Case Report

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TANAFFOS

Supraglottic Hemangioma as a Rare Cause of Recurrent Hemoptysis: A New Treatment Modality with Argon Plasma Coagulation (APC)

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Adult laryngeal hemangiomas are rare and mainly involve the supraglottic region. Most common symptoms include dysphagia, dysphonia, shortness of breath and occasionally recurrent bleeding which sometimes cause a diagnostic dilemma for pulmonologists and head and neck surgeons. There is no consensus about the most appropriate treatment modality for laryngeal hemangiomas. We present a case of supraglottic hemangioma in an adult female, which was diagnosed by fiberoptic bronchoscopy and coagulated by Argon plasma coagulation (APC) with no complication.

Key words: Hemangioma, Bronchoscopy, Argon plasma coagulation

INTRODUCTION

Adult hemangiomas occur at or above the level of the true cord, most of these lesions being usually cavernous hemangiomas (1). Most common symptoms include dysphagia, dysphonia, shortness of breath and occasionally recurrent bleeding which sometimes cause a diagnostic dilemma for pulmonologists and head and neck surgeons (2). Though the occurrence of supraglottic hemangioma is relatively common in adults, vocal fold hemangiomas are extremely rare (3). Adult hemangiomas are bluish red and well defined, appearing most often in the supraglottis and glottis. The principal symptoms include hoarseness, occasional hemoptysis, and in advanced cases dysphagia and difficult breathing. No causative or pre-disposing factors have been convincingly enumerated. Though the malignant transformation of such tumors is very rare, there have been reports that suggest so (4).

CASE SUMMARIES

A 34 year-old female referred to the Pulmonology Department of Imam Reza Hospital with a 2-year history of recurrent hemoptysis. Her medical history and physical examination were unremarkable otherwise. She had no history of any preceding infection, past intubation, trauma or voice abuse. The patient had no history of smoking or alcohol consumption. The chest computed tomographic scan was normal and routine laboratory investigations revealed mild anemia with Hb=11.2 $^{gr}/_{dl}$ (normal range: 12-14 $^{gr}/_{dl}$). Fiberoptic bronchoscopy revealed a blue-purple nodule measured 1 × 0.8 × 0.3 cm superior to the right false vocal cord (Figure 1). The subglottis and the tracheobronchial tree were normal. Cord movements were normal as well. The passage to the larynx was clear. The aryepiglottic folds and false vocal cords were normal. Morgagni's ventricles were normal as well. The epiglottis

had normal configuration and appropriate insertion. Thereafter, the entire lesion was effectively coagulated by Argon plasma coagulation (APC) (Figure 2). The setting of APC was 30-40 watts APC_2 ERBE and the flow of argon gas was 1.8 per minute. Follow-up after 7 months showed total relief of symptoms and bronchoscopy revealed complete resolution of the lesion with no complication.

Figure 1. Fiberoptic bronchoscopy picture showing a hemangioma superior to the right false vocal cord.

Figure 2. The same patient after 7 months of argon plasma coagulation.

DISCUSSION

Hemangiomas of the airways are benign vascular lesions that can involve any site from the nares to the tracheobronchial tree. Adult laryngeal hemangiomas are rare and usually involve the supraglottic region (1). Most common symptoms include dysphagia, dysphonia and shortness of breath (2). They are more frequent in males. There is no consensus about the treatment of adult laryngeal hemangiomas (5-7). APC is a new intervention modality; its use in bronchoscopy was first introduced for the management of gastrointestinal vascular lesions. At present, this modality is extensively used in pulmonary medicine for resection of endobronchial tumors, management of benign and malignant obstructions of the tracheobronchial tree and coagulation of bleeding vessels of tumoral lesions (8,9). The theoretical advantages of APC include its ease of application and safety due to reduced depth of penetration, and lower cost compared to Nd: YAG laser (10). Denoyelle et al. reported two patients with subglottic hemangiomas successfully treated with propranolol (11). Buckmiller et al. reported successful management of one patient with a subglottic hemangioma (12). Oral propranolol was successfully used to treat airway hemangiomas, resulting in rapid airway stabilization, obviating the need for an operative intervention and reducing the duration of systemic corticosteroid therapy while causing no obvious adverse effects (13).

CONCLUSION

This report presented a case of supraglottic hemangioma in an adult female; which was diagnosed and completely treated by bronchoscopic intervention. Adult laryngeal hemangiomas are often treated surgically, but in our patient, clinical symptoms and bronchoscopic findings were effectively treated using APC and she no longer required surgery. No recurrence was noted at 7-month follow-up.

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