



GRAVES' DISEASE IN PREGNANCY

WHAT IS THE STUDY ABOUT?

Pregnant women with Graves' disease in remission after antithyroid drug therapy are at high risk of developing recurrent hyperthyroidism during the postpartum period

THE FULL ARTICLE TITLE: Rotondi M, Cappelli C, Piralì B, Pirola I, Magri F, Fonte R, Castellano M, Rosei EA, Chiovato L. The effect of pregnancy on subsequent relapse from Graves' disease after a successful course of antithyroid drug therapy. *J Clin Endocrinol Metab* 2008;93:3985-8.
<http://www.ncbi.nlm.nih.gov/pubmed/18483014?dopt=Citation>

WHAT WAS THE AIM OF THE STUDY?

This study was done to evaluate the effect of pregnancy and the postpartum (PP) period upon the clinical relapse of hyperthyroidism in patients with Graves' disease who are in remission after antithyroid drug treatment (ATD).

WHO WAS STUDIED?

In all, 150 females with Graves' disease were studied. All had completed a full course of at least 12 months of methimazole (MMI) therapy with restoration of euthyroidism lasting for at least 6 months after withdrawal of ATD.

HOW WAS THE STUDY DONE?

To evaluate the role of pregnancy and the PP period, patients were divided into two groups: those in group I did not become pregnant after stopping MMI, and patients in group II had at least one successful pregnancy after stopping MMI.

WHAT WERE THE RESULTS OF THE STUDY?

There was a significantly lower relapse rate in group I (56%) than in group II patients (84%, $P < 0.05$). Further analysis found that the time to relapse after MMI was significantly shorter in Group I than in Group II ($P < 0.0001$), indicating that only the number of pregnancies after ATD withdrawal was significantly related to the occurrence of relapsing hyperthyroidism. To discriminate the role of pregnancy and the PP period, the timing of the relapse was further evaluated in the patients in group II. During gestation, none of the patients in group II had a relapse of hyperthyroidism; however, 20 of 21 patients (95.2%), had a relapse during the PP period, between 4 and 8 months after delivery, whereas only 1 of 21 women (4.8%) had a relapse of hyperthyroidism after the PP period (24 months after delivery). Pregnancy was recorded after MMII withdrawal in only 4 of 59 patients (6.8%) who remained in remission throughout the study period. The overall relapse rate of hyperthyroidism after ATD treatment was 60.1%. The relative risk for relapsing Graves' disease after ATD was only

significantly higher in pregnancies after ATD withdrawal and was not related to a positive family history of autoimmune thyroid disease, duration of MMI treatment or the number of pregnancies at diagnosis of Graves' disease.

HOW DOES THIS COMPARE WITH OTHER STUDIES?

Other studies also find that the relapses of Graves' hyperthyroidism generally occur during the PP period.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Pregnant women with Graves' disease in remission after antithyroid drug therapy are at high risk of developing recurrent hyperthyroidism during the postpartum period.

ABBREVIATIONS & DEFINITIONS

Methimazole is an anti-thyroid drug that is used to treat hyperthyroidism (an over-active thyroid gland) which is generally not used in pregnancy because of certain rare complications in the fetus.

Propylthiouracil is another type of antithyroid drug that usually is preferred for treatment of Graves' hyperthyroidism during pregnancy.

Graves' disease is an autoimmune thyroid disease with several manifestations, including hyperthyroid goiter, eye and skin involvement and other manifestations. It is self-limited and can be treated with antithyroid drugs, radioiodine, or surgery.

The **National Graves' Disease Foundation** can be reached at the following:
<http://www.ngdf.org/>

For further definitions see the following:
http://en.wikipedia.org/wiki/Graves-Basedow_disease

T₃ is triiodothyronine, the most powerful form of thyroid hormone, accounting for most of the immediate activity of this hormone.

T₄ is levothyroxine, the second main form of thyroid hormone, much of which is transformed to T₃ by enzymes situated in various organs.

Euthyroid is normal thyroid function.