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What is This?
A Rare Finding of Multiple Schwannomas in the Epiglottis

Jianle Xu, MS¹, Yun Zheng, PhD¹, Gang Li, MS¹, and Xueying Su, PhD²

Schwannomas are benign tumors arising from Schwann cells in the peripheral nervous system and are typically solitary. They mostly occur in adults with a female predilection and frequently are located in the head and neck with an incidence of approximately 25% to 45%.¹ Also, they show a laryngeal origin, but the incidence is only 0.1%, and they most commonly occur in the aryepiglottic fold.² Location in the epiglottis is extremely rare. To our knowledge, only 2 cases have been reported in the literature, and these were solitary lesions.³,⁴ A finding of multiple schwannomas in the epiglottis has not been reported so far, so we hereby present the first case of multiple schwannomas in the epiglottis.

Case Report

A 42-year-old man consulted our clinic and complained of having a swelling in the epiglottis found incidentally during intubation in 2011. Moreover, the patient had a neck mass excised 2 months earlier in another hospital by general anesthesia. The mass on histologic diagnosis was a benign schwannoma. The patient presented with almost no symptoms, but we found that he spoke with muffled voice. Fiberoptic laryngoscopy examination revealed the epiglottis was curlier and thicker on the left side, with a smooth submucosal mass located on both the lingual and laryngeal surface. This appearance mimicked that of a cyst. The mobility of the vocal cord was normal. A computed tomography scan focusing on the neck demonstrated that the epiglottis valley became thick on the left side, and a 1.4 × 2.4-cm mass extended to the left recessus piriformis fossa area (Figure 1). The initial diagnosis was epiglottic cyst. The patient had suspension microlaryngoscopy under general anesthesia, with the mass removed with CO₂ laser excision. The surgical specimen exhibited some well-defined, smooth-surfaced, oval, and buff nodulars. The nodulars were 1.5 × 1.0 cm to 0.2 × 0.2 cm in diameter, respectively, and separated from each other with a beaded arrangement. Direct relation between the mass and a nerve was not identified. The excised tissue was confirmed as an Antoni type A schwannoma by histopathologic examination. Immunohistochemical staining evaluation demonstrated S-100 protein positivity (Figure 2), resulting in a final diagnosis of benign schwannoma. After surgery, the patient was sent to the intensive care unit and extubated on the second day. Postoperative tracheostomy and nasogastric tube insertion were avoided. After 3 days, he recovered well and was discharged. By a 5-month follow-up visit, the patient was free of postoperative complications and had no sign of recurrence.

This study was approved by the institutional review board of the West China Hospital of Sichuan University (Chengdu, China), and written informed consent was obtained from the patient.

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Figure 1. A computed tomography scan focusing on the neck demonstrated that the epiglottis valley became thick on the left side, and a 1.4 × 2.4-cm mass extended to the left recessus piriformis fossa area.
Discussion

A schwannoma originating from the epiglottis is extremely rare. In 2002, Martin et al. described the first case of solitary schwannoma of the epiglottis. However, multiple schwannomas are rare and have not been described.

Schwannoma is a type of neurogenic tumor, but a patient ordinarily has no complaint of pain. Clinical symptoms are usually closely associated with the size and location of the tumor. However, clinical features are of no significance for definite diagnosis.

Computed tomography and magnetic resonance imaging scans are not efficient to diagnose schwannomas. They are more helpful for determining location and extension of the tumor. They often present a well-defined mass with no sign of destructive growth.

The definitive diagnosis requires histopathologic examination, ranging from densely packed spindle cells (Antoni A areas) with a typical palisading arrangement (Verocay bodies) to loose hypocellular arrangements (Antoni B areas) with no definite architecture. Type A is strongly positive for S-100 immunoperoxidase stain.

Schwannomas originate from the nerve tissue, but the nerve is often not identified in surgical excision. In our case, it was not found, and the most possible originating nerve is the internal branch of the superior laryngeal nerve.

Surgical resection is the curative method for schwannomas. The approach of surgical excision depends on the size and location of the tumor. Schwannomas are well defined and nonadherent to adjacent tissues. For benign schwannomas, surgical excision does not involve extensive dissection. For malignant schwannomas, surgical resection is an extensive and radical dissection. Radiotherapy is suggested after radical excision.

Author Contributions

Jianle Xu, study design, writing and data collection; Yun Zheng, writing and data collection; Gang Li, writing and data collection; Xueying Su, carrying out the pathological experiment, writing and correcting the manuscript.

Disclosures

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