

Lung Metastasis to the Thyroid Gland: A Case Report

Hatice Türker*, Zühal Karakurt*, Ergun Karahanlı*, Birsen Ocaklı*, Ferda Aksoy.**

* Pulmonology Department

** Pathology Department

SSK Süreyyapaşa Center for Chest Diseases and Cardio-Thoracic Surgery
İstanbul-Turkey

Abstract

We present an unusual case of a metastatic thyroid tumor. The primary cancer site associated with metastases to thyroid gland was the lung. Diagnosis was made by fine-needle aspiration cytology (FNAC), the histology was epidermoid lung cancer (ELC) metastasis. This finding advanced the

disease stage to four and made the patient inoperable for curative intent.

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Key words: Metastatic thyroid gland cancer, Lung cancer

Abbreviations: ELC = epidermoid lung cancer; FNAC = fine-needle aspiration cytology; CTT = computerized thorax tomography.

Introduction

Metastasis to the thyroid gland is uncommon and may be a diagnostic problem. Its presence often indicates poor prognosis (1). The most common primary tumor site is the kidney, followed by lung, breast, esophagus and uterus (1-7). Metastases represent the advanced stage of the tumors and fine-needle aspiration cytology (FNAC) is an important way of diagnosis in thyroid metastases (8,9). Our case with epidermoid lung cancer (ELC) had a thyroid gland mass without any clinical symptom and examination of the cytology obtained by FNAC revealed the ELC metastasis.

Case Report

A 55 year - old man was admitted to the private hospital emergency services with tachypnea, high fever, cough, dsypnea of five days' duration. His chest radiograph and computerized tomography (CT) in November 1997 revealed left upper lobe pneumonic infiltration with air bronchogram and substernal goiter in the right upper zone (figures 1,2,3). His erythrocyte sedimentation rate was 73 mm/ hour and WBC count was 14000/mL. Parenteral antibiotic therapy was given for a duration of two weeks. The control chest

Correspondence: Dr. Hatice Türker
Address: SSK Süreyyapaşa Chest Diseases
and Cardio-Thoracic Surgery Center
C- Blok C-17 Maltepe-İstanbul, Turkey

radiograph showed a progression with left lobe atelectasis and physical examination was note for a well appearing man who was afebrile. The patient was referred to our center for further examination and treatment.

The medical history of the patient was healthy except a left inguinal hernia operation in 1994 and with the

right thyroid gland enlargement in two-year duration without any clinical symptoms.

In our center, the fiberoptic bronchoscopic examination revealed the tumor causing complete stenosis of the left upper lobe orifice. The pathological diagnosis of the lesion was ELC. The patient was evaluated as stage II according to the TNM staging system but his thyroid scintigraphy revealed bilateral throid hyperplasia, a huge (5x 5 x 5cm) nodular normo-active lesion on the right lobe and there were separate hypo-active areas inside the nodule. The patient underwent a FNAC of the right thyroid mass. Cytological diagnosis was a metastatic epidermoid thyroid cancer (figure 4). This finding advanced the disease stage to four and made the patient inoperable curative intent. Then chemotherapy was administered to the patient. The patient is still alive without any clinical complaint up to 25 months following that period.

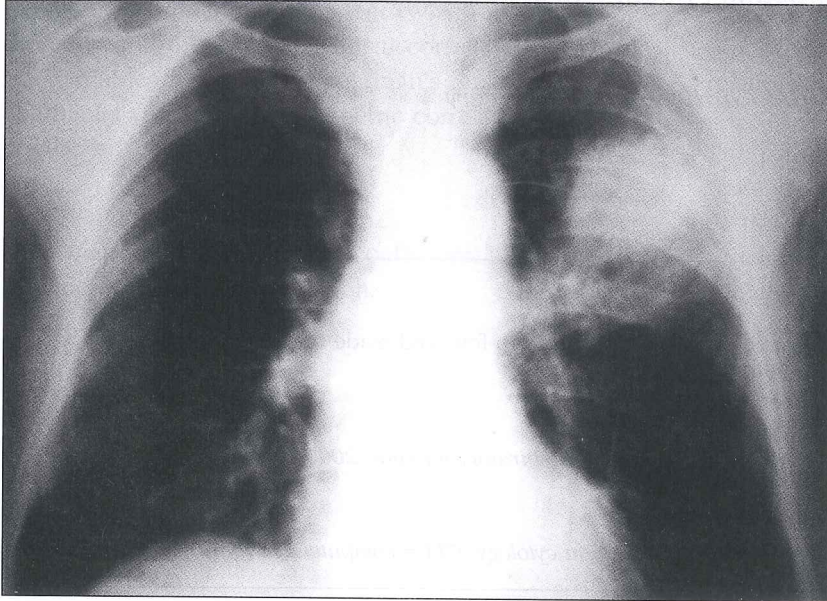


Figure 1. P.A. Chest X ray of patient: pneumonic infiltration and air bronchogram on the left upper zone.

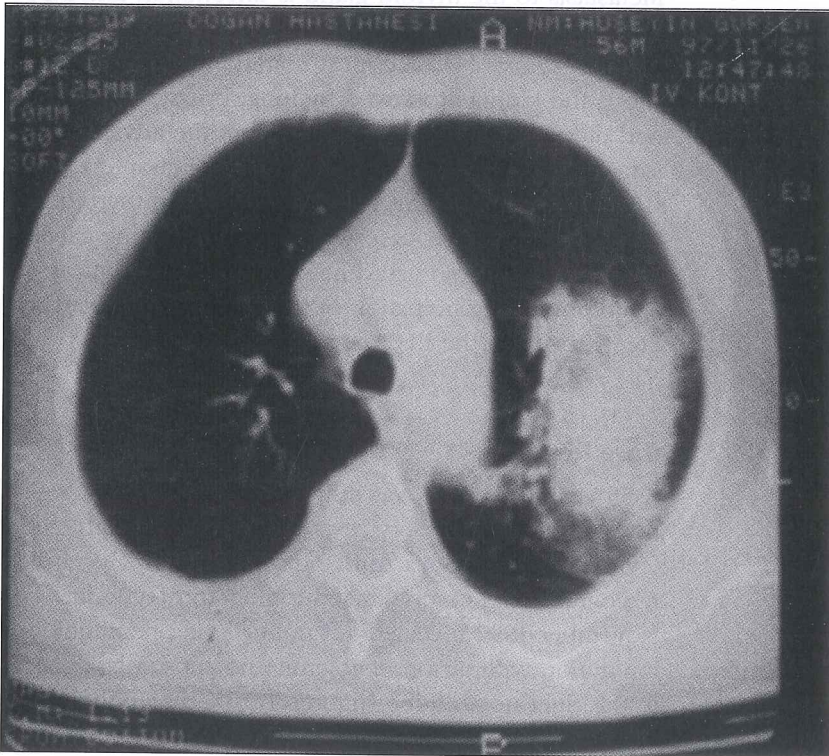


Figure 2. Chest CT on the left upper lobe huge consolidation with peripheral pneumonic infiltration.

Discussion

Metastasis to the thyroid gland is usually considered a terminal event, and effectiveness of treatment has been questioned (2). It has been revealed that thyroid tumors are often moderate or poorly differentiated adenocarcinomas (1- 5). There are a few case studies about metastatic tumors of the thyroid gland. The lung is generally the most or the second most common primary site followed by breast cancer (1,2,4). However, some studies reported the kidney as the most common primary site (1-5). In general, whatever the origin of the metastases, the most common histologic subtype is adenocarcinoma (1-5).

Epidermoid lung cancer is an unusual histologic cell type in the thyroid gland metastases, as in our case report. We used FNAC in the diagnostic of the thyroid gland metastasis. FNAC is a prompt and accurate diagnostic way in such patients (8-9). It has been reported that 80 % of cytological results were

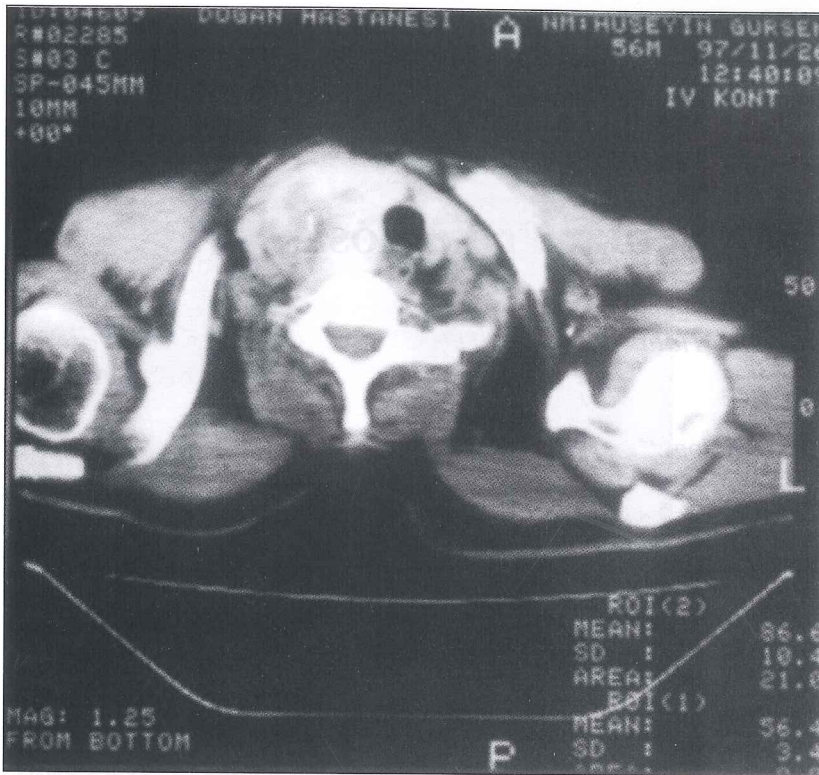


Figure 3. Chest CT on the right upper paratracheal area huge intrathoracic thyroid nodules.

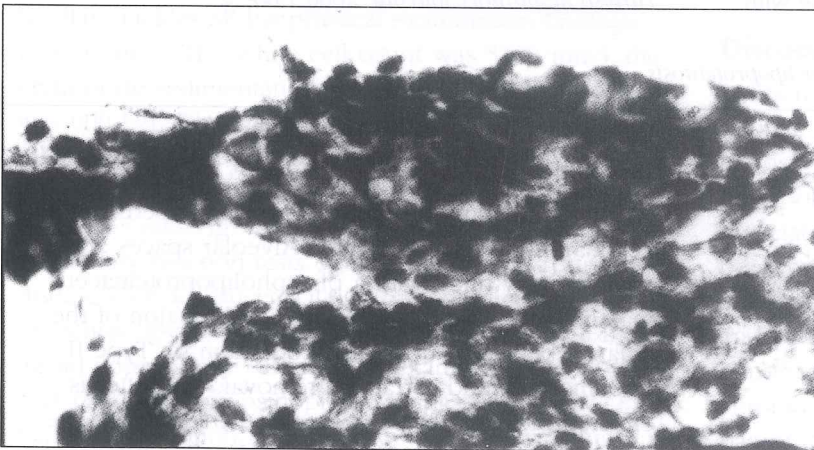


Figure 4. FNAC, stained with papanicolau X 500. Thyroid epidermoid metastases.

malignant in FNAC of the thyroid mass and half of these were of secondary malignancy (9).

Finally, the patient with lung cancer and the thyroid enlargement should be considered metastatic malignancy until proved otherwise. FNAC is the procedure of choice in such cases, and it should be done early in the evaluation of all patients with thyroid nodules, regardless of the presumed etiology or function by scan.

References

1. Lam KY, Lo CY. Metastatic tumors of the thyroid gland: a study of 79 cases in Chinese patients. *Arch Pathol Lab Med* 1998 Jan; 122 (1): 37-41.
2. Nakhjavani MK, Gharib H, Goellner JR et al. Metastases to the thyroid gland. A report of 43 cases. *Cancer* 1997 Feb 1; 79 (3): 574- 578.
3. Czech JM, Lichtor TR, Carney JA. Neoplasms metastatic to the thyroid gland. *Surg. Gynecol Obstet* 1982 Oct; 155 (4): 503- 505.
4. Rosen IB, Bedard YC, Walfish PG. Metastases of cancer of the thyroid gland as a cause of goitre. *Can Med Assoc. J.* 1998 May 20; 118 (10): 1265 - 1268.
5. Hadjadj S, Geoffrois L, Aubert V. Thyroid metastases from cancer of the kidney. Two cases. *Presse Med* 1995 Oct 14; 24 (30): 1386- 1388.
6. Barz H, Barz D, Klemm P. Distribution of lung cancer metastases. Combination and frequency of organ metastases. *Arch Geschwulstforsch* 1982; 52 (7): 551-560.
7. Takashima S, Saeki H, Moriwaki S. An autopsy case of metastatic thyroid tumor. *Gan No Rinso* 1984 Jul; 30 (8): 880- 884.
8. Lin JD, Weng HF, Ho YS. Clinical and pathological characteristics of secondary thyroid cancer. *Thyroid* 1998 Feb; 8 (2): 149-153.
9. Watts NB. Carcinoma metastatic to the thyroid: prevalence and diagnosis by fine-needle aspiration cytology. *Am J Med Sci* 1987 Jan; 293 (1): 13-17.