



THYROID AND PREGNANCY

Management of thyroid cancer during pregnancy

WHAT IS THE STUDY ABOUT?

Thyroid cancer is the fastest rising cancer diagnosed in women. The incidence of thyroid cancer in women has been steadily increasing for the past three decades, peaking in women during their mid-40s. Because of this, thyroid cancer and thyroid nodules are an especially important problem during the reproductive years in women. In fact, about 10% of thyroid cancers occurring during the reproductive years are diagnosed during pregnancy or the first year after delivery. A study by Vannuchi et al. that is highlighted in this issue of *Clinical Thyroidology for Patients* suggests that pregnancy may have a negative impact on the outcome of papillary thyroid cancer. This leads to a number of new and important questions concerning the clinical management of thyroid cancer in pregnant women. Unlike other papers that are usually summarized in this journal, which are stand-alone clinical studies or reports, this is a review of several prior studies and reports. The aim of this paper is to review the current state-of-the-art of treatment for thyroid cancer in the pregnant woman.

THE FULL ARTICLE TITLE:

Holt EH. Care of the pregnant thyroid cancer patient. *Curr Opin Oncol* 2010;22:1-5.

WHAT WAS THE AIM OF THE STUDY?

The aim of this paper is to review the current state-of-the-art for treatment of thyroid cancer in the pregnant woman.

HOW WAS THE STUDY DONE?

This paper reviews the Endocrine Society Guidelines on care of pregnant patients with thyroid nodules or thyroid cancer published in 2007, summarizes the data presented in a symposium on thyroid dysfunction and pregnancy hosted by the American Thyroid Association in April 2009 and reviews recent studies on thyroid cancer and hypothyroidism on the baby and the impact of surgery, radioiodine and levothyroxine therapy in both mother and baby.

Guidelines for Thyroid Cancer during Pregnancy

The following features on care of pregnant patients with thyroid nodules or thyroid cancer are highlighted:

- 1) Thyroid nodules ≥ 1 cm should be evaluated with fine-needle aspiration biopsy. This is the same recommendation as in the non-pregnant patient.
- 2) Women with cancer on the biopsy or rapidly growing thyroid nodules can be offered surgery in the second trimester. However, as thyroid nodules and thyroid cancer in general are not expected to progress rapidly, the risk of surgery might outweigh the benefits of immediate surgery. Thus, it might be appropriate for women to wait until after delivery for surgery. In a recent study, pregnant women in general had more complications following thyroid surgery than non-pregnant women.
- 3) Women with thyroid cancer who become pregnant should have a consistently low but measurable TSH level during pregnancy.
- 4) Women who are breast-feeding should wait 6 to 12 months before being treated with radioactive iodine therapy, if that treatment is indicated.
- 5) Women should wait 6 to 12 months after radioactive therapy before becoming pregnant.
- 6) During pregnancy, women who have had part of their thyroid removed (ie removal of 1 lobe) and do not require thyroid hormone replacement before becoming pregnant should be screened for hypothyroidism and may require thyroid hormone therapy during pregnancy.

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THYROID AND PREGNANCY, continued

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Thyroid cancer in the pregnant woman is a unique problem in which endocrinologists, surgeons, gynecologists and primary care physicians often are involved. All these providers must be aware of the many issues to properly advise the patient in making a decision that is best for her and her baby.

— Alan P. Farwell, MD

ATA THYROID BROCHURE LINKS

Thyroid cancer: http://thyroid.org/patients/patient_brochures/cancer_of_thyroid.html

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

ABBREVIATIONS & DEFINITIONS

Papillary thyroid cancer — the most common type of thyroid cancer.

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).

Thyroid hormone therapy — patients with hypothyroidism are most often treated with Levothyroxine in order to return their thyroid hormone levels to normal. Replacement therapy means the goal is a TSH in the normal range and is the usual therapy. Suppressive therapy means that the goal is a TSH below the normal range and is used in thyroid cancer patients to prevent growth of any remaining cancer cells.

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.