

## Short Communication

# The level of anti-thyroperoxidase antibodies in chronic urticaria patients

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### Abstract

**Background.** Chronic urticaria is a skin disorder characterized by swollen pruritic plaques and papules last long at least for 6-weeks. The aim of this study was to determine the anti-TPO level in patients diagnosed with chronic urticaria, resistant to conventional treatments in order to test the possibility of thyroid hormone replacement with the aim of accelerating healing process.

**Methods.** In this case-control study, 63 patients with chronic urticarial and 63 controls without chronic urticarial were studied by anti-TPO measurement. Anti-TPO level upper than 40 IU/ has been recognized as positive.

**Results.** The prevalence of chronic urticaria among the case group was 3.5 times higher in women rather than men. Mean time of disease period was about  $21.40 \pm 3.75$  months. In this study, there was been no statistically significant association between age, sex, TSH level and anti-TPO concentration in both groups.

**Conclusion.** Anti-TPO level in patients with chronic urticaria was not significantly different from the control group. However, Anti-TPO levels were significantly higher in patients with longer duration of disease.

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## Extended Abstract

### Background

The level of Anti-thyroperoxidase antibody in chronic urticarial patients Chronic urticaria is a skin disorder characterized by swollen pruritic plaques and papules last long at least for 6-weeks. It is a self-limited disorder in most patients, with an average duration of disease of two to five years, although active CSU significantly impairs quality of life. CSU has some frequent comorbidities like autoimmune diseases, drug reactions and inducible urticaria. The etiopathogenesis of the disease is still unclear, but there is evidence that autoimmunity and endocrine dysfunction may be involved. An increase prevalence of autoimmune diseases was observed In subjects with CU. Thyroid autoimmune thyroiditis and Hashimoto's thyroiditis were described among patients with CU, and increased serum levels of antithyroid antibodies were reported with frequency ranging between 12-29% in different studies. The aim of this study is to determine the anti TPO level in patients diagnosed with chronic urticaria, resistant to conventional treatments in order to test the possibility of thyroid hormone replacement with the aim of accelerating healing process.

### Method

In this case-control study we measured the level of Anti-TPO antibodies in 63 patients with chronic urticarial and 63 healthy controls in Sina Hospital's laboratory (we consider Anti-TPO level >40 Iu/ml as positive finding). Inclusion criteria were: the age

between 15-65, having urticarial episodes at least for 6 weeks and resistant to conventional treatments. We exclude the patients with known thyroid dysfunctions. We measured TSH level in control group as well to be sure of thyroid normal function in controls. At the end we compare two groups by student's t-test

### Results

In the control group, 63 patients with chronic urticaria and 63 patients with other diseases referred to a dermatology. Both of these groups were tested and analyzed. The prevalence of chronic urticaria among the case group was 3.5 times higher in women rather than men. . The mean age of patients with urticaria was about  $40.52 \pm 15.12$  years. Mean Time of disease period was about  $21.40 \pm 3.75$  months. The duration of the disease in patients with chronic urticaria, with a median of 8 months and a mode of 12 months, had a minimum of 1.5 months and a maximum of 144 months. The duration of the disease varied from 6 weeks to 12 years. In this study, there has been no statistically significant association between age, Sex, TSH level and anti TPO concentration in both groups.

### Conclusion

According to high prevalence of chronic urticaria in general population (0/5-5%) and poor response to conventional therapies, we need for searching new modalities. As mentioned by our findings, the anti TPO antibody level didn't differ between two groups but interestingly the level of antibody

was significantly higher in patients with more chronic disease. So maybe treatment with low

dose levothyroxine can be an effective modality in longstandig chronic urticaria.



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