Case Report

J Chin Med Assoc
2004;67:373-375

Angiofibroma of the Hypopharynx

Shun-Ta Hsieh[1,3]
Yuan-Ching Guo[1,3]
Tung-Lung Tsai[1,3]
Winby York-Kwan Chen[1,2]
Jui-Lin Huang[1,3]

Department of [1] Otolaryngology,
[2] Pathology, Taipei Veterans General Hospital;
[3] National Yang-Ming University School of Medicine, Taipei, Taiwan, R.O.C.

Primary extranasopharyngeal angiofibroma is very rare. To date, approximately 60 cases have been reported in the English literature. Only 1 case was confined to the posterior wall of hypopharynx. In August 2000, a 68-year-old man presented with a 6-month history of progressive foreign-body sensation in the throat and intermittent inspiratory stridor. Endoscopic examination of the larynx and pharynx revealed a nonpulsatile, pink-grayish, polypoid mass arising from the posterior pharyngeal wall of the left hypopharynx. Under general anesthesia, this tumor mass was subsequently removed by the endoscopic CO_2 laser. The histologic diagnosis was an angiofibroma. Three-year follow-up found no evidence of tumor recurrence or post-operative complications.

Key Words
angiofibroma;
carbon dioxide laser;
extranasopharyngeal;
hypopharynx

Juvenile nasopharyngeal angiofibromas are usually confined to boys in adolescent and early adulthood, and they originate characteristically in the posterior lateral wall of the nasopharynx. The extranasopharyngeal occurrence of these tumors is very rare. In this report we describe a case of extranasopharyngeal angiofibroma arising from the posterior pharyngeal wall of the left hypopharynx and discuss the operative management and differential diagnosis.

CASE REPORT

In August 2000, a 68-year-old man presented with a 6-month history of progressive foreign-body sensation in the throat and intermittent inspiratory stridor. He denied body weight loss, hemoptysis or any history of laryngeal trauma, laryngopharyngeal operation or endotracheal intubation. Endoscopic evaluation of the larynx and pharynx demonstrated a nonpulsatile, pink-grayish, polypoid mass arising from the posterior pharyngeal wall of the left hypopharynx (Fig. 1A). The nasopharynx, oropharynx and larynx were uninvolved, but the tumor mass was sometimes entrapped into the laryngeal inlet with inspiration. Under general anesthesia, this tumor mass was then removed by the endoscopic CO_2 laser. There were no episodes of active bleeding or other sequelae intraoperatively. Microscopically, the tumor mass was composed of fibromyxomatous stroma harboring numerous blood vessels of various sizes and shapes. The histologic diagnosis was an angiofibroma without evidence of malignancy (Fig. 2). The patient demonstrated an excellent postoperative recovery without any airway compromise, and was discharged on the second postoperative day. Followed until 3 years after surgery, the patient remained free of disease (Fig. 1B).

DISCUSSION

Angiofibroma are histologically benign but potentially locally destructive vascular tumors occurring al-

Received: September 19, 2003.
Accepted: December 16, 2003.

Correspondence to: Jui-Lin Huang, MD, Department of Otolaryngology, Taipei Veterans General Hospital, 201, Sec. 2, Shih-Pai Road, Taipei 112, Taiwan.
Tel: +886-2-2875-7337; Fax: +886-2-2875-7338; E-mail: sthsieh@vghtpe.gov.tw

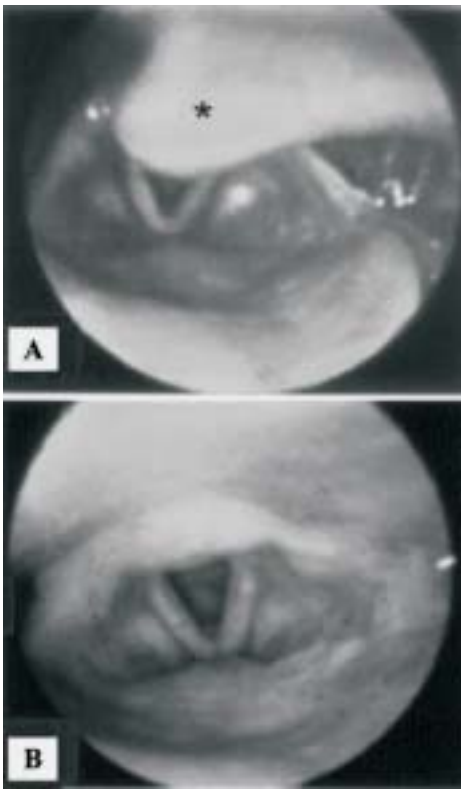

Fig. 1. Endoscopic findings. (**A**) showing a nonpulsatile, pink-grayish, polypoid mass (asterisk) arising from the posterior pharyngeal wall of the left hypopharynx before operation; (**B**) showing smooth mucosa lining without a recurrent tumor at a 3-year follow-up.

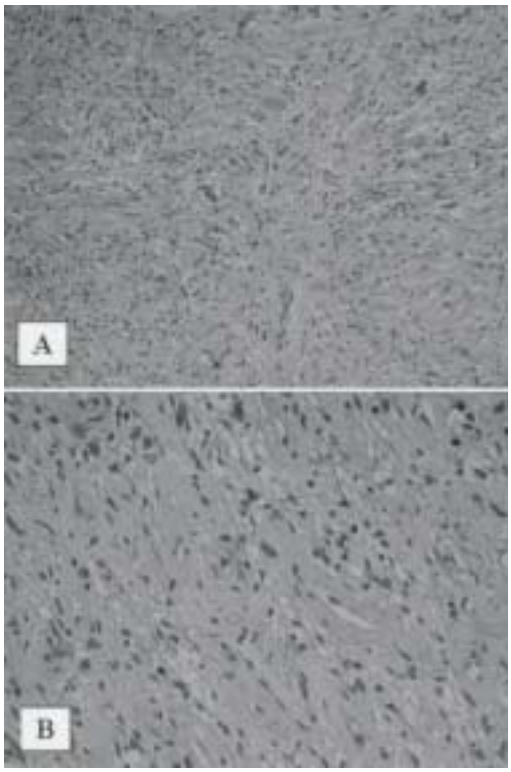

Fig. 2. Histopathologic findings. (**A**) Lower-power view showing fibromyxomatous stroma harboring numerous blood vessels of various sizes and shapes, often with a stellate appearance (H&E stain, ×100); (**B**) Higher-power view showing that the stroma is dense, fibrous, and cellular, and is composed of both fine and coarse collagen fibers and endothelial-lined vascular channels (H&E stain, × 200).

most exclusively in adolescent boys. They are unencapsulated neoplasms composed of a rich vascular network within a fibrous stroma,[1] and are relatively rare that represent only 0.05% of all head and neck neoplasms. Most angiofibromas originate in the posterior lateral wall of the nasopharynx;[2] however, primary extranasopharyngeal occurrence of these tumors is sporadically reported. To date, approximately 60 cases of extranasopharyngeal angiofibromas have been reported in the English literature. Maxillary sinus is the most common site of involvement, followed by the nasal cavity, ethmoid sinus, sphenoid sinus, larynx and pterygomaxillary fissure.[3-5] Only 1 case was confined to the posterior wall of hypopharynx.[4]

The vast majority of the hypopharyngeal tumors are squamous cell carcinomas, which usually present as exophytic, ulcerative or infiltrative lesions with irregular, dark red surface, and are rarely pedunculated. However, an unusual presentation of squamous cell carcinoma of the hypopharynx as a pedunculated polypoid mass has sometimes been reported. Benign tumors of the hypopharynx are very rare but often pedunculated, the most common being fibrolipoma and leiomyoma. The case we present here reflected a 2.5 × 2.0 × 1.5 cm polypoid, glistening, pink-grayish appearance with a wide stalk originating from the posterior pharyngeal wall of left hypopharynx. We performed endoscopic excision because of the possibility of airway obstruction and malignancy.

Surgical excision remains the treatment of choice for extranasopharyngeal angiofibromas. A variety of surgical approaches are required and determined by the location, blood supply, size of the lesion and its deep extent. Angiofibromas have characteristic endothelial-lined vascular spaces, with little or no smooth muscle layers, and are devoid of an internal elastic lamina, which preclude vasoconstriction and contribute to brisk episodes

of bleeding when traumatized.[6] Notwithstanding this character, the feeding arteries within the stalk of the tumor mass almost contain a complete muscle wall, which has normal contractile ability and results in little bleeding after tumor excision from its pedicle. In our case of angiofibroma, we removed it *en-bloc* without difficulty with the endoscopic CO_2 laser since the tumor reflected a relatively obvious stalk, which could be excised across its base. Laser therapy has proven to be a very useful adjunct in the management of such a vascular neoplasm.

The nasopharyngeal angiofibroma seems to have a worse prognosis than extranasopharyngeal lesion. Inadequate surgical exposure and resection may probably count to result in higher recurrence rate in nasopharyngeal angiofibroma. In our case, the laryngopharynx was fully exposed via a transendoscopic approach before total tumor resection was performed. Although tumor recurrence is not expected, long-term follow-up is still needed.

REFERENCES

1. Michaels L, Hellquist HB. Non-epithelial neoplasms. In: Michaels L, ed. *Ear, nose, and throat histopathology*. 2nd ed. London: Springer-Verlag, 2001:270-3.
2. Batsakis JG. Vasoformative tumors. In: Batsakis JG, ed. *Tumors of the head and neck- clinical and pathological considerations*. 2nd ed. Baltimore: Williams & Wilkins, 1979; 196-311.
3. Alvi A, Myssiorek D, Fuchs A. Extranasopharyngeal angiofibroma. *J Otolaryngol* 1996;25:346-8.
4. Huang RY, Damrose EJ, Blackwell KE. Extranasopharyngeal angiofibroma. *Int J Pediatr Otorhinolaryngol* 2000;56:59-64.
5. Steele MH, Nuss DW, Faust BF. Angiofibroma of the larynx: report of a case with clinical and pathologic literature review. *Head Neck* 2002;24:805-9.
6. Barnes L. Sinonasal tract and nasopharynx. In: Barnes L, ed. *Surgical pathology of the head and neck*. 2nd ed. New York : Marcel Dekker, 2000:499-503.