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DISCORDANT THYROID FUNCTION TESTS: RTH SYNDROME OR TSH-OMA?

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INTRODUCTION
Resistance to thyroid hormone (RTH) syndrome and TSH secreting pituitary adenomas are important causes of discordant thyroid function tests (TFTs). Differentiating the two clinical entities requires thorough clinical history taking with a combination of laboratory tests and radiological imaging. We present a young lady with discordant TFT who has RTH syndrome and also a pituitary microadenoma.

CASE
A 25-year-old lady with no prior medical illness who underwent routine laboratory tests was found to have raised thyroid stimulating hormone (TSH) with raised free thyroxine (FT4) and normal *triiodothyronine (FT3) levels*. This pattern remained the same with repeated TFTs, including those that were done at a separate laboratory using a different analyser. She was not taking any supplements or traditional medications and there was no known family history of thyroid illness. She remained clinically euthyroid with no apparent goitre. Anti-TPO and anti- thyroglobulin antibodies were positive and MRI brain revealed a pituitary microadenoma. A TRH stimulation test showed exaggerated TSH response suggestive of resistance to thyroid hormone (RTH) syndrome.

CONCLUSION
In a patient with raised FT4 and inappropriately normal or raised TSH, once assay interference has been ruled out, it is important to differentiate a TSH secreting pituitary adenoma from RTH syndrome. Although our patient had a pituitary microadenoma, her lack of symptoms and TRH stimulation test findings were suggestive of RTH syndrome. A theoretical probability of developing thyrotroph adenomas due to longstanding increase in thyrotroph activity has been suggested with one reported case so far.

KEY WORDS
discordant, thyroid function test, resistance to thyroid hormone (rth), tshoma

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THYROID CRISIS IN A YOUNG WOMAN WITH GESTATIONAL TROPHOBLASTIC DISEASE

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INTRODUCTION
Gestational trophoblastic diseases (GTD) include hydatidiform moles to highly malignant choriocarcinoma. Trophoblast produces human chorionic gonadotropin (hCG) which has the same structure as thyrotrophic hormone (TSH) and their receptors. The high level of hCG may induce secondary hyperthyroidism and thyroid crisis.

CASE
A 27-year-old pregnant woman with vaginal bleeding consulted at the Obstetric and Gynecology Department. She was tachypneic, tachycardic and febrile. She had history of hydatidiform moles twice. She denied having symptoms of hyperthyroidism before. Laboratory exams were leucocyte 18.700, TSH <0,01 μIU/mL, FT4 34,80 ng/dl, βhCG >1,125,000 mIU/mL. Burch Wartofsky score was highly suggestive of thyroid crisis. She was planned to be given prophyltiouracil and lugol, but these were not available. She got thiamazole 20 mg tid, propanolol 40 mg tid, hydrocortisone 100 mg i.v every 12 h, ceftriaxon 2 gram every 24 h. She immediately underwent curettage. Histopathology showed choriocarcinoma and she was planned to be given chemotherapy.

CONCLUSION
Thyroid storm is a rare endocrine emergency. One of the related conditions is GTD. Delays in diagnosis and misdiagnosis still contribute to morbidity and mortality.

KEY WORDS
geslational trophoblastic disease, choriocarcinoma, thyroid crisis