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Case report

Mixed primary squamous cell carcinoma, follicular carcinoma, and micropapillary carcinoma of the thyroid gland: A case report

Su Dong [a], Xue-Song Song [a], Guang Chen [b], Jia Liu [b,*]

[a] Department of Anesthesia, First Hospital of Jilin University, Changchun 130021, China
[b] Department of Thyroid Surgery, First Hospital of Jilin University, Changchun 130021, China

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ABSTRACT

Primary squamous cell carcinoma of the thyroid gland is rare, and mixed squamous cell and follicular carcinoma is even rarer still, with only a few cases reported in the literature. The simultaneous presentation of three primary cancers of the thyroid has not been reported previously. Here we report a case of primary squamous cell carcinoma of the thyroid, follicular thyroid carcinoma, and micropapillary thyroid carcinoma. A 62-year-old female patient presented with complaints of pain and a 2-month history of progressively increased swelling in the anterior region of the neck. Fine-needle-aspiration cytology of both lobes indicated the possibility of the presence of a follicular neoplasm. Total thyroidectomy with left-sided modified radical neck dissection was performed. Postoperative pathological examination confirmed the diagnosis of thyroid follicular carcinoma with squamous cell carcinoma and micropapillary carcinoma of the thyroid. Thyroid-stimulating hormone suppressive therapy with L-thyroxine was administered. Radioiodine and radiotherapy also were recommended, but the patient did not complete treatment as scheduled. The patient remained alive more than 9 months after operation. The present case report provides an example of the coexistence of multiple distinct malignancies in the thyroid.

1. Introduction

Primary squamous cell carcinoma of the thyroid gland (PSCCT) is rare [1]. Moreover, mixed squamous cell and follicular carcinoma is even rarer than pure squamous cell of the thyroid gland, and only a few cases have been reported in the literature [2,3]. In contrast, simultaneous triple primary cancer of the thyroid has not been reported previously. Here we report the case of a patient presenting primary squamous cell carcinoma of the thyroid, follicular thyroid carcinoma, and micropapillary thyroid carcinoma simultaneously.

2. Case report

A 62-year-old woman presented with complaints of pain and progressively increasing swelling in the anterior region of the neck that began 2 months previously. A mass on the neck of the patient had been present for 40 years. Clinical examination revealed a tense mass measuring 5.0 cm × 4.0 cm on the left side of the thyroid gland and a tense mass measuring 3.0 cm × 2.0 cm on the right side of the thyroid gland. Both were hard with a nonsmooth surface and associated with tenderness and movement up and down during swallowing. No obviously swollen lymph nodes were found in the patient's neck. Ultrasound examination showed that the thyroid gland was enlarged with many nodules of varying sizes with uneven echo (Fig. 1). Some nodules had a patch shape and fine punctuate calcifications. Nodules with abundant blood flow

* Corresponding author. Tel.: +86 13578923380; fax: +86 431 85167448.
E-mail address: sosea@sina.com (J. Liu).

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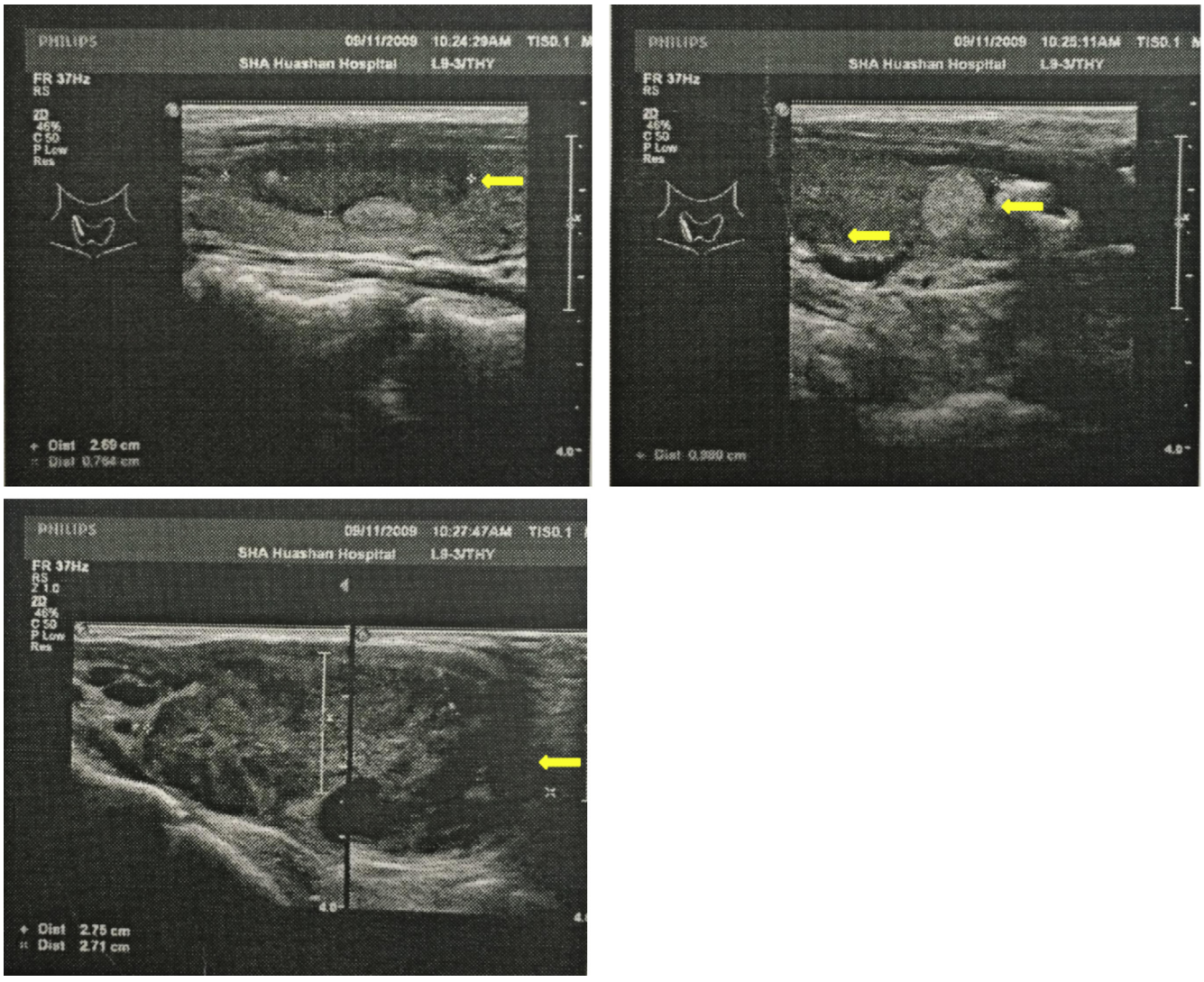

Fig. 1. Ultrasound showed that the thyroid gland was enlarged with many nodules of varying sizes and presenting uneven echo.

signals had reached the retrosternal area on the left lobe. CT showed that the thyroid gland was enlarged with low-density shadow inside and oppressed the tracheal (Fig. 2). The results of fine-needle-aspiration (FNA) cytology of both lobes caused us to consider the presence of follicular neoplasm (Fig. 3A and B). Exhaustive clinical, endoscopic, and radiological examinations (i.e., esophagoscopy, CT of the neck and chest, and ENT checkup) did not reveal a primary site of squamous cell carcinoma as the likely source of the metastases or any contiguous spread from neighboring structures. Surgery was undertaken. Many nodules were seen in the thyroid during operation. The larger neoplasm in the left lobe was approximately 4.0 cm × 3.0 cm and hard with no complete capsule and unclear boundary. The neoplasm adhered to the left anterior muscles of the neck and the left internal jugular vein. Blunt dissection was performed between the mass and the internal jugular vein. The larger neoplasm in the right lobe was approximately 3.0 cm × 2.0 cm and had the same characteristics as that located in the left lobe. Intraoperative quick frozen pathology showed thyroid follicular carcinoma associated with squamous cell carcinoma (Figs. 3C and 4A). Total thyroidectomy with left-sided modified radical neck dissection was performed. The postoperative pathological report confirmed thyroid follicular carcinoma (poorly differentiated) with squamous cell carcinoma and micropapillary carcinoma of the thyroid gland (0.1 cm in diameter located in the right lobe; Fig. 4B). Carcinoma tissues invaded blood vessels, but did not involve nerves. Among 17 lymph nodes excised, 10 showed metastasis of thyroid follicular carcinoma. Immunohistochemical staining showed positive staining for thyroglobulin (TG) (Fig. 3D) and negative staining for calcitonin (CT), chromogranin A (CgA), and synaptophysin (Sy). Thyroid-stimulating hormone (TSH) suppressive therapy with L-thyroxine was administered after operation. Radioiodine was suggested to the patient concurrently, but the patient did not return to the hospital as scheduled. Radiotherapy was carried out in other hospital, but the patient abandoned treatment due to intolerance without one full course being completed. At the time of preparation of this report, the patient remained alive more than 20 months after operation.

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