



HYPERTHYROIDISM

Quality of life is worse at 6-10 years after radioactive iodine therapy of Graves' disease compared with treatment with antithyroid drugs or surgery.

BACKGROUND

Graves' disease is a common cause of an overactive thyroid gland (hyperthyroidism). Studies have shown that having Graves' disease may have negative impact on patient's quality of life. Graves' disease is usually treated with antithyroid drugs, radioactive iodine therapy, or surgery. Previous studies have reported that general-health quality of life among patients treated with three treatment methods as similar, but they were limited by a smaller number of participants or a shorter duration of follow up. This study assessed long-term quality of life in patients with Graves' disease who have been treated in a routine clinical setting.

THE FULL ARTICLE TITLE

Törring O et al 2019. Impaired quality of life after radioiodine therapy compared with antithyroid drugs or surgical treatment for Graves' hyperthyroidism: a long-term follow-up with the Thyroid-Related Patient-Reported Outcome Questionnaire and 36-Item Short Form Health Status Survey. *Thyroid* 29:322–331. PMID: 30667296.

SUMMARY OF THE STUDY

A total of 1186 patients with Graves' disease diagnosed between 2003 and 2005 in southern Sweden were included in the study. Patients were divided into three groups: (i) 347 patients treated with antithyroid drugs only, (ii) 395 patients treated with radioactive iodine therapy (with or without previous treatment with antithyroid drugs), but not surgery, and (iii) 233 patients treated with surgery to remove thyroid gland (with or without previous treatment with antithyroid drugs or radioactive iodine therapy). Quality of life was assessed using two different questionnaire: Thyroid-Related Patient-Reported Outcome questionnaire (ThyPRO in 975 patients) and general 36-Item Short Form Health Status Survey (SF-36 in 964 patients). Age, sex, and presence of other medical conditions that may affect quality of life were also assessed.

Patients were assessed at an average of 8 years after the diagnosis of Graves' disease. Patients in surgery group were generally younger (average age 35 years, compared to 43 years for the antithyroid drug group and 54 years for the radioactive iodine therapy group). More patients in radioactive iodine therapy group had other medical conditions that may affect quality of life (44%, compared to 29% in the antithyroid drug group and 33% in the surgery group).

Overall, patients with treated Graves' disease had worse thyroid-related quality of life scores than the general population. Among the three treatment groups, patients who received radioactive iodine therapy had worse thyroid-specific quality of life scores than patients treated with antithyroid drugs or surgery, as measured by ThyPRO. The radioactive iodine therapy group had worse scores for goiter symptoms, hyperthyroid symptoms, tiredness, anxiety, depression, emotional susceptibility, impaired social life, impaired daily life, and impaired sex life than the antithyroid drug and surgery groups. In addition, the radioactive iodine therapy group had worse scores in hypothyroid symptoms, eye symptoms, and appearance than the antithyroid drug group. A similar pattern was found in general quality of life measures as assessed with the SF-36 questionnaire, with worse scores in radioactive iodine therapy group compared to the antithyroid drug or surgery groups.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

In this study, quality of life scores were worse in patients with Graves' disease treated with radioactive iodine therapy compared to antithyroid drugs or surgery at 6-10 years after treatment. This is different from previous studies of quality of life in patients treated for Graves' disease which showed similar quality of life in patients treated with three treatment methods. This study had a larger number of participants and a longer duration





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of follow up than previous studies. If these findings are confirmed in other studies in other countries, it would suggest that radioactive iodine therapy may be less

desirable in the long term as compared to antithyroid drugs or surgery

— Sun Y. Lee, MD

ATA THYROID BROCHURE LINKS

Graves' Disease: <https://www.thyroid.org/graves-disease/>

Hyperthyroidism (Overactive): <https://www.thyroid.org/hyperthyroidism/>

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

Thyroid Surgery: <https://www.thyroid.org/thyroid-surgery/>

ABBREVIATIONS & DEFINITIONS

Hyperthyroidism: a condition where the thyroid gland is overactive and produces too much thyroid hormone. Hyperthyroidism may be treated with antithyroid meds (Methimazole, Propylthiouracil), radioactive iodine or surgery.

Graves' disease: the most common cause of hyperthyroidism in the United States. It is caused by antibodies that attack the thyroid and turn it on.

Radioactive iodine: 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.

Thyroid-Related Patient-Reported Outcome questionnaire (ThyPRO): a validated questionnaire in determining quality of life in patients with thyroid disorders

