Imaging Case Study of the Month

Penetrating Foreign Body Mimicking Supraglottic Carcinoma

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Penetrating trauma to the neck is a rare observation. We report the first case of laryngeal myofibroblastic tumor due to a persistent splinter of glass in the preepiglottic space, which presented with recurrent mild hemoptysis and cough, and mimicked supraglottic carcinoma. The clinical and imaging evaluations are herein reported. Finally, medical and surgical options in the management of this unusual observation are discussed.

Key Words: foreign body, laryngeal trauma, myofibroblastic tumor.

INTRODUCTION

Laryngeal trauma is an uncommon event, with an incidence ranging from 1 in 5,000 to 1 in 137,000 per year in emergency units. Penetrating injuries of the neck usually occur in suicides and accidental cuts. Prompt imaging by means of computed tomographic (CT) scanning and surgical exploration are usually required.

To the best of our knowledge, we report the first case of a persistent cervical foreign body presenting as a supraglottic neoplasm many years after the initial traumatic event.

CASE REPORT

A 73-year-old man was referred to the Department of Otorhinolaryngology of the University of Brescia, Italy, for recurrent mild hemoptysis associated with dysphonia and cough. The patient’s clinical history included an acute myocardial infarction that had occurred 10 years earlier and still required pharmacologic therapy. The patient also had chronic bronchitis, and had had a penetrating trauma on the left side of the upper neck from broken glass at 24 years of age.

Upon videolaryngoscopic examination with a 70° rigid endoscope, we observed a submucosal mass with ill-defined margins involving the left side of the infrahyoid epiglottis and extending to the left vallecula and aryepiglottic fold. Moreover, a small ulceration — a possible cause of the hemoptysis — was visible (Fig 1). The glottis was not involved by the lesion, and both vocal folds displayed normal mobility. No enlarged lymph nodes were palpable on either side of the neck. A neoplasm of the supraglottic larynx was the most likely diagnosis, and we performed a biopsy under local anesthesia and a CT scan with contrast agent administration.

The CT scan revealed the presence of a foreign body (1.5 cm long, 0.2 cm thick), with a density comparable to bone, located in the upper portion of the left preepiglottic space in strict contact with the hyoid bone and reaching the mucosal surface of the epiglottis. Because of the density and shape (Fig 2), we suspected a splinter of glass surrounded by an inflammatory reaction, residual to the previously reported trauma. The pathology report on the biopsy said the findings were suggestive of chronic inflammation. Be-
cause of the association of notable comorbidities and the spontaneous resolution of symptoms after steroid and broad-spectrum antibiotic therapy, we adopted a "wait-and-see" policy with periodic videolaryngoscopic examinations. The patient is still asymptomatic 18 months after the first evaluation.

DISCUSSION

To the best of our knowledge, this is the first reported case in the English-language literature of a persistent, penetrating laryngeal foreign body presenting as a supraglottic carcinoma.

Patients with penetrating injuries of the neck always need immediate surgical exploration with removal of foreign fragments, repair of possible cartilaginous fractures, and suture of mucosal and/or cutaneous wounds. The persistence of an overlooked foreign body in the soft tissues could contribute to acute infections or cause a chronic inflammatory process with granulomatous tissue formation and variable fibrotic reaction, otherwise known as a pseudotumor or myofibroblastic tumor. Such an entity includes a heterogeneous group of lesions widely recognized as mostly displaying a favorable prognosis. Their pathogenesis remains largely unknown, even though reports of postsurgical, postinfectious, and posttraumatic cases have raised the hypothesis that an initial inflammatory process may possibly lead to a neoplastic lesion. Myofibroblastic tumor of the larynx is usually reported as a polypoid lesion involving the glottis. Anstey et al. also reported a case of hypopharyngeal-laryngeal pseudotumor presenting as an extended submucosal mass with massive involvement of the paraglottic space and unilateral vocal fold paralysis that required tracheotomy for acute dyspnea. The biopsy was negative for malignancy and identified fragments of foreign material. The patient was treated with conservative therapy (broad-spectrum antibiotics and prednisolone) with complete resolution of signs and symptoms.

An accurate analysis of clinical history combined with CT examination was crucial in the therapeutic planning of our case. A "wait-and-see" policy was adopted because of the resolution of symptoms with medical therapy, in addition to the consistent comorbidities and the age of the patient. As a matter of fact, general anesthesia would have been indicated to remove the glass fragment, which was deeply located in the upper part of the neck, close to the left lingual artery. A left cervicotomy through the preexistent scar would have allowed good exposure with relatively safe control of possible bleeding. By contrast, endoscopic removal of the foreign body should have been avoided because of the high risk of lingual artery damage, with potential subsequent massive hemorrhage that would not be manageable by endoscopy.

In summary, a persistent penetrating cervical foreign body presenting as a laryngeal tumor can be considered an extremely rare clinical observation. Nevertheless, when the clinical history of the patient includes a previous penetrating neck injury, even one that occurred many years before, this possibility should be considered and excluded by biopsy and adequate imaging study.

REFERENCES


