



THYROID CANCER

Use of radioactive iodine treatment for thyroid cancer has increased and varies among hospitals

BACKGROUND

The initial treatment for thyroid cancer is surgery. Radioactive iodine is often given after thyroidectomy to destroy any remaining thyroid tissue, either normal or cancerous. However, the indications for radioactive iodine treatment have not been strictly defined, leading to considerable variability in its use. The indications for radioactive iodine treatment were re-evaluated in the guidelines published by the American Thyroid Association (ATA) in 2009. In general, more consideration is being given for not using radioactive iodine in low risk patients. This study was done to evaluate changes in practice patterns and the degree of variability among hospitals in the United States in their use of radioactive iodine and the factors that contribute to these variations.

THE FULL ARTICLE TITLE

Haymart MR et al. Use of radioactive iodine for thyroid cancer. *JAMA* 2011;306:721-8.

SUMMARY OF THE STUDY

The study looked at 189,219 patients with thyroid cancer who had undergone a total thyroidectomy and their records were analyzed for various risk factors. Factors that correlated with use of radioactive iodine were evaluated in the 85,948 patients diagnosed with thyroid cancer between 2004 and 2008. Cancer programs belonged to one of the following four categories: community hospitals, comprehensive community, teaching/research and National Cancer Institute/National Comprehensive Cancer Network.

Between 1990 and 2008, the proportion of patients who received radioactive iodine after total thyroidectomy

increased from 40.4% to 56%. This increase occurred for both smaller and larger cancers. For the 2004–2008 cases, younger age was associated with a 2-fold increase in the use of radioactive iodine. There was less use for low risk patients as compared to those at higher risk. There was less use of radioactive iodine in hospitals who treated <7 cases per year as compared with those treating >34 per year. For patients of similar risk, there was wide variation between hospitals in the use of radioactive iodine.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The use of radioactive iodine increased between 1990 and 2008 and much of the variation in its use was associated with hospital characteristics rather than patient-related factors. The 2009 ATA guideline recommends using radioactive iodine only in select cases of low risk patients, so this trend is likely to decrease in the future. The reason for these recommendations is that recent studies have not found an improvement in survival or cancer recurrence with the use of radioactive iodine in most low risk patients. This is important with a growing concern about possible side effects such as damage to the salivary glands and secondary cancers.

— M. Regina Castro, MD

ATA THYROID BROCHURE LINKS

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

Radioactive Iodine Therapy: http://thyroid.org/patients/patient_brochures/radioactive.html

ABBREVIATIONS & DEFINITIONS

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.

Total thyroidectomy: surgery to remove the entire thyroid gland.

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).