



# DECREASE THYROID HORMONES NEEDS AFTER INTRODUCTION OF OMALIZUMAB IN PATIENTS WITH CHRONIC SPONTANEOUS URTICARIA AND NON AUTO-IMMUNE HYPOTHYROIDISM

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## INTRODUCTION

Chronic spontaneous urticaria (CSU) can be associated with thyroid diseases, mostly auto immune in 4.3-57.4% of cases. We report here two patients with CSU and non-autoimmune thyroid diseases, for which introduction of omalizumab lead to a decrease need of thyroid hormones.

## CASE REPORT 1

- 53 years old woman
- history of hypertension and subtotal-thyroidectomy for thyroid nodule, no anti thyroperoxydase (TPO) antibody
- CSU resistant to H1 second-generation antihistamine (up to 3 /d), montelukast and methotrexate
- Treated with levothyroxine 175µg alternating with 150µg every other day, for a long time with stable level of TSH
- Omalizumab (300 mg/4 weeks) enabled a good control of CSU (Urticaria Control Test (UCT): 14/16).
- A few months after its introduction, despite a stable weight and the absence of introduction of any treatment able to interact with levothyroxine, the dosage of TSH was very low, and the posology of levothyroxine decreased to 125µg/d.

## CASE REPORT 2

- 49 years old woman
- history of Biermer disease and hypothyroism post subacute thyroiditis (no anti TPO antibody)
- CSU resistant to H1 second-generation antihistamine (up to 4/d) and montelukast.
- Treated with levothyroxine 100µg a day and liothyronin 0.025 mg a day, for a long time with stable level of TSH.
- Omalizumab (300 mg/ 4 weeks 2 months, then 300 mg/2 weeks) enabled a good control of CSU (UCT: 15/16).
- A few months after its introduction, despite a stable weight and the absence of introduction of any treatment able to interact with levothyroxine, the dosage of TSH was very low, and the posology of levothyroxine decreased to 75µg/d.

## OMALIZUMAB

- IgE monoclonal antibody licensed for CSU unresponsive to H1 second-generation antihistamine.
- Not known to interact with production, transport, metabolism or activity of iodothyronines.

In the absence of auto-immune thyroid disease for our two patients, we cannot hypothesize an action of omalizumab on anti-thyroid antibodies to explain the decrease need of thyroid hormones. So, we can imagine two hypotheses; the first is that omalizumab interferes with a step of the thyrotropic axis, the second is that control of CSU promotes thyroid hormone production

## CONCLUSION

We recommend to closely managing TSH after introduction of omalizumab in patients with any thyroid disease.