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A rare case of laryngeal myxoma

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Abstract
We report a rare case of laryngeal myxoma in a 57-year-old Japanese man. Except for a five-year history of gradually progressive hoarseness, he had been in good health. Video-stroboscopic examination revealed a solid mass in the anterior third of the right vocal fold. Phonosurgery performed with a microscope showed that the mass was encapsulated and located between the epithelium and vocal fold ligaments of the right vocal fold. This hard, elastic mass which measured 7 mm in diameter, was diagnosed as a myxoma. Only three cases of myxoma of the larynx have been reported in the English literature, with only one other case involving the vocal fold.

Key words: Laryngeal neoplasms; Myxoma; Hoarseness; Vocal fold

Introduction

Myxomas are benign tumours that may occur in the heart, bones, skin, subcutaneous and aponeurotic tissue, genito-urinary tract, and skeletal muscle (Kyriakos, 1990). Laryngeal myxoma is extremely rare: only three cases have been reported in the English literature. Chen and Ballecer (1986) reported a case in which a lesion was found on the dorsal surface of the epiglottis, and Sena and colleagues (1991) reported a case of myxoma on the aryepiglottic fold. Hadley and associates (1994) reported the only other case of myxoma in the vocal fold. We report the second such case in a 57-year-old male.

Case report

A 57-year-old Japanese man was referred by his family physician to our clinic. Except for a five-year history of gradually progressive hoarseness, he had been in good health. Laryngeal fibrescopic examination revealed a hard, elastic mass in the anterior third of his right vocal fold. No mucosal waves could be observed on the mass on stroboscopic examination. The patient worked as a carpenter. He smoked 20 cigarettes per day. We suspected that the mass was a polyp, caused by vocal abuse, or a cyst. To treat the hoarseness, we performed phonosurgery with a microscope.

The ECG and echocardiogram obtained pre-operatively demonstrated normal cardiac function with no mass or tumour in the heart.

During surgery, we found the mass to be encapsulated and located between the epithelium and vocal fold ligaments of the right vocal fold. The mass measured 7 mm in diameter and was hard but elastic (Figure 1). We

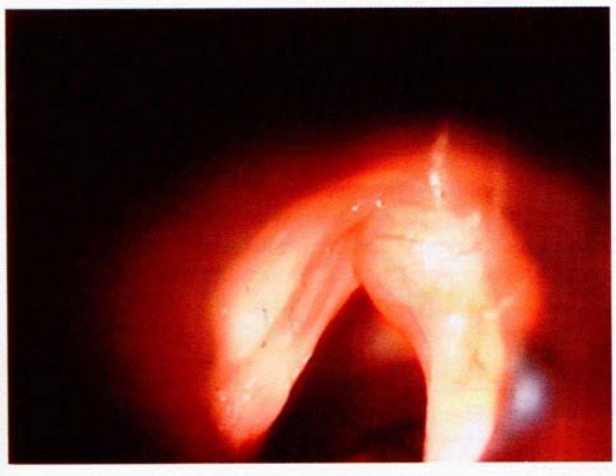

FIG. 1
Before surgery, the mass appeared to be a cyst in the right vocal fold.

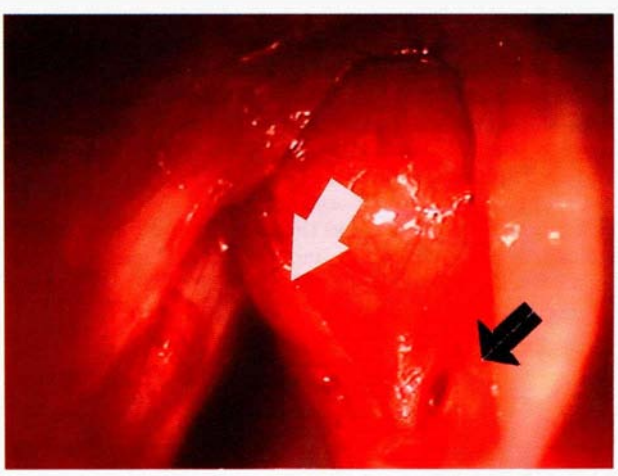

FIG. 2
Vocal fold mass was located between epithelium (white arrow) and vocal fold ligaments (black arrow).

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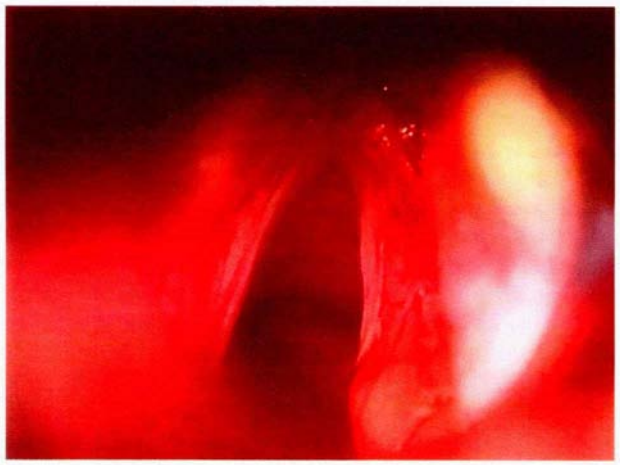

FIG. 3
After removal of the mass, vocal fold ligaments were completely covered by the epithelia.

encountered no difficulties in excising the mass from the vocal fold ligament and vocal fold epithelium (Figure 2). Because the mass was present in the submucosal space and the epithelia and the ligaments were intact after tumour removal, the ligaments of the vocal fold were completely covered by the epithelia (Figure 3).

Myxoma, a benign lesion, was diagnosed on histopathological evaluation. Haematoxylin and eosin staining revealed spindle-shaped and stellate cells (Figure 4a). The myxoid stroma stained positive with Alcian blue (Figure 4b). Immunohistochemical analysis showed the absence of S-100 protein.

Two months post-operatively, the patient's hoarseness resolved dramatically, and mucosal waves were visible throughout the right vocal fold. A cardiologist obtained another echocardiogram to make sure there was no cardiac myxoma: none was found. The patient remains well six months post-operatively.

Discussion

Stout (1948) reported a series of patients with myxoma and outlined diagnostic criteria. He also showed anatomical distribution of myxoma cases, that were found most frequently in the heart. The clinical features of cardiac myxomas are determined by their location, size, and mobility. Occasionally, there are no symptoms, particularly with small tumours. Most patients present with one or more of the triad of embolism, intracardiac obstruction, and constitutional symptoms (Reynen, 1995).

Laryngeal myxoma is extremely rare and only three cases have been reported in the English literature. Table I summarizes these reports and compares them with our own case. As shown in the table, all cases arose from the

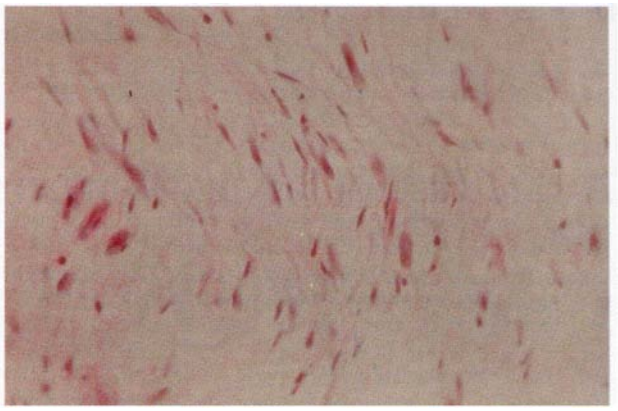

FIG. 4a
Myxoma cells (Haematoxylin and eosin; × 400).

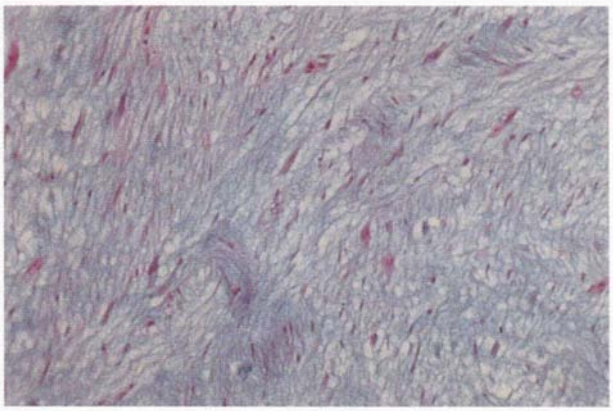

FIG. 4b
Positive staining of myxoid stroma (PAS-Alcian blue; × 400).

glottic or supraglottic area of the larynx and complained of dysphonia or hoarseness. The size of myxomas arising from the glottis was small, however those arising from the supraglottis were large. The hoarseness came about in two ways. Firstly, if the myxoma arises from a vocal fold, there is direct disturbance of the vocal fold vibrations as might occur with a vocal fold polyp. Secondly, with a myxoma arising from an aryepiglottic fold, a longer time elapses before there is disturbance of vocal fold vibrations. If the myxoma arises from the lingual surface of an epiglottis, dysphonia or dysphagia will occur before there is disturbance to vocal fold vibration.

In the only previously reported case of vocal fold myxoma, the tumour was benign and was characterized by a slow growth rate. It was surgically excised together with a rim of surrounding tissue to reduce the risk of recurrence

TABLE I
PREVIOUS CASES OF LARYNGEAL MYXOMA

	Case	Origin	Size (cm)	Symptom
Chen and Ballecer, 1986	37 M	Supraglottis Lingual surface of the epiglottis	5.6 × 4.3 × 2.4	Dysphonia and dysphagia
Sena *et al.*, 1991	70 M	Supraglottis Aryepiglottic fold	6.5 × 5.0 × 2.5	Hoarseness
Hadley *et al.*, 1994	64 M	Glottis (lt.) vocal fold	1.0 × 0.6 × 0.2	Dysphonia
Tsunoda *et al.*, 1997 (this paper)	57 M	Glottis (rt.) vocal fold	0.7 × 0.7 × 0.7	Hoarseness

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(Hadley *et al.*, 1994). We initially assumed the mass in the present case to be a cyst, a neurinoma or some other type of benign tumour. Therefore, we took care to completely excise the mass with the accompanying capsule from the epithelia and vocal fold ligaments.

Conclusion

We report a rare case of laryngeal myxoma and subsequent treatment.

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