

A CASE REPORT ON HASHIMOTO'S THYROIDITIS

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ABSTRACT:

The case report on evaluation of the treatment for Hashimoto's thyroiditis and the parameters that improved the patient health includes diagnostic evaluation, drug usage accountability, and effective manner to enhance the patient's health status, which is followed by proper use of drugs. Patient was diagnosed as transient hyperthyroidism can be caused by silent thyroiditis, it is not accompanied by a painful thyroid gland and this condition usually temporary and goes away with in eight to 12 weeks. Treatment focuses on medications to control any symptoms like palpitations, anxiety and tremors until the condition goes away on its own. It is also called as ***DE QUERVAIN THYROIDITIS*** and ***MIGRATORY THYROIDITIS***.

KEYWORDS:

Hashimoto's thyroiditis, Bethesda system, DSM – V, Transient hyperthyroidism.

INTRODUCTION

Hashimoto's disease is an autoimmune disorder that can cause hypothyroidism or an underactive thyroid, which is a rare side effect of hyperthyroidism or an overactive thyroid. The thyroid is a small butterfly-shaped gland at the front of the neck. As a result of the disease condition the immune system produces antibodies that target the thyroid gland, the thyroid gets damaged and is unable to produce enough thyroid hormones. Other names for Hashimoto's illness include *Autoimmune thyroiditis, chronic lymphocytic thyroiditis, and Hashimoto's thyroiditis* ^[1]. The risk factors for Hashimoto's disease includes as follows: Women are 4 to 10 times more likely than men to have Hashimoto's disease. Although the condition can affect teenagers or young women, it often strikes women between the ages of 30 and 50. There is an increased risk of Hashimoto's with familial history as well ^[2]. If there are any one or more other autoimmune diseases, such as Rheumatoid arthritis, Celiac disease, Sjögren's syndrome, Type 1 diabetes is more likely to develop Hashimoto's disease, and many people with Hashimoto's disease develop hypothyroidism ^[3]. If left untreated, hypothyroidism can lead to several health problems, including high cholesterol, Cardiovascular effects like heart disease, heart failure, and high blood pressure, and also *myxoedema* which is a rare condition in which the body's functions slow down to the point that they can threaten our lives ^[4].

During pregnancy with Hashimoto's illness, hypothyroidism is a common complication. Many sufferers of Hashimoto's illness first show no symptoms. Later on, in pregnancy will experience one or more of the hypothyroidism symptoms, as disease worsens several typical signs of hypothyroidism include, Fatigue, Constipation, Difficulty coping with the cold, joint, and muscular pain, Heavy or irregular menstrual cycles, Thin or dry hair, Issues with conception, Reduced heartbeat ^[5].

Thyroid levels are harmed by Hashimoto's disease. The majority of those who have Hashimoto's disease become hypothyroid. Thyroid destruction may cause the release of excessive amounts of thyroid hormone into the blood, resulting in hyperthyroidism symptoms. In Hashimoto's the thyroid can enlarge and make the front part of the neck region appear enlarged, known as Goitre ^[6]. The diagnosis begins with a physical examination which includes the examination neck for signs of goitre and a medical history. To diagnose hypothyroidism and determine its causes, one or more blood tests will be supportive. Tests for the thyroid hormones [T4 (thyroxine) and T3 (triiodothyronine), or TSH (thyroid stimulating hormone), and TPO (thyroid peroxidase antibodies), a form of thyroid antibody common in those with Hashimoto's disease, are a couple of examples ^[7].

CASE STUDY:

At his first appointment, A 32-year-old male patient who had been diagnosed with Hashimoto's thyroiditis eight months earlier presented with complaints of acute exhaustion, anxiety, and tremors. His thyroid antibodies were highly positive, his TSH was normal, and after using levothyroxine for two months, the patient stopped taking the medication, after symptomatic improvement. Again, the patient experienced the same complaints and severe tremors after which he was admitted to the hospital.

Clinical findings of the patient included complaints of weight loss approximately 10 kg in 3 months, Although the patient did not meet the DSM-V criteria for clinical depression, he was rated as having low mood, feelings of being easily overwhelmed, and low stress tolerance.

DIAGNOSTIC EVALUATION:

Patients' blood tests showed both T3 and T4 are normal and low **TSH** (thyroid stimulating hormone level) of 0.01 mIU/L (0.5 to 5.0). **TPO** antibody test that revealed thyroid peroxidase antibody presence with a value of 96.3 mIU/ml (<34.0). Ultrasound of neck: the thyroid gland-both the lobes and the isthmus exhibit diffuse heterogeneous echotexture and have moderately bulky sizes, findings suggestive of diffuse goitre or thyroiditis.

The biochemical panel of increased TSH levels with reduction in free T4 or total T4 levels along with increased levels of antibodies such as anti-thyroid peroxidase and anti-thyroglobulin suggests Hashimoto's thyroiditis with the hallmark of signs and symptoms such as tremors and weight loss.

In the early stage of Hashimoto's thyroiditis, mild and transitory hyperthyroidism may occur as a result of thyroid cells destruction and the release of thyroid hormones into blood circulation [12]. However, this patient developed symptoms of transitory hyperthyroidism due to the early stage of disease condition which is a symptom of transitory hyperthyroidism.

TREATMENT:

Not everyone who has Hashimoto's disease develops hypothyroidism. Healthcare professionals are unlikely to begin medication for those without clinical hypothyroidism but high antibody levels. Instead, the patient's thyroid levels are closely monitored and the therapy is tailored [8]. When hypothyroidism is brought on by Hashimoto's ailment, levothyroxine is the recommended medication. It is a synthetic (man-made) form of the thyroid hormone-produced hormone T4. The standard dose is 1.6 - 1.8 mcg/kg per day as per the patient needs it should be titrated. The patient has to take medications every day for the rest of their life [9]. The patient was recommended to be admitted to the hospital and was given a 10 mcg carbimazole tablet once a day and a continuation of Tab Inderal LA 40 mg (propranolol) for 5 days for the management of transitory hyperthyroidism symptoms. Upon treatment when the patient underwent a blood investigation, it indicated that the level of TSH was increased from 0.01 to 0.05 mIU/ml (normal value: 0.34–5.60 mL) and noted a decreasing level of thyroid peroxidase antibody from 61.8 lu/ml to 45.2 lu/ml (normal range less than 34.0 lu/ml)

Discussion:

Antibodies to thyroglobulin, the most abundant protein in the thyroid gland, are less sensitive (positive in only 60 to 80% of patients with HT) and less specific (positive in a greater proportion of healthy controls) than antithyroid peroxidase antibodies. Ultrasound of the neck has become the most used imaging tool in patients with thyroid diseases. In TH, the thyroid follicles are destroyed and replaced by small lymphocytes, causing the echogenicity of the thyroid parenchyma to decrease instantly. Fine needle aspiration is performed in patients in whom a thyroid nodule is detected. Although the recommendation of the *Bethesda System* is conservative management and most lesions are benign, in some cases, patients are referred to the surgeon, and thyroidectomy may be required. The treatment of primary hyperthyroidism consists of the daily oral administration of carbimazole. If the patient has a complaint of tremors and the presence of a thyroid peroxidase antibody in the blood, the initial therapy of propranolol (40mg) is used most widely, which offers prompt relief of the adrenergic symptoms of hyperthyroidism such as tremor, palpitations, heat intolerance, and nervousness. because of the significant tremors during the early phase of the treatment, the patient was admitted to the hospital. On day 1, the patient had symptoms of severe tremors that continued for 2 days, and on day 4, the patient had mild tremors. The evaluation study explained the clinical and diagnostic criteria of autoimmunity reviews for Hashimoto's thyroiditis. [10] This study was conducted on autoimmune thyroiditis, which revealed implications for other organ systems. [11]. Current therapy focused on the management of transitory hyperthyroid symptoms with propranolol and carbimazole, later which management with standard guidelines will be followed.

Conclusion

Hence the substitution of carbimazole in the patient displayed a remission of the symptoms in addition to a considerable rise in serum TSH levels and a decrease in antibodies. Since there was no calcification or other indication for a thyroid biopsy, the ultrasound of the neck revealed increased vascularity, but more follow-up is necessary to conduct more analyses. The significance of this case rests in the fact that HT is the most prevalent thyroid illness in this age range, allowing to understand the clinical presentation of HT in the adult population.

ABBREVIATIONS:

- (1) TSH - THYROID STIMULATING HORMONE.
- (2) DSM-V – DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS.
- (3) TH – THYROID HORMONE.
- (4) HT – HASHIMOTOS THYROIDITIS.
- (5) TPO – THYROID PEROXIDASE.

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