



## GRAVES' DISEASE

# Rituximab is better than corticosteroids for active Graves' orbitopathy

### BACKGROUND

Graves' orbitopathy (GO) occurs in about 1/4th of patients with Graves' disease and is a significant problem in about 5% to 10% of these patients. Glucocorticoids are general antiinflammatory and immunosuppressive drugs that are commonly used for the treatment of many autoimmune diseases associated with inflammation but have many side effects. Glucocorticoids are the principal medical therapy for active moderate-to-severe GO but are not very effective in many patients. Rituximab is a selective immunosuppressive drug that is administered intravenously (IV) and which is directed against B lymphocytes (cells of the immune system) and has been reported to be effective in the treatment of GO. The current study is a clinical trial of rituximab (RTX) versus the glucocorticoid drug methylprednisolone (MP) in patients with moderate-to-severe GO.

### THE FULL ARTICLE TITLE

Salvi M et al. Efficacy of B-cell targeted therapy with rituximab in patients with active moderate to severe Graves' orbitopathy: a randomized controlled study. *J Clin Endocrinol Metab* 2015;100(2):422-31. Epub December 15, 2014.

### SUMMARY OF THE STUDY

The study included patients with Graves' disease who were affected by active GO based on a clinical activity score (CAS) of 4 or greater. The study was designed to include 60 patients but was stopped after 32 patients were treated (16 in each group). Patients in the RTX group received a single 500-mg IV infusion while patients in the MP group received 830 mg of MP IV weekly for 6 weeks followed by 415 mg weekly for another 6 weeks. The primary end

point was a decrease in the CAS by 2 or more points.

The 32 patients included 26 women and 6 men; 19 were smokers. The duration of GO had been 4.5 months for patients in each group. Impressive decreases in CAS were similar in the two groups up to 12 weeks; after that, the CAS continued to improve with RTX but plateaued with MP, and the differences between the scores was significant at 16, 20, and 24 weeks, favoring RTX. A total of 5 of 16 patients in the MP group had reactivation of GO within 1 year, but none of the patients in the RTX group had reactivation. Ten patients in the MP group and 3 in the RTX group underwent a surgical procedure for GO. Based on the GO quality-of-life scale, RTX caused much greater improvement in quality-of-life than did MP. Adverse reactions occurred in 10 of 16 patients in the MP group, mainly high blood sugars and liver-function abnormalities. Adverse events occurred in 13 of 15 patients in the RTX group, mainly reactions of throat itching and nasal stuffiness during the IV infusion.

### WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Treatment with rituximab results in a better therapeutic outcome for active moderate-to-severe Graves' orbitopathy than treatment with methylprednisolone with much fewer significant side effects. This is a great new drug to use in the unfortunate patient with Graves' disease and severe eye disease.

— Alan P. Farwell, MD, FACE

### ATA THYROID BROCHURE LINKS

Graves' disease: <http://www.thyroid.org/what-is-graves-disease>

### ABBREVIATIONS & DEFINITIONS

**Graves' disease:** the most common cause of hyperthyroidism in the United States. It is caused by antibodies that attack the thyroid and turn it on.

**Graves orbitopathy (GO):** also known as Thyroid eye disease. GO is most often seen in patients with

Graves' disease but also can be seen with Hashimoto's thyroiditis. GO includes inflammation of the eyes, eye muscles and the surrounding tissues. Symptoms include dry eyes, red eyes, bulging of the eyes and double vision.



## GRAVES' DISEASE, continued

**Rituximab:** a selective immunosuppressive drug that is administered intravenously and which is directed against B lymphocytes (cells of the immune system)

**Steroids/Glucocorticoids:** general antiinflammatory and immunosuppressive drugs that are commonly used for the treatment of many autoimmune diseases associated with inflammation

**CAS:** Clinical Activity Score, a scoring system used to evaluate patients with Graves' ophthalmopathy, and is based on classical signs of inflammation (pain, redness, swelling and function) and that helps predict which patients will benefit from immunosuppressive treatment

## Thyroid Awareness Monthly Campaigns

The ATA will be highlighting a distinct thyroid disorder each month and a portion of the sales for Bravelets™ will be donated to the ATA. The month of September is **Thyroid Cancer Awareness Month** and a bracelet is available through the [ATA Marketplace](#) to support thyroid cancer awareness and education related to thyroid disease.

