

## Sub Glottic Schwannoma of the Larynx

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### Abstract

Schwannomas are rare neurogenic tumors. Their laryngeal location is uncommon. We present a case of subglottic schwannoma which is very rare.

### Key words

Schwannoma, sub-glottis.

### Introduction

Schwannoma is a tumor derived from the schwann cells which are embedded in the neurilemmal sheath as a multinucleated syncytial network (1,2). Approximately 25% to 35% of all reported schwannomas occur in the head and neck region (1). However, schwannomas involving the larynx are rare (2,3). Shouchnek (4) is credited with the original report in 1925. Almost all laryngeal schwannomas present insidiously and arise from the aryepiglottic fold or arytenoids (5).

### Case report

An 80 year old male, farmer was admitted in the Deptt. of Otorhinolaryngology and Head and Neck Surgery, Government Medical College, Srinagar with chief complaints of hoarseness of voice of 12 years duration in May, 2001. Examination of the larynx showed normal aryepiglottic folds, arytenoids, ventricles and left vocal cord. Mobility of the right vocal cord was impaired. A mucosa-covered swelling occupying the right subglottic region was seen. The surface of the swelling was smooth and a few prominent blood vessels were present over it. There was no involvement of lymph nodes. CT scan of the neck showed a soft tissue hyperdense lesion in the

subglottic region on the right side extending to the right vocal cord. The airway was adequate occluding less than 50% of the subglottis (Fig 1). Direct laryngoscopy was done which confirmed the findings on indirect laryngoscopy. Biopsy was taken and sent for histopathological examination, which revealed it to be a schwannoma (Fig 2). Surgery was advised which was refused by the patient and he left against advice. Patient was re-admitted in the department on 24th of December, 2001 with severe airway obstruction. Emergency tracheostomy was done. MRI was done which showed a hyperintense mass in the subglottic region almost occluding the whole lumen (Fig 3). Surgical excision of the tumor by laryngofissure was performed under general anaesthesia. The tumor was found to arise from the right side of the subglottis extending to the undersurface of vocal cords and into the tracheal lumen (first and second tracheal rings). The tumor was pale yellow, globular, smooth surfaced. The tumor was removed in toto and measured 5x2.5cms. Histopathologic characteristics of the tumor revealed it to be a schwannoma. The immunohistochemistry for S100 protein was positive. The post-operative course was unremarkable and the patient was

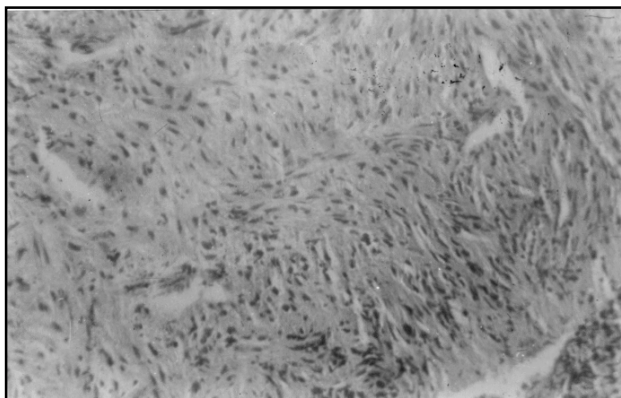
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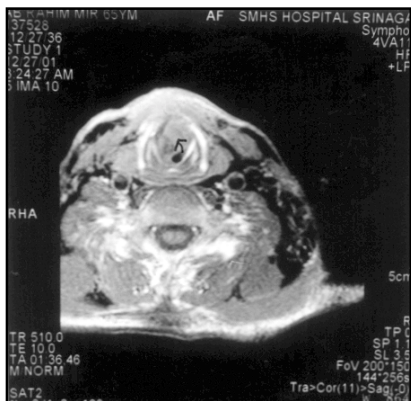
decanulated on 10th post-operative day. The patient is under regular follow up and is doing well.



**Fig. 1.** CT scan of the neck showing a hyperdense lesion in the subglottic region on the right side.



**Fig. 2.** Microphoto showing features suggestive to schwannoma (H%EX40).



**Fig. 3.** MRI of the neck showing a hyperintense lesion in the subglottic occluding whole of the lumen.

## Discussion

Schwannomas arise from the schwann cells of peripheral, cranial or sympathetic nerves. They were first described by Verocay in 1910 who called them neurinomas (6). Schwannomas involve males and females equally and can occur at any age (7). With expansion of the tumor, the nerve fibers become splayed over the outer aspect of the capsule, rather than getting incorporated within the substance of the tumor. The most common nerve of origin of laryngeal schwannoma is the internal branch of superior laryngeal nerve (8). The nerve of origin, however, is difficult to identify at operation (9), as occurred in our patient. Still the anatomical location of the tumor indicated that it arose from the branches of recurrent laryngeal nerve.

Various surgical approaches for the removal of laryngeal schwannoma have been mentioned in the literature, varying from endoscopic removal, laryngofissure and anterior and lateral pharyngotomies to lasers (10,11). The prognosis is good if surgical excision is complete. Malignant transformation is rare (8). Radiation should not be employed as a form of therapy, for schwannomas are highly radio-resistant.

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