



THYROID AND PREGNANCY

Pregnancy is safe when it occurs at least 6 months after radioactive iodine treatment for thyroid cancer

BACKGROUND

In some cases of thyroid cancer, radioactive iodine therapy is needed after surgery to remove thyroid gland. Currently, the American Thyroid Association recommends women to wait at least 6 months to become pregnant after radioactive iodine therapy. This study was done to evaluate risk of abortion, premature birth, and birth defect after radioactive iodine therapy for thyroid cancer.

THE FULL ARTICLE TITLE

Kim HO et al. 2019 Association Between Pregnancy Outcomes and Radioactive Iodine Treatment After Thyroidectomy Among Women With Thyroid Cancer. *JAMA Int Med*. Epub 2019 Oct 21. PMID: 31633736

SUMMARY OF THE STUDY

A total of 111,459 women between 20-49 years of age, who had a thyroidectomy for thyroid cancer in South Korea between January 2008 and December 2015 were identified from an insurance database. Among these, 51,976 women (radioactive iodine therapy group) had radioactive iodine therapy treatment and 59,483 women (surgery group) did not. Pregnancy outcomes studied included abortion (both miscarriage and induced), premature birth, and birth defects.

The average age at thyroidectomy or radioactive iodine therapy was 39.8 years in the whole group. A total of 10,842 (9.7%) women became pregnant after treatment (9.4% in the radioactive iodine therapy and 10% in the surgery group). These women were generally younger than the whole group (mean age 31.2 years for the radioactive iodine therapy group and 31.5 years for the surgery group at treatment). The time from treatment to pregnancy was longer in the radioactive iodine therapy group (22 months) compared to the surgery group (25.3 months). The pregnancy rate was lower within the first 12 months after treatment in the radioactive iodine therapy group compared to the surgery group (0.7% vs 2.0% at 0-5 months and 1.4% vs 1.9% at 6-11 months after treatment). There was no significant differences in the rates of abortion, premature birth, or birth defects between the radioactive iodine therapy and surgery groups.

In the radioactive iodine therapy group, there was an about 4 times higher risk of abortion if a woman became pregnant before 6 months after treatment compared to 12-23 months after treatment. Women's age over 35 years at pregnancy was also associated with a higher risk of abortion. In the radioactive iodine therapy group, there was also a 1.7 times higher risk of birth defect if a woman became pregnant before 6 months after treatment compared to 12-23 months after treatment. The dose of radioactive iodine therapy received did not affect risk of birth defect. Pregnancy within 6 months after treatment did not have higher risks of abortion or birth defects in the surgery group. In both radioactive iodine therapy and surgery groups, there was a higher risk of premature birth if a woman became pregnant more than 24 months after treatment.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Women are advised to wait 6-12 months before becoming pregnant after treatment with radioactive iodine after thyroidectomy for thyroid cancer because of a concern for possible effects of radiation in developing baby. The findings of this study support such recommendation, since there was no increased risk of abortion, premature birth, or birth defects if pregnancy occurred at least 6 months after treatment with radioactive iodine therapy. Although there was a higher risk of abortion within 6 months after treatment with radioactive iodine therapy, we do not know if abortion was miscarriage (spontaneous abortion) or induced abortion due to worry about possible effects of radiation. A higher risk of birth defects was only seen when pregnancy occurred within 6 months after treatment with radioactive iodine therapy. There was an increased risk of premature birth in both radioactive iodine therapy and surgery group if pregnancy occurred more than 24 months after treatment.

In conclusion, the findings of this study suggest that it is safe to become pregnant at least 6 months after treatment with radioactive iodine after thyroidectomy for thyroid cancer.

— Sun Lee, MD





THYROID AND PREGNANCY, continued

ATA THYROID BROCHURE LINKS

Thyroid Disease in Pregnancy: <https://www.thyroid.org/thyroid-disease-pregnancy/>

Radioactive Iodine Therapy: <https://www.thyroid.org/radioactive-iodine/>

ABBREVIATIONS & DEFINITIONS

Premature delivery: birth of a baby before 38 weeks of pregnancy.

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

Thyroidectomy: surgery to remove the entire thyroid gland. When the entire thyroid is removed it is termed a total thyroidectomy. When less is removed, such as in removal of a lobe, it is termed a partial thyroidectomy.

Radioactive iodine (RAI): this plays a valuable role in diagnosing and treating thyroid problems since it is taken up only by the thyroid gland. I-131 is the destructive form used to destroy thyroid tissue in the treatment of thyroid cancer and with an overactive thyroid. I-123 is the non-destructive form that does not damage the thyroid and is used in scans to take pictures of the thyroid (Thyroid Scan) or to take pictures of the whole body to look for thyroid cancer (Whole Body Scan).

DECEMBER Thyroid & Development Awareness Month



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