

Depression in Patients with Hypothyroidism: Etiological Analysis

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Abstract

Introduction: depressive illnesses are often associated with chronic diseases and hypothyroidism is considered as a leading cause. **Material and Methods:** in this survey we investigated various causes of hypothyroidism and how they are resulted in depression amidst patients by using Beck's Depression Inventory scoring system. **Results:** most of the causes of hypothyroidism are associated with depression at different scales and Hashimotos thyroiditis cause depression in half of the patients investigated with a range from mild to severe depression. **Discussion and Conclusion:** Hashimotos thyroiditis cause depression mainly through an autoimmune mechanism. Doses of levothyroxin need to be adjusted according to patient's mental evaluation. Assessment of depressive status of the patient is crucial for the treatment plan.

Keywords: hypothyroidism, Becks depression Inventory, Hashimotos thyroiditis, Depression.

INTRODUCTION

The relationship between hypothyroidism and depression has been confirmed in many studies. This can be due to the influence of hypothalamus-pituitary-thyroid axis. Moreover, the elevation of thyroid stimulating hormone (TSH), antithyroglobulin (TgAb) and thyroid peroxidase antibodies (TPOAb) levels have been shown to be directly correlated to increased rates of depression and even suicide (1), especially in undiagnosed, untreated and undertreated population. In this study, we are investigating rates of depression in patients with hypothyroidism including different subtypes, treated at the Specialized Center for Endocrinology and Diabetes in Baghdad.

MATERIALS AND METHODS

Patients were assessed for depression using Beck's Depression Inventory scoring system, falling into three categories (mild, moderate and severe), and were analyzed according to their primary etiology of hypothyroidism.

RESULTS

72 patients participated in the survey, of which 9 (6.48%) were males and 63 (93.52%) were females. Median age was 46. Hashimoto's thyroiditis was responsible for 50% of depression cases included in this study. Hypothyroidism induced post thyroidectomy surgery accounted for 30.05% of depression cases. On the other hand, depression in patients who had primary hypothyroidism of iodine deficiency and hypothyroidism from radioactive Iodine I-131 ablation were at rates as low as 11.2% and 5.5% respectively (figure 1). The largest proportion, 52%; of hypothyroid patients have found to have moderate depression. Whilst 19% of population were afflicted by mild depression, and 22% were considered to be on borderline according to Beck's Inventory. Whereas those patients who were severely depressed has a percentage of 7%. In terms of hypothyroidism subtypes associated with depression, Chronic Hashimoto's thyroiditis was responsible for almost half of the depression rates, 50%. Post thyroidectomy accounted for 30.05%. Primary hypothyroidism due to iodine deficiency along with radio active Iodine I-131 caused depression in 11.2% and 5.5% respectively.

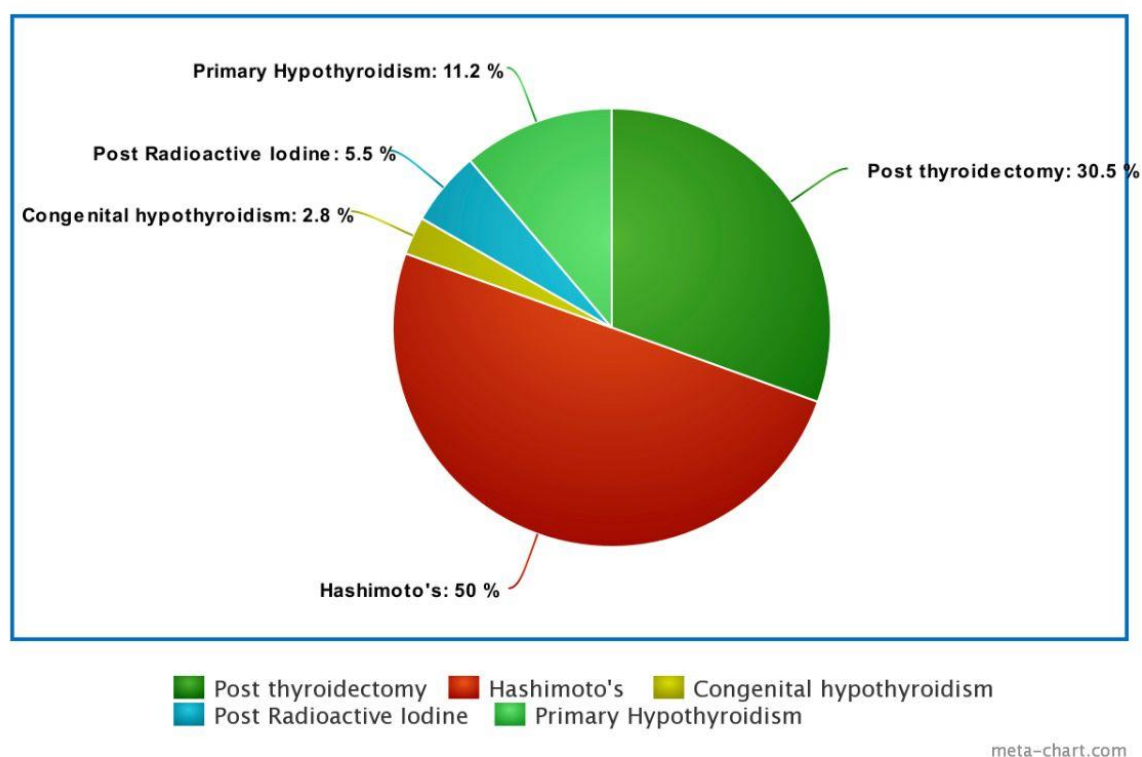


Figure 1: different causes of hypothyroidism and depression rates for each etiology. N= 72

DISCUSSION AND CONCLUSION

Among all different etiological factors of hypothyroidism associated with depression, Hashimoto's thyroiditis accounted for exactly half of the cases taken in this study. The autoimmune nature of the disease and the potential damage of normal cells by high levels of circulating antibodies might explain the results (2). The main psychologic effects of being hypothyroid are psychomotor retardation, anxiety, sleep disturbance and hence low mood. These findings implicate that patients diagnosed with different subtypes of hypothyroidism should have treatment plans based on their mental and psychological evaluation (3).

Furthermore, studies are recommended to determine the effect on levothyroxine dosages on patients suffering from depression.

References:

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