ABSTRACT

Objective: To present a rare case of laryngeal extranasopharyngeal angiofibroma, discussing its diagnosis, treatment and differences from the more typical juvenile angiofibroma.

Methods:

Design: Case Report
Setting: Tertiary Government Hospital
Patient: One

Results: A 51-year-old male with a two-year history of hoarseness developed difficulty of breathing. Direct laryngoscopy showed a 2x2x1 cm glistening, multinodular, pedunculated, firm, pink mass attached to the posterior half of the right true vocal fold obstructing the glottic opening and extending superiorly to the ventricle. Microlaryngeal excision was done. Histopathology showing numerous vascular channels surrounded by dense paucicellular fibrous tissue was consistent with angiofibroma.

Conclusion: Primary extranasopharyngeal angiofibroma is rare, with only four previously reported cases occurring in the larynx. We presented what may possibly be the first locally reported case. Although histopathologically similar to the more common juvenile nasopharyngeal angiofibroma, this was atypically seen in the larynx of an older adult patient. Direct laryngoscopy provided excellent exposure for identification as well as complete surgical resection. Unlike the nasopharyngeal type, no massive bleeding was encountered. Prognosis for this extranasopharyngeal angiofibroma is excellent as recurrence is noted to be rare, however, long term follow-up is recommended.

Keywords: extranasopharyngeal angiofibroma, laryngeal angiofibroma

Extranasopharyngeal Angiofibroma of the Larynx

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In a review of 65 cases of extranasopharyngeal angiofibromas (ENA), Windfuhr and Remmert found only four in the larynx. Clinical characteristics of ENAs do not conform with those of nasopharyngeal angiofibromas and, for this reason, these tumors must be regarded as a separate entity. A better understanding of this atypical entity obviates the need for unnecessary invasive procedures typically reserved for nasopharyngeal angiofibroma.

We present a case of extranasopharyngeal angiofibroma affecting the glottic region. Differences between ENA and the more typical nasopharyngeal angiofibroma will be discussed. Diagnosis and treatment of laryngeal angiofibroma will be elaborated upon.

**CASE REPORT**

A 51-year-old male was admitted due to progressive difficulty of breathing. He had been hoarse for two years, described as having a coarse, strained voice which gradually developed into a weak, strained voice. He was a 20-pack-year smoker and occasionally drank alcoholic beverages. Indirect laryngoscopy revealed a multinodular, non-necrotic, pink mass covering the true vocal folds and filling up the ventricles. Emergency tracheotomy was done.

Direct laryngoscopy showed a 2x2x1cm glistening, multinodular, pedunculated, firm, pink mass attached to the posterior half of the right true vocal fold obstructing the glottic introitus and extending superiorly to the ventricle (Figure 1). Microlaryngeal excision was done with minimal bleeding that resolved spontaneously (Figure 2). Histopathological examination showed numerous vascular channels surrounded by dense paucicellular fibrous tissue (Figure 3). The cells in the fibrous tissue were cytologically bland and spindle shaped. The nuclei lacked hyperchromasia and had small nucleoli. The vascular channels were slit-like or dilated, and varied in number, configuration and thickness. Findings were consistent with angiofibroma.

While follow-up videolaryngoscopy at one week was essentially normal, a repeat three weeks post-operatively showed nodular scar tissue on the right vocal fold where the base of the excised tumor pedicle had been located (Figure 4).

**Discussion**

Primary extranasopharyngeal angiofibroma is very rare. The most common site for extranasopharyngeal angiofibroma is the maxillary sinus. The ethmoid and sphenoid sinuses, nasal septum, middle and inferior turbinate, conjunctiva, molar and retromolar region and larynx are other sites where extranasopharyngeal angiofibromas have been reported. Our patient may be the first locally reported case of laryngeal angiofibroma.

Angiofibroma presenting with at least one of the following criteria such as origin or location other than nasopharynx, presenting complaints other than nasal obstruction or epistaxis, age younger than seven or older than 25, female sex and multifocality are considered
in our case, long-term follow-up is recommended. Tumor recurrence is rare for laryngeal angiofibromas and is not expected the higher recurrence rate in nasopharyngeal angiofibromas. Although exposure and subsequent incomplete resection probably account for laryngopharyngectomy and transcervical resection, respectively. With successful results.

To four previously reported cases. In two of the four, endolaryngeal managing laryngeal angiofibroma. It appears that angiography may not be necessary in nasopharyngeal angiofibroma as it has the ability to identify the feeding vessels and allows the option of pre-operative embolization for vascular control.11 In our case, as the mass was relatively small and easily excised at its base, minimal bleeding was encountered. It appears that angiography may not be necessary in managing laryngeal angiofibroma.

The clinical presentation of our patient (Table 1) was virtually similar to four previously reported cases. In two of the four, endolaryngeal endoscopic or microendolaryngeal surgical excision was performed with successful results.5,11 The two other cases involved partial laryngopharyngectomy and transcervical resection, respectively.5

Due to the confined space in the nasopharynx, inadequate surgical exposure and subsequent incomplete resection probably account for the higher recurrence rate in nasopharyngeal angiofibromas. Although tumor recurrence is rare for laryngeal angiofibromas and is not expected in our case, long-term follow-up is recommended.9

Table 1. Comparison of Reported Cases of Laryngeal Extranasopharyngeal Angiofibromas

<table>
<thead>
<tr>
<th>Case No.</th>
<th>Age</th>
<th>Sex</th>
<th>Site</th>
<th>Symptom/s</th>
<th>Onset</th>
<th>Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>64</td>
<td>F</td>
<td>Left aryepiglottic area</td>
<td>Dysphagia and dyspnea</td>
<td>2 ½ months</td>
<td>Tracheostomy, partial laryngopharyngectomy</td>
</tr>
<tr>
<td>2</td>
<td>29</td>
<td>M</td>
<td>Right vocal fold, subglottic</td>
<td>Hoarseness</td>
<td>7 months</td>
<td>Microlyrnxal surgery</td>
</tr>
<tr>
<td>3</td>
<td>30</td>
<td>F</td>
<td>Interarytenoid region</td>
<td>Asymptomatic</td>
<td>On Otol exam</td>
<td>Tracheostomy, laryngofissure and microlyrnxal surgery</td>
</tr>
<tr>
<td>4</td>
<td>25</td>
<td>M</td>
<td>Larynx (site not specified), pharynx</td>
<td>Dysphagia and voice changes</td>
<td>6 months</td>
<td>Transcervical resection</td>
</tr>
</tbody>
</table>

Our Case | 51 | M | Right vocal fold | Hoarseness and dyspnea | 2 years | Tracheostomy, microlyrnxal surgery |

REFERENCES