



# A Case of Left Vocal Cord Palsy due to Thymic Enlargement

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## Abstract

We report a case of a 55 years old male patient who presented with left vocal cord palsy subsequently found to be due to the presence of a thymic mass. The thymic mass underwent a spontaneous and complete regression in size over a period of 2 months with subsequent improvement in the left vocal cord mobility.

**Keywords:** Thymus; Vocal cord palsy

## Introduction

Vocal cord palsy is one of the common presentations in otolaryngology clinics. It is not a diagnosis but rather a clinical and it requires a thorough evaluation to search for an underlying cause. The cause can be anywhere along the course of the vagus nerve from the cerebral cortex to the neuromuscular junction. Patients with unilateral vocal cord palsy can be asymptomatic or can have voice abnormalities with problems of aspiration. Complete recovery of the vocal cord function is rare, with the best outcome being an immobile or poorly mobile vocal cord with a satisfactory voice and airway [1].

## Case Report

A 55 years old male patient presented with complaints of hoarseness of voice from the past four weeks. He had no contributing past medical or surgical history. He was a non smoker. The patient's clinical examination and the examination of ear, nose, oropharynx and neck were normal. Video-laryngoscopic examination revealed paralysis of the left vocal cord.

The patient underwent a computerised tomography scan from the skull base to the mediastinum. It showed an enlarged thymus gland measuring 4.7 cm × 2.0 cm × 4.3 cm (Figure 1a and b). Patient was referred to the cardio-thoracic unit for further management. A biopsy of the thymus was suggested, but the patient refused surgical intervention. Patient was given a course of antibiotics and anti-inflammatory drugs.

Patient came for a follow-up 2 months later. Video-laryngoscopic examination showed normal mobility of the left vocal cord. A repeat CT scan of the thorax showed regression of the size of the thymus (Figure 2a and b). Patient reported improvement in the quality of his voice. At 6<sup>th</sup> month of follow-up, vocal cord movements and voice were normal.

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**Figure 1a and b:** CT scan of thorax showing (arrow) enlarged thymus measuring 4.7 cm × 2.0 cm × 4.3 cm.



Figure 2a and b: Follow-up CT scan of thorax showing (arrow) regressed thymus.

## Discussion

Presence of vocal cord palsy necessitates the search for an underlying cause and involves a thorough history taking, ENT examination. The standard investigation includes a CT scan from the skull base to the mediastinum.

In our patient the cause was found to be an enlarged thymus gland. The thymus gland starts to develop during the fourth to fifth week of gestation [2]. It develops mainly from the ventral wing of the third pharyngeal pouch on either side. The descent of the thymic primordial begins by eighth week of gestation and the final position is usually in the anterior mediastinum between the sternum, parietal pericardium and the thoracic inlet [3]. Most pathologies of thymus occur in the first two decades of life, as thymus usually regresses after puberty [4]. Adult cases share only a small part of literature. In a study done by Lewis et al., [2] only five out of 34 cases were adults older than 18 years old at presentation.

Differential diagnosis for a thymic mass includes thymic cysts, malignant thymomas, carcinoids, germ cell tumours, neuroendocrine tumours, and Hodgkin and non-Hodgkin lymphomas [5]. The diagnosis of a thymic mass can be made using CT scan which helps in determining the exact location of the mass, relationship to the surrounding structures and its density [6]. CT guided fine needle aspiration and core needle biopsies can be undertaken which may be useful in differentiating cystic from solid tumours. Management includes careful observation and surgical resection using minimally invasive surgery [7]. In the present case thymus enlargement was may be due to inflammatory pathology and it regressed with a course of antibiotics and anti-inflammatory drugs.

## Conclusion

Benign mediastinal thymic masses are rare in adult population. They can be asymptomatic or present with dysphagia, dyspnoea, cough, hoarseness of voice. Though literature reviews show complete surgical resection is the most suitable treatment, the patient in our study refused any surgical intervention and the thymus showed spontaneous and complete regression of size with subsequent improvement in the vocal cord mobility.

## References

1. Crumley RL. Laryngeal synkinesis revisited. *Ann Otol Rhinol Laryngol.* 2000;109(4):365-71.
2. Lewis MR. Persistence of the thymus in the cervical area. *J Pediatr.* 1962;61(6):887-93.
3. Tovi F, Mares AJ. The aberrant cervical thymus. Embryology, pathology and clinical implications. *Am J Surg.* 1978;136(5):631-7.
4. Barat M, Sciubba JJ, Abramson AL. Cervical thymic cyst: case report and review of literature. *Laryngoscope.* 1985;95(1):89-91.
5. Allan BJ, Thorson CM, Davis JS, Van Haren RM, Parikh PP, Perez EA, et al. An analysis of 73 cases of pediatric malignant tumors of the thymus. *J Surg Res.* 2013;184(1):397-403.
6. Woolley SL, Espeso A, Smith DR. Complete recovery of an isolated left vocal fold palsy associated with a benign mediastinal thymic cyst. *J Laryngol Otol.* 2008;122(2):4.
7. Urschel JD, Horan TA. Mediastinoscopic treatment of mediastinal cysts. *Ann Thorac Surg.* 1994;58(6):1698-700.