the pharynx. Routine laboratory investigation results were normal. To further investigate the disease, computed tomography (CT) and magnetic resonance imaging (MRI) of the neck and spine were performed, and revealed a large, well-circumscribed, dense mass that extended from the retropharyngeal space to the sides of the neck (Fig. 1A) and from the level of the soft palate to sternum (Fig. 1B).

Under general anesthesia for preventive tracheotomy, a surgical excision of the retropharyngeal mass was performed using a one-side semi-arc incision. The tumor adhered to the posterior pharyngeal wall with integrated capsule. Subsequently, the tumor was resected completely and measured (Fig. 2). During surgery, about 400 mL of blood was lost. Histological examination showed cavernous hemangioma with thick-walled blood vessels and anastomosing vascular channels of cavernous pattern (Fig. 3A) and showed the positive staining of smooth muscle actin (SMA) as the marker of cavernous hemangioma (Fig. 3B). Upon follow-up at 24 months, there were foreign body sensations in the throat for several months without any other complication and no signs of local tumor recurrence.

Discussion

The retropharyngeal space is the potential space lying between the prevertebral fascia posteriorly and the buccopharyngeal membrane covering the constrictor muscles anteriorly. It extends from the skull base to the mediastinum. The retropharyngeal space is separated from the parapharyngeal space by a thin fascial layer and closed by the internal

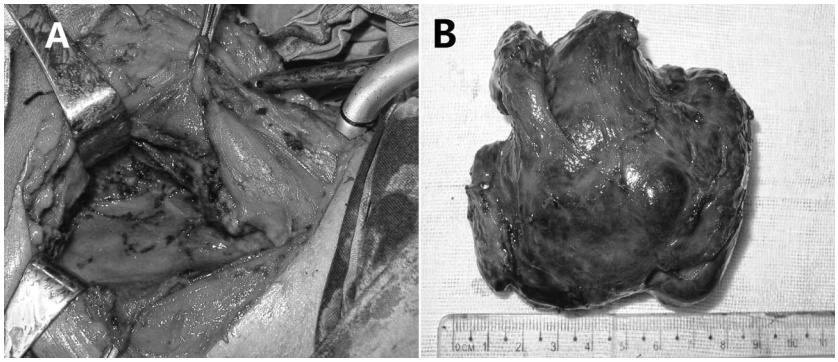

Fig. 2. (A) Resected tumor encapsulated and measured. (B) View of resection lodge.

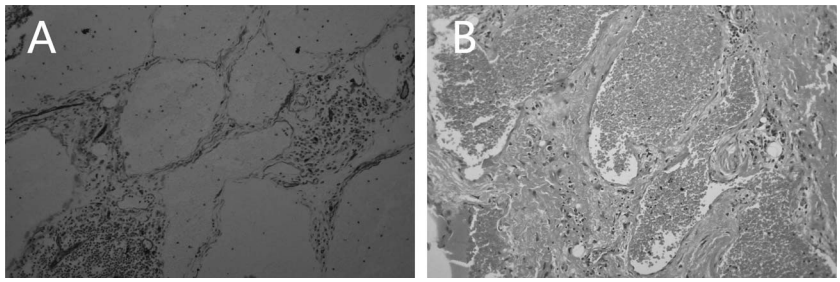

Fig. 3. (A) Histology showing cavernous hemangioma. (B) Positive staining of SMA (hematoxylin-eosin staining, original magnification, ×20).

jugular vein, common carotid artery, and vagus nerve. The retropharyngeal space mainly contains lymph nodes and fatty tissues. The clinical significance of the retropharyngeal space is usually related to the potential spread of infection and malignancy because of its anatomic feature. In the literature, about noninfectious retropharyngeal lesions, the most common differential diagnoses for retropharyngeal masses are malignant lesions such as direct invasion or nodal metastases from head and neck cancer,[5,6] and few lesions are benign tumors such as lipoma[7] and schwannoma.[8]

The most common presenting symptoms for patients with retropharyngeal masses are dysphagia and foreign body sensation as were seen in our patient. The patients may become habituated to their symptoms till the tumor attained an extremely large size and compressed the pharynx, causing dysphagia and ultimately leading to dyspnea. In the case of our patient, the tumor was thought to arise from the retropharyngeal space to extend to the parapharyngeal space and lateral neck compartment. Doppler ultrasound, CT, and MRI scans aid in establishing a diagnosis and offer precise delineation of disease for treatment planning.[9] Digital subtraction angiography can also be used to determine the blood supply and be a benefit in the control of intraoperative bleeding. Due to the deep location and the specific features of hemangioma, a core biopsy or incisional biopsy usually can't be easily implemented. Pathologic and immunohistochemical analysis is essential for definitive diagnosis. For treating hemangiomas, embolization and sclerotherapy can be used for some small and superficial cases. However, surgical excision was the principal management approach for symptom-directed therapy of retropharyngeal hemangiomas for first aiming to relieve obstructional symptoms. For the patient, surgical excision via a cervical approach offered definitive therapy and had good anatomical and functional result.

In conclusion, although retropharyngeal hemangiomas have a number of unfavorable diagnostic factors due to its unique localization, related auxiliary examination methods can be widely adopted to improve diagnosis, treatment, and prognosis. From clinical data of the patient, adequate evidence has demonstrated the value of surgical excision via a cervical approach for treating large hemangiomas of the retropharyngeal space.

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