Primary Tracheal Schwannoma: A Case Report

Wong, Timothy MD¹, Chhedha, Neil N. MD¹, Lin, Christine MD²

University of Florida
1Department of Otolaryngology
2Department of Pathology

ABSTRACT

Purpose: Present a case of a rare primary tracheal schwannoma at our institution and perform systematic review of the literature pertaining to previous cases of primary tracheal schwannoma.

Methods: Clinical case report and review of the literature.

Results: A 42-year-old female patient presented to our institution for evaluation of a tracheal mass noted on a CT scan during the workup of newly diagnosed sarcoidosis. The patient reported dyspnea and intermittent neck pain, and was determined to have an obstructing tracheal mass. She was taken to the operating room for rigid bronchoscopy with excision of the tracheal mass. Pathological analysis was consistent with schwannoma. Post-operatively her symptoms resolved and she currently has no evidence of recurrence of her tracheal schwannoma.

Conclusion: Primary tracheal schwannoma is a rare entity with less than thirty reported cases. Dyspnea and wheezing are the most common presenting symptoms. Many different treatment methods have been described in the literature including both open and endoscopic methods. An endoscopic method using cold-steel and microdebrider technique is described here.

INTRODUCTION

Primary tracheal tumors are rare and more uncommon than primary bronchial tumors⁴⁵. Approximately two-thirds of primary tracheal tumors are divided between malignant or intermediate malignancy and the remaining third fall into heterogeneous mix composed of a variety of benign lesions⁵. Most neurogenic lesions occur in the adult population. Primary tracheal schwannomas are a rare entity and there have been less than 30 cases described in the literature. A variety of methods have been described for treatment and we discuss another technique here⁶⁷.

MATERIALS AND METHODS

Study Design: Case report with review of the literature

CLINICAL HISTORY

A 42 year old female patient with recently diagnosed sarcoidosis presented to an outside hospital with increasing shortness of breath, especially when lying down. She had no prior history of tobacco use or previous chronic pulmonary problems. A CT of the chest at the outside facility showed a mid-tracheal intraluminal mass. She was referred to University of Florida Shands hospital for further evaluation. On physical exam, patient was noted to be breathing comfortably at rest but expiratory stridor noted on exertion. There was no prior history of schwannomas within patient or family members. A flexible fiberoptic laryngoscopy and tracheoscopy was performed trans-nasally and a smooth benign appearing intra-tracheal mass pedicled on the posterior tracheal wall that occupied approximately 80% of tracheal lumen was identified. Surgical intervention for endoscopic excisional biopsy was recommended.

DISCUSSION

Airway obstruction secondary to primary tracheal schwannoma is a rare event. There have been less than 30 cases of primary tracheal schwannoma described in the literature to date. Many different techniques have been described for management of these tumors including open versus endoscopic techniques. We performed an endoscopic technique using a combination of microdebrider and cold steel excision. On her most recent endoscopic evaluation there has not been any evidence of recurrent disease. Immediately post-operatively, the patient indicates that she had a subjective improvement in her obstructive symptoms. The patient has remained symptom free since her initial surgical procedure.

CONCLUSIONS

Primary tracheal schwannomas are rare tumors that typically affect adults. Safe management of the airway is the first step in managing this disease. We described an endoscopic technique here using a combination of microdebrider and cold steel. The patient was followed closely with repeat flexible laryngoscopy and tracheoscopy and there has been no evidence of recurrence. Based on this experience we feel that endoscopic evaluation and management of select primary tracheal schwannomas with microdebrider and cold steel excision is an effective method for resection of primary tracheal schwannomas.

MANAGEMENT

The patient was taken to the operating room and a micro-suspended direct laryngoscopy was performed under Jet ventilation. A Dedo laryngoscope was used to expose the glottis and subglottis. A 0-degree Hopkins rod telescope was then used to identify the intra-luminal lesion. The lesion was smooth appearing and pedicled on the posterior aspect of the tracheal wall. A combination of laryngeal microdebrider and cold steel was used to resect the tumor. A near-total excision was achieved endoscopically, and there was no evidence of any residual disease after the surgical procedure was complete. The patient was monitored in the post-anesthesia care unit and discharged same day. The patient was re-evaluated in the clinic setting 3 months after surgery. A repeat flexible laryngoscopy and tracheoscopy did not show any evidence of recurrent disease. The patient has remained symptom free and is over one year from her initial procedure and there has been no evidence to suggest recurrence.

REFERENCES


Contact Information: Timothy Wong
Timothy.Wong@ent.ufl.edu