

CASE REPORT

Case reports –Hyperthyroidism treatment in two female patients

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Abstract

The thyroid gland is located in the front part of the larynx and is composed of two lobes. It secretes thyroid hormones T4 and T3, which had the main and most important role in the work of all organs in the body, as well as maintaining normal body temperature. Thyroid gland stimulation it receives from the hypothalamus, that is, from the thyroid-stimulating hormone. There are various disorders of the thyroid gland such as goiter, functional disorders (hyperfunction or hypofunction), inflammatory and tumorous diseases. In this article are presented two female patients aged 41 and 43 years, both diagnosed with hyperthyroidism. The first symptom in both patients was a sudden loss of body weight. after the analysis, the results showed that there are deviations in the thyroid hormones, that is, extremely high values of T4 hormone and extremely low values of TSH. After the diagnosis of the patients, they were treated with appropriate therapy given by an endocrinologist, i.e. both patients were treated with T. Thiamazole. With the recommended therapy, the condition of the patients began to stabilize and they reported feeling much better.

Keywords: Hyperthyroidism, thyroid hormones, treatment, female

Introduction

Hyperthyroidism or overactive thyroid gland is a condition that occurs due to producing increased amount of thyroid hormones - T3 and T4. Hyperthyroidism occurs less than the hypothyroidism. It is more common in young people on age from 20 to 40, more in women than men. The causes for hyperthyroidism are different and may be Graves' disease, thyrotoxicosis, toxic adenomas thyroiditis, and etc. How will the disease manifest depends on how much are increased the levels of the hormones and the body condition. [1]

Symptoms that occur in hyperthyroid patients are: nervousness, irritability, mood swings, and reduced concentration, a goiter, a swelling in the neck due to an enlarged thyroid gland, fatigue and difficulty sleeping, oversensitivity to heat, excessive sweating, and warm, damp skin, infertility and a loss of interest in sex, menstrual problems, especially lighter periods or absence of periods, a faster heartbeat, sudden weight loss and etc. [2]

The diagnosis of hyperthyroidism is based on the clinical picture, symptoms, and lab test. Doctors also will take medical history and perform physical exam. Diagnostic test include: T4, free T4, and T3 level test, thyroid-stimulating hormone (TSH) level test, thyroid scan, ultrasound of thyroid, CT or MRI scans. There are three options for treating patients with hyperthyroidism: antithyroid drugs (ATDs), radioactive iodine ablation, and surgery. The antithyroid thionamide drugs are propylthiouracil, carbimazole, and thiamazole. These drugs might also have immunosuppressive and anti-inflammatory effects. As a safe and cost-effective option, radioactive iodine therapy can be considered as the first-line treatment for Graves' disease, toxic adenoma, and toxic multinodular goiter. Thyroidectomy is recommended in patients with the following characteristics: large goitres or low uptake of radioactive iodine, moderate-to-severe ophthalmopathy, for which radioactive iodine therapy is contraindicated, and suspected or documented thyroid cancer. [3] [4]

Material

For the purposes of the research, data were taken on patients diagnosed with Hyperthyroidism from the Private Health Institution in Makedonska Kamenica, North Macedonia.

Case report 1

A 43-year-old patient, with previous body weight 90 kg, 2 years ago has lost 25 kg within 1 month without prior diet or increased physical activity. She was happy because she had been struggling with excess weight for a long time. But when her eyes got larger and started having problems with the eye vision, she got worried and asked for help from the family doctor. The first thing that was done was a set of laboratory and biochemical analyzes including TSH and T4 hormones. The analyzes showed that the T4 hormone was much higher than normal, i.e. 3.8 ng/ml (0.89-1.76) and her TSH hormone was much below normal ie 0.004 mg/UI (0.4-4). She was referred to an internist and from there to an endocrinologist, where she was prescribed appropriate therapy. The first therapy that was prescribed to her by an endocrinologist was T. Tiamazole 20 mcg twice a day for one month. After one month, when she was under control, the results showed TSH - 0.003 ml/UI and T4 - 3.7 ng/ml, after which the same therapy was continued. After one month, the dose was reduced, ie T. Thiamazole 30 mg a day for 3 weeks, then 20 mg. Within the next months the results were better and the therapy was reduced to 15 mg for 2 weeks, then 10 mg per day. After three months, the therapy was reduced to 5 mg per day. After other three months the results were T4 16.78 pmol/L and TSH – 0.817mlUL. For the exophthalmos, she was transferred to an ophthalmologist. No other family history data of hyperthyroidism was registered.

Case report 2

A 41-year-old patient, complaining of weight loss of about 9 kilograms in a short period of time. The whole situation was accompanied by hand tremors, heart palpitations, hair loss and fatigue. The patient was visibly upset and scared about her condition. The

patient underwent a period of stressful situation after losing a family member. After the previous analyzes in the both cases, the results showed that there were deviations in the thyroid hormones, that is, extremely high T4 6.72 (0.7-2 ,2) ng/ml values and extremely low TSH <0.10 (0.3-6.6) ml/UI values. Because of these values, the endocrinologist prescribed T. Thiamazole 20 mg 2x1 for 1 month, then 20 mg once a day. After 6 months the results were as follows: T4 19.45 ng/ml and TSH 0.004 ml/UI. The therapy was prolonged the same T. Thiamazole 20 mg once a day for another month, and then 15 mg per day. After 6 months, the results were T4 13.79 ng/ml and TSH 0.033 ml/UI, therefore she was prescribed to drink T. Thiamazole 10 mg in the morning and 5 mg in the evening.

Conclusion

Hyperthyroidism, also known as overactive thyroid, is a condition characterized by the excessive production and release of thyroid hormone. This hormonal imbalance causes an acceleration of metabolism. In these cases, it's shown that with the recommended therapy, the patient's condition begins to stabilize and the thyroid health gets in better shape.

References

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