



GRAVES' DISEASE

Selenium improves mild Graves' eye disease

BACKGROUND

Graves' disease is the most common cause of hyperthyroidism in the United States. Thyroid eye disease (TED) also known as Graves' ophthalmopathy, occurs in some form in up to 50% of patients with hyperthyroidism from Graves' disease. TED is mild in the majority of patients and may improve on its own. In approximately 15% of patients, however, TED is progressive and can be very severe. Progressive TED is very difficult to treat. Two medications have been reported to have some effect on the course of TED: pentoxifylline, which causes dilation of blood vessels, and selenium, a mineral found naturally in various foods that is important for making thyroid hormones and for normal thyroid function. The current study evaluated the effect of these two medications in the treatment of mild TED.

THE FULL ARTICLE TITLE:

Marcocci C, et al. Selenium and the Course of Mild Graves' Orbitopathy. *N Engl J Med* 2011;364:1920-31.

SUMMARY OF THE STUDY

A total of 159 patients with mild TED were given selenium (100 mcg twice daily), pentoxifylline (600 mcg twice daily) or placebo (twice daily) orally for 6 months. They were then followed for an additional six months after treatment was withdrawn. Patients were evaluated at baseline, 3, 6 and 12 months by an ophthalmologist who

determined a clinical activity score that evaluated seven items. They also completed a quality of life questionnaire. The overall outcome at 6 months was significantly better in the group receiving selenium compared to both the placebo group and those receiving pentoxifylline. TED improved in 61% of patients receiving selenium compared with an improvement in 35% of patients receiving pentoxifylline and 36% receiving placebo. TED worsened in 7% receiving selenium, 10% receiving pentoxifylline and 26% receiving placebo. The beneficial effect of selenium persisted for 6 months after treatment was withdrawn, and no adverse effects were noted in patients taking selenium.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The present study provides significant evidence that the use of selenium, an inexpensive and easy to administer medication, provides some degree of protection for those patients with mild TED. Its use should be strongly considered in this group of patients.

— Frank Cranz, MD

ATA THYROID BROCHURE LINKS

Graves' disease: <http://thyroid.org/patients/patient-brochures/graves.html>

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.

Thyroid eye disease (TED): also known as Graves ophthalmopathy. TED is most often seen in patients with Graves' disease, but also can be seen with

Hashimoto's thyroiditis. TED includes inflammation of the eyes, eye muscles and the surrounding tissues. Symptoms include dry eyes, red eyes, bulging of the eyes and double vision.

Selenium: a mineral found naturally in various foods that is important for making thyroid hormones and for normal thyroid function. It is needed in small amounts by the body.