



Ectopic Thyroid Present in Mediastinum

Onur Bayrakci^{1*}, Maruf Sanli², Ahmet Ulsan², A.Ferudun Isik², Levent Elbeyli³

¹ Department of Thoracic Surgery, Ersin Arslan Education and Research Hospital, Gaziantep Turkey

² Department of Thoracic Surgery, Gaziantep University Faculty of Medicine, Gaziantep Turkey

³ Department of Thoracic Surgery, Sanko University School of Medicine, Gaziantep Turkey

***Corresponding author:** Onur Bayrakci, Department of Thoracic Surgery Ersin Arslan Education and Research Hospital, Gaziantep Turkey.

© All rights reserved by
Onur Bayrakci

Received Date: August 06, 2021; **Published Date:** August 25, 2021

Abstract

Ectopic thyroid can be seen in different localizations from foramen cecum to mediastinum due to lack of migration in the embryological period. Mediastinal location is very rare in ectopic thyroids. In our study, we present three cases of mediastinal ectopic thyroid. In all our cases, the mediastinal mass was totally removed by right localized, right eploratris thoracotomy. One of our cases was reported as multinodular goiter, one as goiter and well-differentiated tumor association, and the other as papillary thyroid carcinoma. If malignancy is suspected in mediastinal masses, mass biopsy and appropriate surgical resection should be performed if indicated.

Keywords: Ectopic Thyroid; Goiter; Thyroid Karsinoma; Mediastinal; Surgery

Introduction

The inability of the thyroid gland from the thyroid anlage area to its final position in front of the trachea is called an ectopic thyroid. Ectopic thyroid can occur in any position from the foramen cecum at the base of the tongue to the mediastinum [1]. While the prevalence of ectopic thyroid is 1 / 100000-300000 cases in healthy individuals, it is seen as 1 / 4000-8000 in those with thyroid disease [2]. In our study, we will present 3 rare cases with mediastinal location.

Material and method

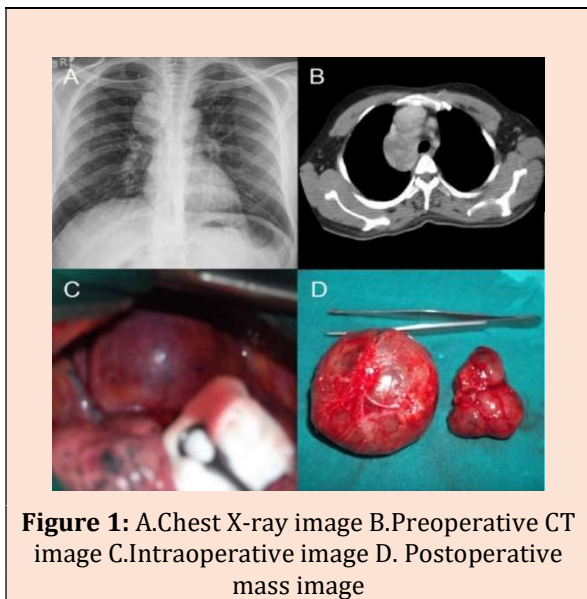
In our study, 3 mediastinally located ectopic

thyroid cases among the cases we encountered between 2011 and 2016 in Gaziantep University Medical Faculty Hospital were retrospectively analyzed.

Case 1

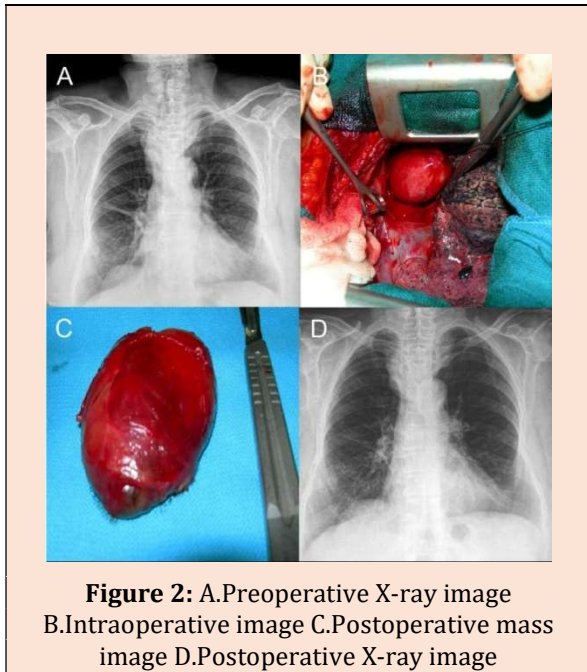
A 50-year-old male patient was admitted with cough and shortness of breath. No pathological findings were found on physical examination. Right paratracheal well-circumscribed lesion was observed on chest radiography. Thoracic computed tomography (CT) was reported as a well-circumscribed heterogeneous mass

extending to the right thyroid lobe and compressing the right paratracheal 53x48x58 mm trachea. TSH, T3, T4 and other laboratory parameters were evaluated as normal. In thyroid ultrasonography (USG), a fine needle aspiration biopsy (FNAB) was performed from the lobular vascularized 52x40 mm lesion extending into the mediastinum at the lower end of the right thyroid. FNAB pathology was reported as benign groups of thyrocytes. Fluorodeoxyglucose positron emission tomography (FDG PET) examination reported increased involvement in the right paratracheal mass at the margin of malignancy (Standardized uptake value (SUV) 2,7/1,7). There was no pathological involvement in the thyroid gland. Bilateral vocal cord and entire bronchial system were evaluated as normal in bronchoscopy examination. In the exploratory right thoracotomy, a 60x70 mm encapsulated well-circumscribed mass located between the vena subclavia, azygos vein and superior vena cava was totally removed (Figure 1). Mediastinal mass pathology was reported as multinodular goitre.



Case 2

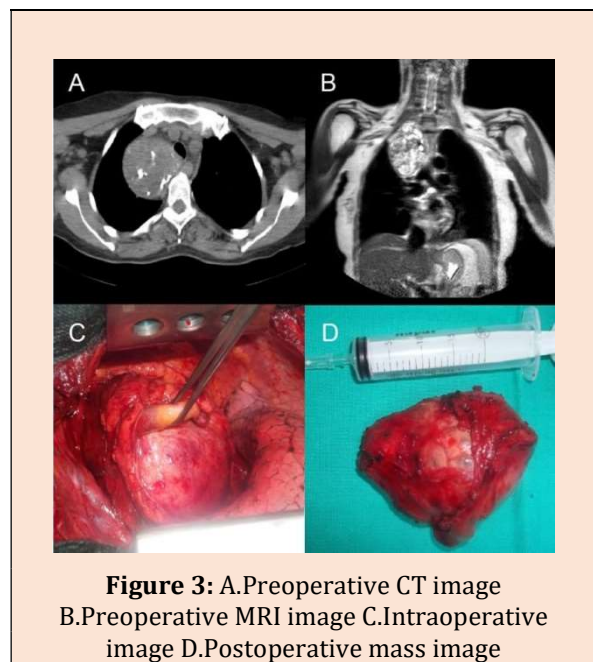
A 50-year-old female patient presented with shortness of breath and chest pain. The patient, who had a history of total thyroidectomy 30 years ago, was using levothyroxine regularly. There was an operation scar on his neck. Physical examination findings were normal except for the prolonged expiration. No pathological finding was found in cardiac examinations performed for chest pain. A well-circumscribed opacity lesion was observed in the right Paratracheal area on chest radiography. TSH was found to be 7.69 (0.35-4.94). T3, T4 and other lab parameters reported as normal. Heterogeneous residual thyroid tissue was reported on thyroid USG (right 11x9 mm, left 9x6 mm). A well-circumscribed heterogeneous mass with calcification was reported in the right paratracheal area, measuring 55x62x68 mm, compressing the trachea. No area compatible with thyroid parenchyma was observed in thyroid scintigraphy. Bilateral vocal cord was normal in bronchoscopy, it was observed that the trachea was narrowed by compression from the right outside. In the exploratory right thoracotomy, a 80x70 mm encapsulated well-circumscribed mass located between the vena subclavia, azygos vein and superior vena cava was totally removed (Figure 2). Mediastinal mass pathology was reported as a well-differentiated tumor (25 mm) of uncertain malignancy potential and multinodular goitre.



Case 3

A 76-year-old female patient presented with complaints of shortness of breath, weakness, sweating and back pain. She was referred to our clinic when a nodular lesion located in the upper zone between the vertebra and trachea was detected in the external center examinations. No pathological findings were found on physical examination. TSH was found to be 0.23 (0.35-4.94). T3, T4 and other lab parameters reported as normal. Magnetic resonance imaging (MRI) was reported as a 56x42x35 T1 hypointense T2 hyperintense mass lesion showing heterogeneous contrasting, obliterating the anterior prevertebral area at the posterior of the trachea. In addition, USG revealed a 51x40x32 mm mass lesion in the left thyroid lobe. Thyroid scintigraphy showed that the left lobe was larger than normal and a hypoactive nodule was reported in the lateral aspect of the left lobe. FNAB was made from this nodule. Vocal cord was normal in bronchoscopy. It was observed that the trachea was narrowed from the posterior 2 cm

below the vocal cord. In exploratory right thoracotomy, a well-circumscribed rigid mass lesion, approximately 70x50 mm in size, in the anterior vertebra in the posterior mediastinum para esophageal area, without invasion of the surrounding tissues, was totally removed (Figure 3). Pathology of the mass was reported as papillary thyroid carcinoma (encapsulated follicular variant, 65 mm in diameter).



Discussion and Conclusion

Ectopic thyroid is one of the rare cases and it is generally located in the lingual area. Embryological incomplete displacement of the thyroid can lead to the mediastinal or even paracardiac position. It is mostly asymptomatic (47%) but local symptoms such as dysphagia, dysphonia and upper airway obstruction may be seen [3]. In our study, in all three patients, respiratory and there were pressure symptoms. It is a very rare association of hyperthyroidism and is usually associated with hypothyroidism [4]. Hypothyroidism is seen in 33% of

thyroidectomy cases [5]. One of our 3 patients, two female and one male, had hypothyroidism. In cases of hypothyroidism, surgery is performed for gland bleeding, ulceration, uncontrolled hyperthyroidism, severe local compression symptoms, respiratory symptoms and cosmetic reasons [6]. Surgical method (right exploratory thoracotomy) was used in our patients due to compression and respiratory symptoms. If malignancy is suspected despite FNAB, mass biopsy and surgical resection should be performed in case of indication. Because although one of our cases had multinodular goitre, it was reported that one of our other two cases had a well-differentiated tumour goitre association and the other had papillary thyroid carcinoma.

References

1. [Siddique M, Bashir H \(2018\) 99mTc Sodium Pertechnetate Uptake in Ectopic Mediastinal Thyroid Tissue on Hybrid Thyroid Scintigraphy. Clin Nucl Med 43: 820-822.](#)
2. [Kim MS, Kong YH, Lee DY \(2015\) A Case of Subclinical Hypothyroidism with Lingual and](#)

[Right Pretracheal Ectopic Thyroid. J Clin Res Pediatr Endocrinol 7: 148-150.](#)

3. [Ibrahim NA, Fadeyibi IO \(2011\) Ectopic thyroid: etiology, pathology and management. Hormones \(Athens\) 10: 261-269.](#)
4. [Abdallah-Matta MP, Dubarry PH, Pessey JJ, Caron P \(2002\) Lingual thyroid and hyperthyroidism: a new case and review of the literature. J Endocrinol Invest 25: 264-267.](#)
5. [J. Tan, T. Liu \(2013\) Coexistence of non-functional ectopic thyroid tissue and a normal thyroid: a case report Exp. Ther Med 6: 1059-1061.](#)
6. [Turri-Zanoni M, Battaglia P, Castelnuovo P \(2018\) Thyroglossal Duct Cyst at the Base of Tongue: The Emerging Role of Transoral Endoscopic-Assisted Surgery. J Craniofac Surg 29: 469-470.](#)

Copyright: © 2021 Onur Bayrakci., *et al.*, This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.