Case of Synchronous Central Neck Node Metastases from Both Primary Thyroid Cancer and from Endometrial Cancer to the Thyroid

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A 54-year-old woman presenting with dizziness was diagnosed with a metastatic brain tumor. Imaging studies to identify the primary cancer revealed endometrial thickening with a left adnexal mass, enlarged bilateral external iliac lymph nodes, and multiple attenuated nodules in both lobes of the thyroid gland with enlarged central neck nodes. After curettage of the uterine endometrium and ultrasonography-guided gun biopsy of the thyroid gland to confirm uterine and thyroid cancers, respectively, total abdominal hysterectomy with bilateral salpingo-oophorectomy and total thyroidectomy with bilateral central neck dissection were performed. Histopathologic examination of the removed tissues demonstrated both endometrial carcinoma metastasis to the thyroid gland and primary thyroid cancer with synchronous central neck node metastasis originating in the endometrium and thyroid. Three of the four right central lymph nodes were positive for metastatic papillary carcinoma; on the other hand, the remaining right central lymph node and one of the two left central lymph nodes were confirmed to be positive for metastatic endometrial carcinoma.

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INTRODUCTION

The head and neck region is the primary site of lymph node metastases. The most common extraoral primary site of cervical lymph node metastasis is the thyroid gland, with papillary thyroid carcinoma (PTC) accounting for up to 25-50% of cervical lymph node metastasis cases [1]. It is no wonder that 50-60% of PTC patients have central neck node metastasis [2], and 2-38% have lateral neck node metastasis at the time of initial surgery [3]. Therefore, when a patient is diagnosed with a primary thyroid...
cancer, the primary differential diagnosis of enlarged central
neck nodes is expected to be metastasis from the thyroid tumor.

Cervical lymph node metastasis from endometrial cancer
occurs rarely, with a frequency of 0.15% [4], in the form of lateral
neck node metastasis via the thoracic duct. However, once
endometrial carcinoma first metastasizes to the thyroid, it may
subsequently metastasize to the cervical lymph nodes.

Herein, we report a case of synchronous central neck node
metastases both from primary thyroid cancer and from endo-
metrial cancer to the thyroid.

CASE REPORT

A 54-year-old woman suddenly developed severe, non-whirling,
constant dizziness. She was referred to our hospital after
diagnosis of multiple brain tumors by brain computed tomo-
graphy (CT) at a nearby hospital. Physical examination revealed
abnormal blood pressure (179/101 mmHg) in the absence of
additional abnormalities. She had normal neurologic functions
with all results of the initial laboratory tests falling within their
normal reference ranges.

Magnetic resonance imaging of the brain revealed multiple
hyperintense masses with perilesional edema involving both
hemispheres on a T2-weighted image, consistent with metastatic
brain tumors. Further diagnostic studies were performed to
investigate the primary origin of the metastatic brain tumors.
Positron emission tomography (PET) revealed heterogeneously
hypermetabolic masses in the pelvic cavity, mediastinum, left
paraortic lymph nodes, left femur head, and right thyroid gland.
The serum TSH level was 5.97 μIU/mL (normal reference range:
0.4-4.1 μIU/mL), and the free T4 level was 1.63 ng/dL (normal
reference range: 0.7-1.8 ng/dL). Additionally, there were in-
creased levels detected of three serum tumor markers: serum
levels of CA 19-9, CA 125, and CA 15-3 were 650.0 U/mL
(normal reference range: 0-37 U/mL), 978.3 U/mL (normal re-
ference range: 0-35 U/mL), and 69.2 U/mL (normal reference
range: < 30 U/mL), respectively.

Chest and abdominal CT scans showed a solid and cystic
endometrial mass in the left adnexa with multiple enlarged lymph
nodes along the bilateral external iliac chains and bilateral
mediastinum (Fig. 1A). Thyroid CT scans revealed multiple solid
masses with low attenuation in both thyroid lobes (Fig. 1B), with
57 calcified lymph nodes at levels IV, V, and VI of the neck
(Fig. 1C).

Ultrasonography (USG) of the thyroid demonstrated a 1.12 ×
0.83 × 1.11 cm indeterminate nodule with suspicious micro-
calcification in the middle of the left thyroid lobe (Fig. 2A).
Another indeterminate nodule (1.79 × 1.13 × 1.98 cm in size)