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Extended English Abstract

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EVALUATION DEPRESSIVE SYMPTOMS IN PATIENTS WITH EUTHYROID HASHIMOTO'S THYROIDITIS AND PATIENTS WITH SUBCLINICAL HYPOTHYROIDISM

Özge Telci Çaklılı[1*]

[1]Kocaeli State Hospital, Internal Medicine Clinic, Kocaeli, Turkey

ORCID iD: Özge Telci Çaklılı: 0000-0001-7566-5427

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Correspondence
Özge Telci Çaklılı

Kocaeli State Hospital, Internal Medicine Clinic, Kocaeli, Turkey

e-mail
wattersonx@gmail.com

Abstract

Objective: Hypothyroidism is a common endocrine disorder in general population. This study aims to compare depressive symptoms of patients with euthyroid Hashimoto hypothyroidism, patients with new onset subclinical hypothyroidism and healthy controls.

Methods: Study was conducted at Kocaeli State Hospital Internal Medicine Clinic between 2017-2019. Patients who were treated for hypothyroidism at Kocaeli State Hospital Internal Medicine Clinic were screened and eligible patients were divided into two groups: Patients with euthyroid Hashimoto thyroiditis and patients with subclinical hypothyroidism. Beck depression inventory was applied to the groups. Also, a control group was generated and applied the same inventory.

Results: Forty-three patients and 31 healthy controls were recruited; 32 had euthyroid Hashimoto thyroiditis whereas 11 had subclinical hypothyroidism. Mean thyroid stimulating hormone (TSH) level of patients was 2.3±0.9 mU/L and 8.2±2.7 mU/L, respectively. Mean Beck depression inventory score of the patients was 14.1±8.9. Mean score of the control group was 6.4±5.2. Although there was no difference between scores of controls and subclinical hypothyroid patients, there was statistically significant difference between controls and euthyroid patients (p<0.01). There was no statistically significant difference between subclinical hypothyroid patients and euthyroid patients. Fifteen patients had score ≥17. Thirty four percent of the euthyroid patients (n=11) and 36% of subclinical hypothyroid patients (n=4) had moderate and high depressive symptoms.

Conclusion: Depression is not uncommon in patients with hypothyroidism. It should be investigated when necessary.

Keywords: *Hashimoto thyroiditis, subclinical hypothyroidism, depression*

Introduction

Hypothyroidism is a common endocrine disorder in general population.[1] There are two subtypes; overt and subclinical. Along with somatic symptoms, psychological findings are also prominent in both types. Even in euthyroid Hashimoto disease patients depression is reported.[2]

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Objective

This study aims to compare depressive symptoms of patients with euthyroid Hashimoto hypothyroidism, patients with new onset subclinical hypothyroidism and healthy controls.

Methods

Study was conducted at Kocaeli State Hospital Internal Medicine Clinic between 2017-2019. Patients who were treated for hypothyroidism at Kocaeli State Hospital Internal Medicine Clinic were screened and eligible patients were divided into two groups: patients with euthyroid Hashimoto hypothyroidism and patients with new onset subclinical hypothyroidism. Beck depression inventory was applied to the groups.[3] Also, a control group was generated and applied the same inventory.

Results

Forty-three patients and 31 healthy controls were recruited; 32 had euthyroid Hashimoto hypothyroidism whereas 11 had subclinical hypothyroidism. Mean thyroid stimulating hormone (TSH) level of patients was 2.3±0.9 mU/L and 8.2±2.7 mU/L, respectively. Mean Beck depression inventory score of the patients was 14.1±8.9. Mean score of the control group was 6.4±5.2. Although there was no difference between scores of controls and subclinical hypothyroid patients, there was statistically significant difference between controls and euthyroid patients (p<0.01). There was no statistically significant difference between subclinical hypothyroid patients and euthyroid patients. Fifteen patients had score ≥ 17. Thirty four percent of the euthyroid patients (n=11) and 36% of subclinical hypothyroid patients (n=4) had moderate and high depressive symptoms. Among patients with moderate and severe depressive symptoms 36.4% (n=4) were high school graduates, 27.3% (n=3) were middle school graduates and 27.3% (n=3) were elementary school graduates and 9.1% (n=1) were college graduates. Fifty percent of patients (n=2) with subclinical hypothyroidism and moderate and severe depressive symptoms were illiterate and 50% (n=2) were elementary school graduates. Most of the participants from control group were high school or college graduates.

Discussion

This study aimed to evaluate depressive symptoms in patients with hypothyroidism. It is found that in 34% of patients with euthyroid hypothyroidism and in 36% of patients with subclinic hypothyroidism moderate and severe depressive symptoms were present. In a meta-analysis by Siegmann et al., depression and anxiety disorders were investigated.[4] This analysis has included 27 studies an among these studies 37% used Beck Depression Scale. Analysis shows that depression risk is 3.3-fold higher in patients with autoimmune thyroiditis than healthy controls.
The relation between psychological diseases and thyroid disorders is not one directional. In patients with bipolar disorder high TSH levels and low free T4 levels were observed.[5] A review by Jackson et al. has proposed four mechanisms for this relation; (1) disturbance in TRH response to TSH, (2) increase in T4 levels (most common) (3) presence of autoimmune thyroiditis (4) impairment in TSH augmentation due to disturbances in circadian rhythm.[6] Due to all of these causes the relation between depression and thyroiditis is more complex than anticipated. Patents with hypothyroidism are more susceptible to depressive disorders than normal population.

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