

# CONCOMITANT GRAVES' DISEASE AND PRIMARY HYPERPARATHYROIDISM: CASE REPORT

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## Introduction:

Hyperthyroidism is associated with asymptomatic hypercalcemia due to increased calcium mobilization from bone and catecholamine metabolism (1). Hypercalcemia secondary to hyperthyroidism coexist with decreased or normal parathyroid hormone level (2). We reported case of 30-year old man who suffered from Graves' disease and primary hyperparathyroidism.

## Case report :

30-year-old male patient was admitted to our hospital suffered from palpitation, heat intolerance and sweating. He had blood pressure of 130/90 mmHg, heart rate of 102 beats/minute, and temperature of 36.6 C. He had warm and moist skin. Blood tests showed TSH < 0.03 µU/L (0,27 – 4,2), fT3 14.34 pg/ml (2 – 4,4) and fT4 3.91 pg/mL (1 – 1,7). Other results: anti-TPO 229 IU/mL (0 – 34), TRAbs 0,73 U/L (0 – 1,75), serum calcium 11.05 mg/dL, inorganic phosphorus 3,61 mg/dl, iPTH 85,9 pg/mL and 25-OH vitamin D<sub>3</sub> 31.8 ng/mL. The 24-hour collected urine showed creatinine clearance of 132 ml/min and calcium excretion of 428 mg/day. Other laboratory parameters were largely within normal ranges. Ultrasonography revealed enlarged thyroid gland with inhomogeneous pattern. Scintigraphy of the thyroid gland was consistent with Graves' disease (Figure 1). Scintigraphy of the parathyroid glands revealed parathyroid adenoma (Figure 2). Patient was treated with propylthiouracil 300 mg/day and propranolol 20 mg twice a day. Treatment successfully controlled sympathetic symptoms. When he became euthyroid, serum calcium and parathyroid hormone was still elevated. Subtotal thyroidectomy and parathyroidectomy was performed. The follow-up investigations showed normalization of serum calcium and parathyroid hormone.

## Conclusions:

Constant hypercalcemia after treatment of hyperthyroidism may indicate concomitant hyperparathyroidism if iPTH level is not reduced (3). It should be considered that; slightly or moderately elevated iPTH levels in hypercalcemia coexists with hyperthyroidism, may suggest hyperparathyroidism.

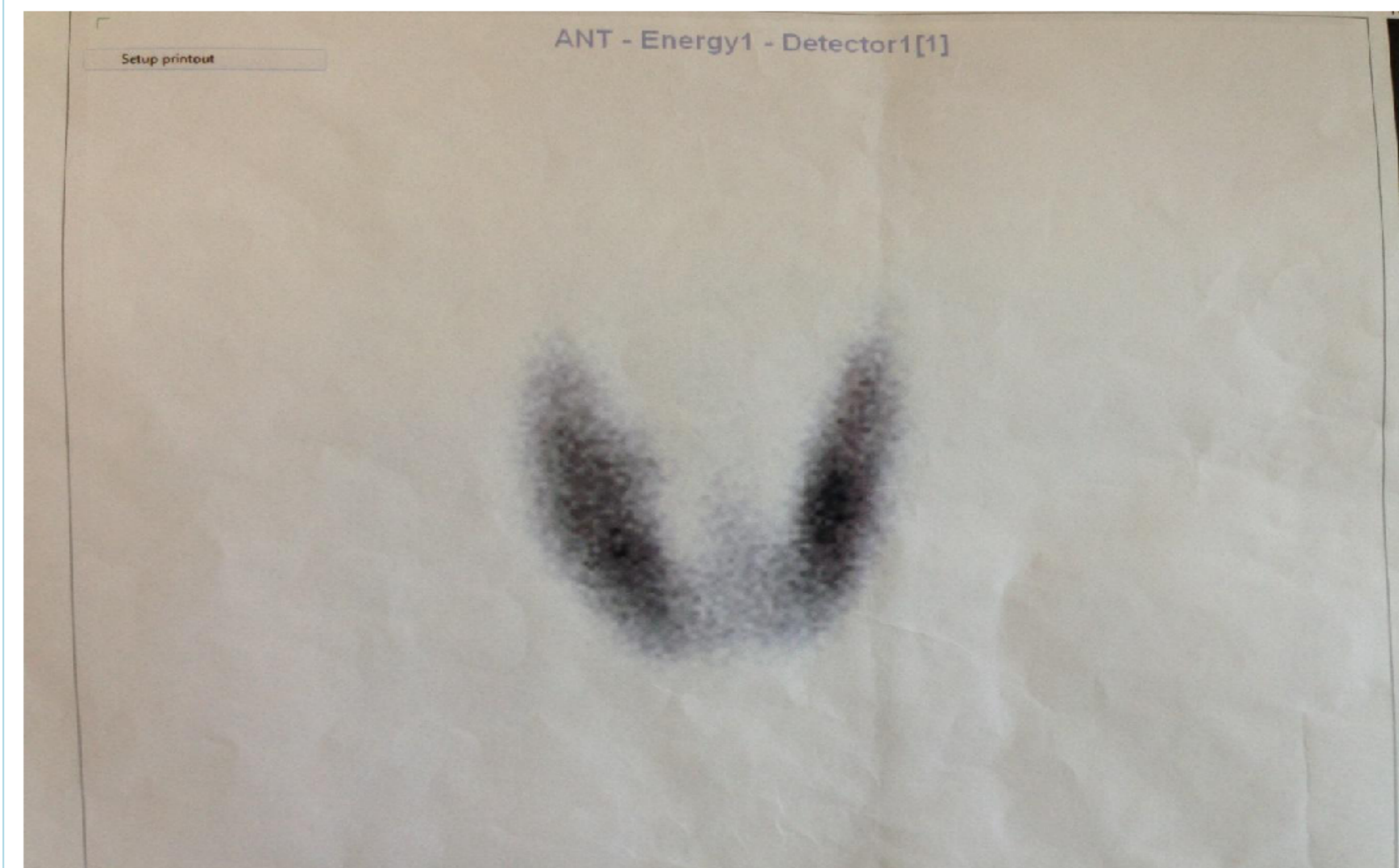


Fig 1. Hyperplastic thyroid gland diffusely increased homogeneous uptake is consistent with Graves' disease

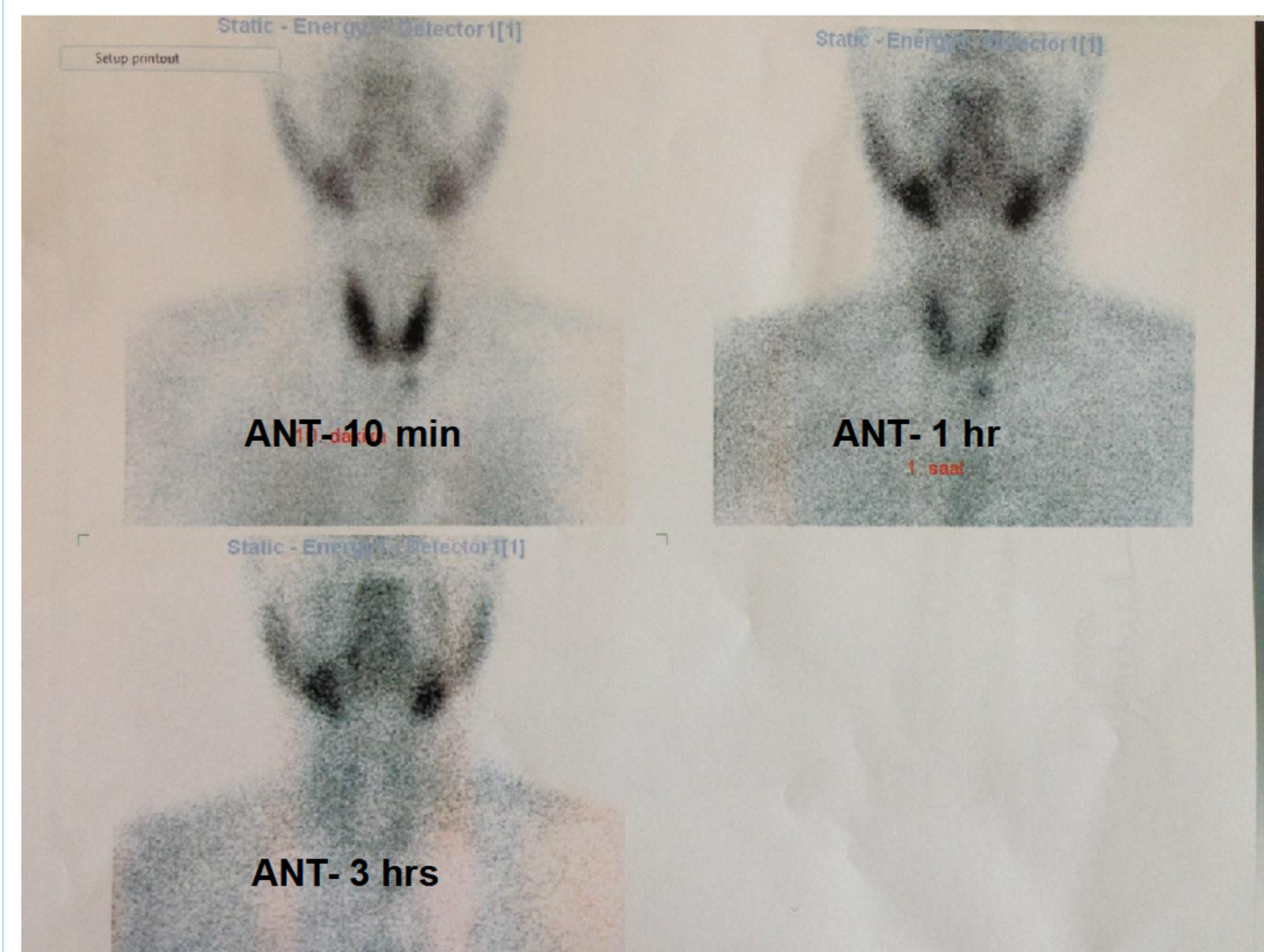


Fig 2. Left lower parathyroid lesion detected by 99mTc-MIBI scan.

Ultrasonography, scintigraphy and ultrasound guided fine needle biopsy of parathyroid gland lesions can be used for differential diagnosis (4). Avoiding from repeated operations and complications; the best treatment is combined resection of thyroid and parathyroid gland when concomitant parathyroid adenoma is determined (5).

## References

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