



HYPOTHYROIDISM AND PREGNANCY

Treatment of subclinical hypothyroidism is beneficial in women undergoing in-vitro fertilization treatment

BACKGROUND

Subclinical hypothyroidism, where there is an increase in serum TSH but normal thyroid hormone levels, is common. However, since many patients with subclinical hypothyroidism do not have any symptoms, it is controversial who should be offered treatment. Pregnant women with hypothyroidism, either subclinical or overt hypothyroidism, are at increased risk of miscarriages and premature deliveries. This is true whether the pregnancy occurs naturally or as a result of in-vitro fertilization. Some studies have shown that treatment of subclinical hypothyroidism during pregnancy helps decrease the risk of miscarriage. The goal of this study was to determine if levothyroxine treatment of infertile women with subclinical hypothyroidism before undergoing in-vitro fertilization would decrease the risk of miscarriage.

THE FULL ARTICLE TITLE:

Kim C-H et al. Effect of levothyroxine treatment on in vitro fertilization and pregnancy outcome in infertile women with subclinical hypothyroidism undergoing in vitro fertilization/intracytoplasmic sperm injection. *Fertil Steril* 2011; 95:1650-4. Epub December 30, 2010.

SUMMARY OF THE STUDY

A total of 64 infertile patients with subclinical hypothyroidism participated in this study from Seoul,

South Korea. Patients were randomly assigned to receive either levothyroxine or no treatment prior to starting the in-vitro fertilization process.

There was no significant difference in the clinical pregnancy rate between the two groups. However, the miscarriage rate was significantly lower in the levothyroxine treatment group than in the group that was not treated.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study confirms prior studies that found that levothyroxine treatment can decrease the miscarriage rate in women with subclinical hypothyroidism. This is true regardless of how the pregnancy was achieved. In general, all women with subclinical hypothyroidism who are considering pregnancy or who are found to be pregnant should be treated with levothyroxine for the duration of the pregnancy.

— Alan P. Farwell, MD

ATA THYROID BROCHURE LINKS

Thyroid and Pregnancy: http://thyroid.org/patients/patient_brochures/pregnancy.html

Hypothyroidism: http://thyroid.org/patients/patient_brochures/hypothyroidism.html

ABBREVIATIONS & DEFINITIONS

In-vitro fertilization: a procedure when an egg is fertilized outside of the body and then implanted in a woman to achieve a pregnancy.

Hypothyroidism: a condition where the thyroid gland is underactive and doesn't produce enough thyroid hormone. Treatment requires taking thyroid hormone pills.

Subclinical Hypothyroidism: a mild form of hypothyroidism where the only abnormal hormone level is an increased TSH. There is controversy as to whether this should be treated or not.

Overt Hypothyroidism: clear hypothyroidism an

increased TSH and a decreased T₄ level. All patients with overt hypothyroidism are usually treated with thyroid hormone pills.

Miscarriage: this occurs when a baby dies in the first few months of a pregnancy, usually before 22 weeks of pregnancy.

Levothyroxine: the major hormone produced by the thyroid gland and available in pill form as Levoxyl™, Synthroid™, Levotheroid™ and generic preparations.

TSH: Thyroid Stimulating Hormone — produced by the pituitary gland that regulates thyroid function; also the best screening test to determine if the thyroid is functioning normally.