ABSTRACT

Objectives: We report a case of granulomatous lesion infiltrating the recurrent laryngeal nerve to produce vocal cord palsy, the diagnostic dilemma posed by it and its management.

Materials and methods: Clinical documentation of a 52-year-old man who presented with hoarseness of 3 months duration is presented. The clinical examination revealed immobile left vocal cord and a bulky (Lt) ventricular band with a suspicious ulcer on its posterior aspect. A computed tomographic (CT) scan of the neck and chest revealed a 1 × 1 cm nodular lesion in the tracheoesophageal groove.

Conclusion: Causes for vocal cord palsies are wide ranging and predominantly include malignant infiltration of the vagus or the recurrent laryngeal nerve. The anatomical site of involvement can be clinically and radiologically assessed with ease. Vocal cord palsy due to recurrent laryngeal nerve involvement by a granulomatous lesion is an unreported phenomenon and we believe that this is the first case to be reported in literature.

Summary: An unusual case of recurrent laryngeal nerve granuloma is reported with the diagnostic dilemma that it presented. This was successfully managed by surgical excision and postoperative antituberculosis treatment.

Keywords: Vocal cord palsy, Recurrent laryngeal nerve, Granuloma, Extrapulmonary tuberculosis.


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Conflict of interest: None declared

INTRODUCTION

Commonest cause for unilateral vocal cord fixity is infiltration of the recurrent laryngeal nerve (RLN) by malignancy. Clinical examination and imaging localizes the site of infiltration and fine needle aspiration cytology (FNAC) often yields the diagnosis. Occasionally when the FNAC is inconclusive or when it is difficult to differentiate between a poorly differentiated carcinoma and lymphoma an open biopsy may be required.

We present a case of left vocal cord palsy in an adult male which was due to a circumscribed lesion in the tracheoesophageal groove, the FNAC of which was repeatedly inconclusive. With a high index of suspicion of neurogenic tumor of the RLN, excision of the lesion was planned and to our surprise it was reported by the pathologist as a granulomatous lesion and clinically confirmed to be extrapulmonary tuberculosis.
An Unusual cause for Vocal Cord Palsy: Case Record

surgical intervention and clinicopathological correlation helped us in the optimal and successful management. An extensive review of literature did not reveal any other similar case and we believe this to be the first case report of a tuberculous RLN granuloma.

DISCUSSION

The commonest cause for unilateral fixity of vocal cord is its paralysis due to temporary or permanent damage to the RLN or vagus nerve due to malignant infiltration, trauma, idiopathic causes, neurological abnormality, infections or inflammations (Table 1). In a recent update of review of causes of vocal cord palsy by Watkinson et al\textsuperscript{1} 25% of all cases were due to malignancy, one-half being caused by lung cancer, 20% by cancer of the esophagus, 10% by thyroid cancers and 20% by gliomas, nasopharyngeal cancers and lymphomas. Surgical trauma which constitutes

<table>
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<th>Table 1: Causes of vocal cord fixity</th>
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<td><strong>Malignant:</strong> Bronchogenic carcinoma, esophageal cancer, thyroid and parathyroid malignancies, metastatic neck and mediastinal nodes.</td>
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<td><strong>Surgical/Traumatic:</strong> Thyroidectomy parathyroidectomy, partial laryngectomy, radical neck dissection, removal of pharyngeal pouch, pneumonectomy, coronary artery bypass grafting (CABG), carotid endarterectomy, penetrating neck or chest trauma, post-intubation, whiplash injuries, posterior fossa surgery and spine fusion by anterior approach.</td>
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<td><strong>Idiopathic:</strong> Syphilis, pulmonary tuberculosis, thyroiditis, viral (influenza and infectious mononucleosis).</td>
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<td><strong>Neurological:</strong> Wallenberg syndrome, syringomyelia, encephalitis, Parkinsons disease, poliomyelitis, multiple sclerosis (MS), myasthenia gravis, amyotrophic lateral sclerosis (ALS), progressive bulbar palsy, diabetic/alcoholic neuropathy and Guillain-Barre syndrome.</td>
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<tr>
<td><strong>Miscellaneous:</strong> Neurogenic tumors of RLN or vagus, rheumatoid arthritis, hemolytic anemia, syphilis and collagen diseases, sarcoidosis, lupus, polyarteritis nodosa, Ortner’s syndrome (left atrial hypertrophy), aortic aneurysm, thrombosis of subclavian vein and granulomas.</td>
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20% of all cases closely follows the list which again is followed by nonsurgical trauma to the nerve (15%), neurological causes (15%), and idiopathic causes (15%). Only 5% of cases are due to infective and inflammatory causes and miscellaneous causes form another 5%.

Although the approach to the management of vocal cord palsy is well known, quite unusually we may be faced with a diagnostic and therapeutic dilemma where individualized decisions may be needed to manage the case. The present case which mimicked malignancy is an example. The differential diagnosis (DD) of a well-circumscribed tumor in the tracheoesophageal groove are metastatic node(s), tuberculous adenitis, parathyroid adenoma and cyst, neurofibroma of the RLN. Although the 1st three possibilities were clinically and radiologically excluded to arrive at a working diagnosis of neurogenic tumor of the RLN, the HPR of granulomatous lesion was a surprise.

An extensive Medline search of the literature did not yield any reports of granulomatous lesion of the recurrent laryngeal nerve, although tuberculosas of other peripheral nerves were found. Commonest cause for peripheral nerve granuloma in our part of the world is tuberculosis and this needs to be excluded before other causes are considered. Thorotrast granuloma teflonoma and sarcoaidosis are the other rare possibilities to be considered in the case presented.

REFERENCES


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