CLINICAL THYROIDOLOGY **FOR THE PUBLIC**

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HYPERTHYROIDISM

Subclinical hyperthyroidism reduces survival in patients under age 65 years

BACKGROUND

Hypothyroidism and hyperthyroidism are common in our population and subclinical variants of these disorders are even more common. There are many studies that examine whether thyroid disorders are associated with mortality. In particular, hyperthyroidism has been associated with increased mortality as compared to patients without thyroid disease. The current study examines the relationship between mortality and thyroid disorders and also between mortality and thyroid test results within the normal range.

THE FULL ARTICLE TITLE

van de Ven AC et al. Associations between thyroid function and mortality: the influence of age. Eur J Endocrinol 2014;171:183-91. Epub May 6, 2014.

SUMMARY OF THE STUDY

There were 5,816 participants involved in this study from 2002-2003 from a city in the Netherlands. The participants were divided into different age groups: <65, 65-80, >80. During the 9.4 years of follow-up, 13.3% of the population died. A total of 9 subjects with hyperthyroidism had the lowest survival rate. Decreased survival rate for patients with subclinical hyperthyroidism was found only in the age <65 group. Patients with subclinical hypothyroidism were not associated with increased mortality rate.

Within the range of normal thyroid function, reduced survival was found in subjects >80 years who had either a FT_4 or TSH that was high-normal as compared with TSH that was mid-normal. In all age groups either a high TSH or high Free T_4/total T_4 were associated with higher mortality rates than those with normal levels. No significant difference was found between thyroid antibodies and mortality.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

While there are many limitations in the study, the data suggests that thyroid function and mortality differs with age. While this study is not clear evidence for increased screening for thyroid disease, it is suggestive that mild abnormalities of thyroid function could be significant. The is especially true in those with a low serum TSH level. Minimal lowering does not require a workup, but subclinical hyperthyroidism with a suppressed TSH may have serious cardiac consequences and usually requires evaluation and treatment.

— Heather Hofflich, DO

ATA THYROID BROCHURE LINKS

Thyroid Function Tests: http://www.thyroid.org/blood-test-for-thyroid

Hyperthyroidism: http://www.thyroid.org/what-is-hyperthyroidism

ABBREVIATIONS & DEFINITIONS

Subclinical Hyperthyroidism: a mild form of hyperthyroidism where the only abnormal hormone level is a decreased TSH.

Thyroxine (T_4): the major hormone produced by the thyroid gland. T_4 gets converted to the active hormone T_3 in various tissues in the body.

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.

Thyroid antibodies: these are antibodies that attack the thyroid instead of bacteria and viruses, they are a marker for autoimmune thyroid disease, which is the main underlying cause for hypothyroidism and hyperthyroidism in the United States.