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Robotic Resection of Ectopic Thyroid Tissue of the Mediastinum - Case Report and Literature Review

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Abstract

Introduction: Ectopic thyroid tissue (ETT) is a rare cause of mediastinal masses, representing less than 1% of all mediastinal tumors (1). ETT could be detected anywhere along the path of the first embryonic descent of the thyroid gland from the primordial foregut floor to its usual pre-tracheal position. ETT mediastinal localization accounts for fewer than 1% of all ectopic thyroid cases (2, 3). Various surgical methods for approaching mediastinal masses have been documented in the literature, including median sternotomy, posterolateral thoracotomy, and, video-assisted thoracoscopic surgery (VATS) (4). More recently, robotic-assisted thoracoscopic surgery (RATS) has been proposed for these masses. The aim of this article is to present the use of robotic-assisted thoracoscopic surgery (RATS) for a rare case of a mediastinal ETT.

Case presentation: We present the case of a 40-year-old male with no significant medical history who discovered a mediastinal mass on a thoracic CT scan following COVID-19 infection. Symptoms were dysphagia and anterior thoracic pain with cervical extension. Scintigraphy confirmed the presence of ectopic thyroid tissue in the mediastinum as well as a normal cervical thyroid gland. ETT was histologically confirmed by endoscopic ultrasound guided biopsy. Robotic assisted surgery was the chosen approach to surgically treat this mass and the technical details are presented. The mass was extracted through the cervical incision. Total surgical time was 230 minutes, and the blood loss was 60 ml. The patient was discharged after 48 hours with follow up showing a full recovery with no residual pain or respiratory symptoms.

Conclusion: Ectopic thyroid tissue (ETT) is a rare cause of mediastinal masses, and the diagnosis is always a challenge. Robotic assisted thoracoscopic surgery was proved to be safe and efficient in this rare case of ETT developed in the superior mediastinum.

Key words: ectopic thyroid tissue, robotic assisted thoracoscopy