Dysphagia and vocal cord palsy

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ABSTRACT

Dysphagia is a common symptom, with a variety of possible causes, and associated symptoms. A patient with this symptom could therefore present in different out-patient departments in an Institution. Occasionally, investigating the associated symptom could lead to an unsuspected diagnosis.

In this case report, we present a case of carcinoma thyroid, which was incidentally recognised on investigating for asymptomatic vocal cord palsy, in an adult male referred from Gastroenterology for throat findings. Relevant discussion and literature review are also presented.

INTRODUCTION

Dysphagia can occur due to a variety of causes depending on the age of the patient. Based on the predominant associated symptoms, the patient may consult different specialties, like Gastroenterology or ENT, for the initial evaluation. Hence, the investigation protocols would vary as per the focus of the concerned specialty. This may lead to the overlooking of certain unusual causes of dysphagia.

We present the case report of such a patient with dysphagia with incidental evaluation in ENT resulting in an unexpected diagnosis. Relevant literature search is discussed.

CASE REPORT

A 46 years old man presented with symptoms suggestive of acid reflux for the past 8 years and dysphagia, more for solids, since 3 months. He had undergone prior evaluation under a Gastroenterologist. Upper gastro-intestinal endoscopy was done 5 years back and it was reported as normal. He was put on proton pump inhibitors, but symptoms persisted. He was re-evaluated by Gastroenterology in our institution and a repeat endoscopy was also found to be normal. He was referred to ENT department as part of evaluation for symptoms of GERD. On detailed history taking, the patient gave history of occasional voice change without causing much functional limitation. A prior ENT evaluation 3 years back for voice change was reported as unremarkable.

Routine neck examination revealed presence of a vague swelling in the left side of neck, which was not moving with deglutition. It had a woody feel on palpation. There was no clear evidence of lymph node enlargement. On further evaluation, the maximum phonatory duration was found to be 7 seconds. Indirect laryngoscopy showed evidence of left vocal cord palsy; it was immobile in the paramedian position with compensation from right side. The left pyriform fossa was not opening up. Hypopharynx and arytenoid was found to be congested.

A CT scan from base of skull to upper mediastinum was then obtained, as part of protocol evaluation of left vocal cord palsy. This showed an infiltrative poorly enhancing mass lesion with intra-lesional vascular channels arising from the left lobe of the thyroid gland (Fig. 1). The lesion measured 57 mm x 47 mm transaxially and 61 mm caudo-cranially. Medially, the lesion was found to be displacing the trachea towards the right, compressing the airway for a length of 3.6 cm. There was extension into the trachea-esophageal groove with compression of the esophagus. Laterally, the lesion was infiltrating...
the carotid sheath encasing the left common carotid artery 360 degrees, displacing the left internal jugular vein laterally. Inferiorly, the lesion was extending up to the top of manubrium. There was posterior extension into the pre-vertebral space without any vertebral bony changes. Bilateral level II and left level III - 8.5 mm (FDG non-avid) lymph nodes were noted. PET scan confirmed the findings of a FDG-avid infiltrative poorly enhancing mass lesion arising from the left lobe of the thyroid gland with extensions to surrounding structures as described in the CT scan (Fig. 2).

Ultrasound-guided FNAC showed poorly differentiated carcinoma appearing to arise from thyroid. Subsequently, a trucut biopsy done was done which showed infiltrative neoplasm of the thyroid. Immunohistochemistry was positive for HMWCK and CK19 and negative for TTF1 and thyroglobulin. CD5 showed nonspecific positivity.

In view of the extensive infiltration into the carotids and pre-vertebral space, the patient was advised neoadjuvant chemotherapy followed by CTRT.

DISCUSSION

The etiology of dysphagia is varied. The possibilities depend on the age of the patient and associated presenting symptoms. In view of the protean presentation, patients with dysphagia may be evaluated by varied protocols by different specialties. The protocol for evaluation thus may be biased according to the concerned specialty and this may lead to overlooking of certain less common causes associated with this symptom.

The presence of subtle voice symptoms, obtained by leading questioning prompted us to perform an indirect laryngoscopic examination. This was the turning point in the diagnostic approach to this patient. The detection of unilateral vocal cord palsy on the left side prompted a detailed check for the underlying cause. Unilateral vocal cord paralysis can be due to malignancy (25%, commonest being carcinoma lung), surgical trauma (20%), inflammatory causes (13%), neurological disorders or idiopathic1. The CT scan confirmed a highly infiltrative form of thyroid malignancy as the cause in our patient which was eventually confirmed by PET scan and biopsy. Unfortunately, the diagnosis in this case was made at a late stage when the malignancy had already become extensively infiltrative precluding a surgical resection.

Compressive symptoms are common among patients with thyroid disease which range from mild, presenting with neck pressure or globus sensation to severe, characterized by significant dysphagia or dyspnoea2. Thyroid enlargement associated with goiter can lead to some compressive symptoms owing to proximity to the esophagus. This situation is most likely to occur in patients who have substernal extensions of their goiter in which the goiterous mass occupies the narrowed space in the thoracic inlet3-5.

More ominous are thyroid malignancies. Although the majority of these do not directly lead to dysphagia, it is not uncommon that extracapsular extension of thyroid tumors involves the tracheoesophageal junction and thus the course of the recurrent laryngeal nerve, leading to vocal cord paralysis, and secondary dysphagia due to pressure effects6. The highly malignant forms of thyroid cancer such as the anaplastic variety directly invade surrounding structures. These patients may present with rapid onset of dysphagia as the tumors invade the cervical esophagus and surrounding neurovascular structures. This was the case in our patient. Hence, a high index of suspicion has to be maintained in the initial evaluation so that such malignancies can be diagnosed before they become extensively infiltrative.

CONCLUSIONS

A careful survey for associated symptoms, however subtle, and a high index of suspicion for underlying infiltrative conditions need to be considered in the evaluation of patients with dysphagia. Thyroid lesions are an important but often overlooked cause of dysphagia, particularly when associated with voice symptoms. This case report highlights this point and illustrates the need for a comprehensive approach in evaluation of such patients.
REFERENCES