

CONCLUSION

A novel iterative learning method using selected ultrasound images from big data sets can help beginners learn to differentiate between benign and malignant thyroid nodules. With the assistance of SERA, the diagnostic performances of readers with various experiences in thyroid imaging could be further improved.

KEYWORDS

deep learning, thyroid nodule, ultrasound, learning program, diagnostic performance

PP-T-03

A CASE OF SCLEROSING EPITHELIOID FIBROSARCOMA WITH METASTASES TO THE THYROID

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CASE

Sclerosing Epithelioid Fibrosarcoma (SEF) is a rare form of sarcoma with slow growth, often with local recurrences/distant metastases. Treatment is by wide excision and adjuvant chemotherapy/radiotherapy. A 36-year-old Filipino female was first diagnosed with SEF when she presented with abdominal pain and elevated lipases and amylases. CT showed lesions in the pancreas, left erector spinae, axilla, lateral chest wall, left lower lung lobe, and liver. Biopsy revealed round cell sarcoma consistent with SEF. She underwent wide excision of the masses and adjuvant chemotherapy. After 6 months, an enlarging mass was noted on the thyroid. Thyroid function tests were normal. On thyroid ultrasound, a 2.6 x 1.8 x 2.4 cm, hypoechoic, solid nodule in the right lobe and a 0.3 x 0.2 x 0.3 cm hypoechoic solid nodule in the left lobe were seen. She underwent a total thyroidectomy. Histopathologic examination of the thyroid mass confirmed SEF.

KEYWORDS

thyroid, sclerosing epithelioid fibrosarcoma, thyroid metastases, sarcoma

PP-T-04

FOLLICULAR VARIANT OF PTCA INITIALLY PRESENTING AS WIDESPREAD METASTASES

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CASE

Papillary thyroid carcinoma accounts for most cases of thyroid cancer with most cases having good prognosis and low incidence of metastases. The follicular variant (FV) is the most common. First described in the 1960s, the understanding of FV-PTC began to evolve with molecular profiling demonstrating a similarity with FTC, and clinical behavior profiling showing that a subtype may behave like PTC with a propensity for lymph node metastases. We are presented with an unusual case of an infiltrative FV-PTC presenting with widespread multiple metastases on diagnosis.

A 64-year-old female presented with a 1-year history of a slowly enlarging mass on the left mandible, associated with an enlarging anterior neck mass. On examination, there was a 7 x 8 x 3 cm hard, fixed, left mandibular mass and a palpable right thyroid nodule measuring 2.5 x 2 cm. There was no difficulty in swallowing or breathing, but she had some difficulty in eating due to trismus. There were no associated symptoms of hypo- nor hyperthyroidism. Investigations revealed a euthyroid status. CT scan showed a solid lobulated heterogeneously enhancing mass measuring 4.2 x 5.1 x 5.2 cm on the body and angle of the left mandible. Ultrasound showed multiple thyroid nodules, the largest - a mixed cystic and solid mass measuring 2.9 x 2.7 x 2.17 cm on the right thyroid lobe, for which FNA was performed. Histopathology showed benign follicular nodules. An incision biopsy of the mandibular mass showed the presence of thyroid tissue. Further imaging showed metastases to the left frontal and parietal bone, T7 vertebra, and bilateral lungs. With a pre-operative diagnosis of a primary thyroid malignancy, the case was discussed in a multi-disciplinary tumor board meeting. The patient then underwent total thyroidectomy with segmental mandibulectomy. Histopathology post-op showed a metastatic multifocal infiltrative follicular variant of PTC. RAI was administered post-surgery and suppressive thyroxine therapy was started. Steroids were given during RAI, with no untoward events post-treatment. Post-ablative whole-body scanning revealed increased tracer uptake in multiple areas: left frontal and parietal bone, bilateral thyroidal beds, left supraclavicular lymph node, the sternomanubrial junction, bilateral lung lobes, right humeral head, and T7 vertebra. Further doses of RAI were planned and she is currently maintained on

suppressive thyroxine therapy. Diagnosis of FV-PTC may be a greater challenge than conventional forms because of possible false-negative results on cytology. The infiltrative subtype has greater metastatic potential and higher recurrence rates. Multidisciplinary team management and careful preparation prior to treatment with RAI are indicated in these cases.

KEYWORDS

thyroid, follicular variant, papillary thyroid cancer, PTCA, thyroid cancer

PP-T-05

MANAGEMENT OF HYPOTHYROIDISM IN GASTRIC OUTLET OBSTRUCTION USING LEVOTHYROXINE SOLUTION VIA ILEOSTOMY ROUTE

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CASE

A 64-year-old Filipino female with colon adenocarcinoma previously underwent hemicolectomy and ileostomy creation. She was maintained on oral levothyroxine 75µg tablet once daily for post-surgical hypothyroidism. She was placed on prolonged nothing per orem due to gastric outlet obstruction which hindered the delivery of oral levothyroxine resulting in hypothyroidism. Her thyroid function test showed elevated TSH at 23.2 uIU/ml and low normal free T4 at 0.7 ng/dl. Levothyroxine solution was prepared by dissolving 2 tablets of 150 µg levothyroxine in 50ml of plain saline solution administered via ileostomy route using a French 24 foley catheter and dwelling for 2 hours before removal. We delivered levothyroxine solution via the ileostomy route at a dose range of 6.3 to 15 µg per kilogram per day to achieve euthyroid state with a normal free T4 level. A cost-effective and safe alternative route of levothyroxine administration for conditions prohibiting the enteral route of administration can be used.

KEYWORDS

levothyroxine, hypothyroidism, ileostomy, malignant obstruction

PP-T-06

ASSOCIATION BETWEEN THYROID HORMONES WITHIN NORMAL TO SUBCLINICAL DYSFUNCTION AND LEFT VENTRICULAR DIASTOLIC DYSFUNCTION

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INTRODUCTION

Thyroid hormones play critical roles in modulating the cardiovascular system. However, the effects of subclinical thyroid dysfunction and euthyroidism on cardiac function remain unclear. We investigated the association between left ventricular (LV) diastolic dysfunction and subclinical thyroid dysfunction or thyroid hormone levels within the reference range and LV diastolic dysfunction in a large cohort.

METHODOLOGY

This cross-sectional study included 26,289 participants (22,197 euthyroid, 3,671 with subclinical hypothyroidism, and 421 with subclinical thyrotoxicosis) who underwent regular health checkups. The cardiac structure and function were evaluated using echocardiography. LV diastolic dysfunction with normal ejection fraction (EF) was defined as follows: EF of >50% and (a) E/e' ratio >15, or (b) E/e' ratio of 8–15 and left atrial volume index ≥34 mL/m².

RESULTS

Subclinical hypothyroidism was significantly associated with cardiac indices regarding LV diastolic dysfunction, and the risk of having LV diastolic dysfunction was also increased in participants with subclinical hypothyroidism (adjusted odds ratio [AOR] 1.36, 95% confidence interval [CI], 1.01–1.89) compared to euthyroid participants. The risk of having diastolic dysfunction was even greater in participants who had relatively severe hypothyroidism (thyroid stimulating hormone [TSH] ≥10.0 uIU/mL (AOR, 1.99; 95% CI: 1.07–5.00). Subclinical thyrotoxicosis was not associated with diastolic dysfunction. Among the thyroid hormones, only serum triiodothyronine (T3) was significantly and inversely associated with LV diastolic dysfunction even within the normal range.