Volume 14 | Issue 12 | December 2021

Clinical Thyroidology® for the Public

AMERICAN THYROID ASSOCIATION
Optimal Thyroid Health for All

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Editor's Comments

Welcome to another issue issue of *Clinical Thyroidology for the Public*. In this journal, we will bring to you the most up-to-date, cutting edge thyroid research. We also provide even faster updates of late-breaking thyroid news through Twitter at @thyroidfriends and on Facebook. Our goal is to provide patients with the tools to be the most informed thyroid patient in the waiting room. Also check out our friends in the **Alliance for Thyroid Patient Education**. The **Alliance** member groups consist of: the *American Thyroid Association, Bite Me Cancer, the Graves' Disease and Thyroid Foundation, the Light of Life Foundation, MCT8 – AHDS Foundation, ThyCa: Thyroid Cancer Survivors' Association, Thyroid Cancer Canada, Thyroid Cancer Alliance* and *Thyroid Federation International.*

We invite all of you to join our **Friends of the ATA** community. It is for you that the American Thyroid Association (ATA) is dedicated to carrying out our mission of providing reliable thyroid information and resources, clinical practice guidelines for thyroid detection and treatments, resources for connecting you with other patients affected by thyroid conditions, and cutting edge thyroid research as we search for better diagnoses and treatment outcomes for thyroid disease and thyroid cancer. We thank all of the *Friends of the ATA* who support our mission and work throughout the year to support us. We invite you to help keep the ATA mission strong by choosing to make a donation that suits you — it takes just one moment to give online at: www.thyroid.org/donate and all donations are put to good work. The ATA is a 501(c)3 nonprofit organization and your gift is tax deductible.

While the Covid-19 pandemic is winding down, it has caused an unprecedented upheaval in our daily lives and presented extremely difficult challenges to our healthcare system. We at the American Thyroid Association would like to make sure that you all have access to most accurate, reliable, fact-based and updated information. (https://www.thyroid.org/covid-19/)

December is Thyroid and Development Awareness Month.

In this issue, the studies ask the following questions:

- Does iodine exposure in the mother lead to hypothyroidism in the baby?
- How does a mother's thyroid hormone level affect pregnancy?
- What are the factors that lead to over-diagnosis of thyroid cancer?
- What factors cause physicians to order thyroid ultrasounds?
- Do thyroid problems lead to dementia?
- What are the TSH targets for patients with thyroid cancer?

We welcome your feedback and suggestions. Let us know what you want to see in this publication. I hope you find these summaries interesting and informative.

— Alan P. Farwell, MD,

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THYROID AND PREGNANCY

How does mothers' low thyroid hormone level affect pregnancy?

BACKGROUND

Thyroid hormone is essential for normal development of the baby during pregnancy. It is important for pregnant women to have enough thyroid hormone during pregnancy for normal pregnancy and babies' normal development. Severe hypothyroidism in pregnant women is known to cause problems in pregnancy such as premature delivery, miscarriages and poor growth in babies. However, the effects of mild hypothyroidism during pregnancy are still unclear. Some studies showed poor pregnancy outcomes while others did not. There is especially limited data regarding the effects of isolated maternal hypothyroxinemia (IMH) on pregnancy. IMH is a condition where the mother's free T_4 level is low but the TSH level is normal. This study aimed to study the effects of IMH on pregnancy outcomes.

THE FULL ARTICLE TITLE

Nazarpour S et al 2021 Effects of isolated maternal hypothyroxinemia on adverse pregnancy outcomes. Arch Gynecol Obstet. Epub 2021 Sep 5. PMID: 34482473

SUMMARY OF THE STUDY

The researchers recruited 2406 pregnant women in Iran and measured their thyroid hormone, thyroid peroxidase (TPO) antibody, and urine iodine levels in the first trimester. Among these women, 1842 women with normal TSH levels and not taking thyroid medications were included in this study. IMH was defined as having normal TSH and low FT_4 levels. Risks of poor pregnancy outcomes, including preterm delivery (defined as delivery before 37 weeks of pregnancy), miscarriage, low birth weight (LBW) of baby, third-trimester excessive bleeding, baby's admission to intensive care unit, and baby's birth weight, birth height, and birth head circumference. Researchers accounted for potential impacts of the number of previous pregnancies, urinary iodine levels, and TPO antibody status in assessing these risks.

Among 1843 women in the study, 142 (7.7%) women had IMH. There were no significant differences in baseline characteristics and proportion of poor pregnancy outcomes between women with normal thyroid function (euthyoid group) and women with IMH (IMH group). However, when adjusted for potential impact of number of prior pregnancies, urinary iodine levels, and TPO antibody status, women in IMH group had about 2.5-fold higher risk of having babies with LBW compared to women in euthyroid group. Babies of women in the IMH group also had a slightly smaller head circumference and slightly lower birth weight at birth compared to babies of women in the euthyroid group when accounted for these factors.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study shows that women with IMH had a slight increase of poor pregnancy outcomes. However, the overall number of poor pregnancy outcomes were small, which may have limited its ability to study full effects of IMH on certain pregnancy outcomes. Overall, this study adds to the currently available research on the effects of IMH on pregnancy outcome, but larger studies that similarly include measurement of iodine and TPO antibody status would be helpful to confirm and further expand the findings.

— Sun Y. Lee, MD

ATA THYROID BROCHURE LINKS

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

Thyroid Function Tests: https://www.thyroid.org/thyroid-function-tests/

THYROID AND PREGNANCY, continued

ABBREVIATIONS & DEFINITIONS

Euthyroid: a condition where the thyroid gland as working normally and producing normal levels of thyroid hormone.

Hypothyroidism: a condition where the thyroid gland is underactive and doesn't produce enough thyroid hormone. Treatment requires taking thyroid hormone pills.

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

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.

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.

TPO 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.

Iodine: an element found naturally in various foods that is important for making thyroid hormones and for normal thyroid function. Common foods high in iodine include iodized salt, dairy products, seafood and some breads.

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THYROID AND PREGNANCY

Does iodine exposure in the mother lead to hypothyroidism in the baby?

BACKGROUND

Congenital hypothyroidism refers to children born with hypothyroidism. This condition is uncommon and it affects about 1 child for every 4000 newly born children. However, it was noted that this problem is becoming more common in recent years. There are certain characteristics that are known to be associated with congenital hypothyroidism. For example, congenital hypothyroidism is more common in girls, in children born significantly before their due date, and in twin pregnancies. It can also occur in babies born from mothers with hyperthyroidism, due to either the effects of the medication the mothers received during the pregnancy (antithyroid drugs) or thyroid antibodies in the mother that cross the placenta and affect the baby.

Iodine is important for making thyroid hormones and for normal thyroid function. Iodine in the mother is important for the normal brain development of the baby. However, too much iodine may be harmful to the baby. This study was done to find out if there is a link between the amount of iodine in the mother and hypothyroidism in children from birth to 1 year of age.

THE FULL ARTICLE

Yokomichi H et 2021 Mother's iodine exposure and infants' hypothyroidism: The Japan Environment and Children's Study. Endocr J. Epub 2021 Aug 26. PMID: 34433732

SUMMARY OF THE STUDY

The authors study over 100,000 children born in different regions of Japan between 2011 and 2014. They carefully collected information regarding the amount of iodine the mothers were exposed to during their pregnancy: from the diet (seaweed) and from two medical sources: a radiological study called hysterosalpinography (HSG) that uses iodine to look at the uterus and tubes before pregnancy and povidone-iodine, a solution that is applied to the mother during delivery in order to kill germs. To determine congenital hypothyroidism, thyroid blood levels of the newborns were taken about one week after birth. Also, when the children were 1 year of age, the mothers received a questionnaire asking them if a new diagnosis of hypothyroidism was made by their pediatricians.

One in about 700 children were affected by hypothyroidism (about 0.14%). This number is higher than previously reported. Children born prematurely had a higher chance of being hypothyroid at birth (about 1 in 100). Children born to mothers who had received a HSG had less than 1 in 1000 chances of being hypothyroid. Graves' disease in the mother and treatment with antithyroid drugs had a higher chance of being linked to congenital hypothyroidism, occurring in about 1 in 100 children. Similarly, mothers who were taking levothyroxine, have a higher chance of having children with congenital hypothyroidism at 1.15 in 100. Children born to mothers who took low iodine during the pregnancy had a little over 1 in 1000 chance of congenital hypothyroidism.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study shows that hyper- and hypothyroidism in the mother significantly increases the risk of hypothyroidism at birth, but may resolve. Hypothyroidism can be seen in children born to mothers who were exposed to povidone-iodine or did not have enough iodine in their diet during their pregnancy. However, hypothyroidism in their babies resolved by the age of 1-year-old. Babies born to mothers that received high doses of iodine before pregnancy did not experience higher chances of congenital hypothyroidism. Pregnant women should follow the health organizations' recommendations of iodine supplementation to their dietary intake by taking a daily prenatal vitamin that contains 150 mcg of iodine.

— Susana Ebner MD

THYROID AND PREGNANCY, continued

ATA THYROID BROCHURE LINKS

Iodine Deficiency: https://www.thyroid.org/iodine-deficiency/

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

ABBREVIATIONS & DEFINITIONS

Congenital hypothyroidism: hypothyroidism that exists at birth either because the thyroid did not develop properly (thyroid dysgenesis) or because the thyroid has problems in one of the needed steps to make thyroid hormones (thyroid dyshormonogenesis). Congenital hypothyroidism is estimated to occur in 1:1700 newborns.

Hashimoto's thyroiditis: the most common cause of hypothyroidism in the United States. It is caused by antibodies that attack the thyroid and destroy it.

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.

Iodine: an element found naturally in various foods that is important for making thyroid hormones and for normal thyroid function. Common foods high in iodine include iodized salt, dairy products, seafood and some breads.

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THYROID CANCER

Thyroid cancer over-diagnosis is associated with increased socioeconomic development and urbanization

BACKGROUND:

The number of patients diagnosed with thyroid cancer has increased significantly in the recent decades, while death from this cancer has remained stable at a low level. This can be explained by a large number of small thyroid cancers found on different radiological tests such as ultrasound, computed tomography (CT) scanning and magnetic resonance imaging (MRI) that are done for another reason. These small cancers are mostly very low risk and may not need to be treated. Over-diagnosis is defined as finding cancer that will never cause any symptoms and will not affect the quality of life and the overall survival of a person. It has been reported that over-diagnosis accounts for up to 60-90% of all cases of thyroid cancer in different countries. Because of over-diagnosis, healthy people can undergo unnecessary diagnostic tests and treatments, including surgery, which can result in complications, in addition to experiencing the anxiety of a cancer diagnosis. Over-diagnosis is also a burden for the health-care systems because of the associated financial costs.

Over-diagnosis was thought to be correlated with the socioeconomic status such that people with a high socioeconomic status and better access to health care would be more likely to get tests leading to over-diagnosis. However, other factors may be involved, since several countries with a high socioeconomic status and access to health care, such as the Scandinavian countries and the UK, have low rates of over-diagnosis. In China, which is undergoing a rapid economic growth and urbanization, thyroid cancer is the fastest growing cancer with an average of 20% increase in diagnosis per year between 2003 and 2011. However, there are differences of up to 45-fold between the areas with low and high incidence of thyroid cancer. The aim of this study was to evaluate the factors associated with thyroid cancer over-diagnosis across different regions in China.

THE FULL ARTICLE TITLE:

Li M et al 2021 Mapping over-diagnosis of thyroid cancer in China. Lancet Diabetes Endocrinol 9:330-332. PMID: 33891886.

SUMMARY OF THE STUDY:

The study included data contained in 35 cancer registries from different regions in mainland China for the period 2008-2012. The study population represented 4.1% of the Chinese population, with 21 registries including patients from urban areas and 14 from rural areas. The 10 registries that also contained data between 2003-2007 were used to evaluate the change in thyroid cancer incidence over time, from 2003-2007 to 2008-2012.

A total of 27,842 patients aged 15-84 years were diagnosed with thyroid cancer (predominantly papillary thyroid cancer) between 2008-2012. The average incidence rate was 16.8 cases per 100,000 women and 5.3 cases per 100,000 men, with large variations noted across the 35 registries examined (from 0.7 to 33.9 cases per 100,000 women and from 0.4 to 11.6 cases per 100,000 men). The 21 urban registries showed a higher incidence rate (average age-standardized incidence of 19 cases per 100,000 women and 6.1 cases per 100,000 men) than the rural registries (4.9 cased per 100,000 women and 1.4 cases per 100,000 men). There was an increase of 10 and 5 cases per 100,000 women and men, respectively from 2003-2007 to 2008-2012. Similar to other countries, death from thyroid cancer has remained stable at low levels in China.

Over-diagnosis was estimated to account for 16,721 (83%) women and 4,986 (77%) men with thyroid cancer in urban registries, and for 597 (60%) women and 170 (59%) men with thyroid cancer in rural registries. Similar to other countries reporting thyroid cancer over-diagnosis, there was a change in the age at diagnostic with a peak

THYROID CANCER, continued

at middle age (35-64 years) instead of older ages (65-84 years) noted in the past, this trend being more common in urban areas. Women were found to be diagnosed early in life (age 30-49 years) as compared to men, because of their more frequent use of the health system for child-bearing reasons. Thyroid cancer over-diagnosis occurred more often in regions with increased health care access. The predominant fee-for-service payment method may have contributed to over-diagnosis since it encouraged hospitals to perform more tests.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The recent increased urbanization and economic growth in China has been associated with an increase in the incidence of thyroid cancer, which can be in large part explained by over-diagnosis. These findings highlight the risk of overusing the health care system in countries undergoing economic development and the importance of implementing regulations to prevent this.

— Alina Gavrila, MD, MMSc

ATA THYROID BROCHURE LINKS

Thyroid Cancer (Papillary and Follicular): https://www.thyroid.org/thyroid-cancer/

ABBREVIATIONS & DEFINITIONS

Papillary thyroid cancer: the most common type of thyroid cancer. There are 4 variants of papillary thyroid cancer: classic, follicular, tall-cell and noninvasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP).

Thyroid Ultrasound: a common imaging test used to evaluate the structure of the thyroid gland. Ultrasound uses soundwaves to create a picture of the structure of the thyroid gland and accurately identify and characterize nodules within the thyroid. Ultrasound is also frequently used to guide the needle into a nodule during a thyroid nodule biopsy.

Incidence: the number of individuals who develop a disease during a specific time period.

Over-diagnosis: finding cancer that will never cause any symptoms and will not affect the quality of life and the overall survival of a person.

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THYROID NODULES

Physician-reported use of thyroid ultrasound

BACKGROUND

Thyroid ultrasound is an essential tool in the evaluation and management of thyroid nodules. Thyroid nodules are the most common endocrine problem, occurring in up to half of the US population. The main concern with a thyroid nodules is the possibility of thyroid cancer, which overall occurs in ~5% of thyroid nodules. In recent years there has been a marked increase in incidence of thyroid cancer. Much of this increase in diagnosis of thyroid cancer has been thought to be due to increased use of neck imaging studies, including ultrasound, leading to greater detection of nodules. Some authors have suggested wide-spread use of neck imaging has led to the overdiagnosis of thyroid nodules and cancer, resulting in finding very low risk thyroid cancers that may not need to be treated. This study sought to understand physician attitudes and practice patterns for ordering thyroid ultrasounds. They surveyed physicians taking care of patients with thyroid cancer as to how the cancer came to be diagnosed.

THE FULL ARTICLE TITLE:

Chen DW et al 2020 Physician-reported misuse of thyroid ultrasonography. JAMA Surg 155:984–986. PMID: 32804996.

SUMMARY OF THE STUDY:

Authors of this study surveyed physicians in Georgia and Los Angeles, California identified as caretakers of patients with thyroid cancer who were diagnosed between 2014 and 2015 and identified in the Surveillance, Epidemiology and End Results (SEER) Registry regarding their practice patterns and the use of neck/thyroid ultrasounds in a variety of clinical scenarios. The scenarios presented were grouped into three categories:

1) Clinically supported use: palpable thyroid nodule, large thyroid or goiter on exam, thyroid nodule seen on another imaging study and / or new onset horseness or compressive symptoms.
2) Clinically unclear use: history of head/neck radiation or family history of thyroid cancer.
3) Clinically unsupported use: patient request, abnormal thyroid function tests, or positive thyroid antibodies.

There were 610 physicians that participated in the survey including surgeons, endocrinologists, and primary care physicians. Approximately 60% worked in private practice, 66% were men and 70% reported having read published clinical guidelines related to the management of thyroid nodules and/or thyroid cancer. Although most of the physicians reported the use of neck/thyroid ultrasound for clinically supported indications, a substantial proportion reported using the test in non-clinically supported scenarios such as patient request or abnormal thyroid laboratory results. For example, 98.2% of respondents reported thyroid ultrasound use if the patient had a palpable thyroid nodule (clinically supported reason) and 32.7% reported using thyroid ultrasound when the sole reason was patient request (non-clinically supported reason). Specialists were more likely order an ultrasound in response to a patient request than primary care providers. Private practice physicians were more likely to order thyroid ultrasounds in response to abnormal thyroid laboratory results than physicians working in academic centers. Most physicians acknowledged published clinical guidelines as impacting their decisions to order neck/thyroid ultrasounds.

In summary, most physicians order neck/thyroid ultrasounds for reasons supported by the published literature. A smaller yet significant percent of physicians report using neck/thyroid ultrasound for reasons not supported by clinical guidelines.

WHAT ARE THE IMPLICATIONS OF THE STUDY?

Physicians order neck/thyroid ultrasound for a variety of reasons. Most clinicians reported more frequent use of the neck/thyroid ultrasounds in patient scenarios supported by clinical guidelines (palpable thyroid nodules, large goiter, nodule seen on other imaging, new voice changes or compressive symptoms). However, a relatively high percent of physicians reported ordering neck/thyroid ultrasounds for non-indicated reasons such as patient request or abnormal thyroid laboratory tests. This pattern may increase the risk of finding thyroid nodules that need

THYROID NODULES, continued

further evaluation. These findings suggest the need for increased education about the clinically appropriate uses of thyroid ultrasound and that there should be increased discussion between patients and ordering physicians about the potential negative effects of ordering unnecessary neck/thyroid ultrasounds.

— Whitney W. Woodmansee MD

ATA THYROID BROCHURE AND WEBSITE LINKS

Thyroid Nodules: https://www.thyroid.org/thyroid-nodules/

Thyroid Cancer (Papillary and Follicular): https://www.thyroid.org/thyroid-cancer/

ABBREVIATIONS & DEFINITIONS

Thyroid nodule: an abnormal growth of thyroid cells that forms a lump within the thyroid. While most thyroid nodules are non-cancerous (Benign), ~5% are cancerous.

Thyroid Ultrasound: a common imaging test used to evaluate the structure of the thyroid gland. Ultrasound uses soundwaves to create a picture of the structure of the thyroid gland and accurately identify and characterize nodules within the thyroid. Ultrasound is also frequently used to guide the needle into a nodule during a thyroid nodule biopsy.

Goiter: a thyroid gland that is enlarged for any reason is called a goiter. A goiter can be seen when the thyroid is overactive, underactive or functioning normally. If there are nodules in the goiter it is called a nodular goiter; if there is more than one nodule it is called a multinodular goiter.

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THYROID AND BRAIN FUNCTION

Do thyroid problems lead to decreased brain function or the onset of dementia?

BACKGROUND

Decreased brain function and dementia are important causes of disability among older people worldwide. While age is still the most critical risk factor, younger people can also have dementia (called early-onset dementia). It is estimated that 2-8% of all dementia cases are early-onset, and therefore early identification of potentially reversible risk factors responsible for decreased brain function and dementia is essential.

Thyroid disease has traditionally been felt to contribute to decline in brain functioning. As such, most clinical practice guidelines recommend that doctors order thyroid hormone blood tests when investigating their patients for dementia. However, the actual relationship between thyroid disease and brain function is still controversial. In fact, recent trials have found no evidence that treating various forms of hyperthyroidism or hypothyroidism will improve brain function. In the current study the authors try to answer whether or not thyroid problems are associated with decreased brain function and dementia.

THE FULL ARTICLE TITLE

van Vliet NA et al Thyroid Studies Collaboration 2021 Association of thyroid dysfunction with cognitive function: An individual participant data analysis. JAMA Intern Med. Epub 2021 Sep 7.

SUMMARY OF THE STUDY

The authors examined data from 74, 565 people participating in 23 different clinical trials whose thyroid hormone levels had been measured (57.5% women and 42.5% men). Of these participants, 89.3% had normal thyroid function, 0.8% were hyperthyroid, 0.9% were hypothyroid, 3.4 % had subclinical hyperthyroidism (low TSH, normal FT_4) and 5.6% had subclinical hypothyroidism (high TSH, normal FT_4). In addition, 38,144 of these participants had provided data about their brain functioning and 2033 people were diagnosed with dementia.

They found that thyroid function, particularly subclinical hyperthyroidism and subclinical hypothyroidism, was not related to normal brain function, a decrease in brain function or risk of dementia. Similarly, there was no association between overt hypothyroidism and overt hyperthyroidism either, although the data was more limited for these two groups.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The authors conclude that since they could find no statistical association between thyroid function and brain decline or dementia, screening for thyroid dysfunction (particularly subclinical thyroid dysfunction) may not be helpful when investigating patients for these conditions. Also, while the study was not designed to assess whether treating thyroid dysfunction would improve brain function, the authors felt that it was unlikely to help, particularly in those with subclinical thyroid disease.

— Philip Segal, MD

ATA THYROID BROCHURE LINKS

Hyperthyroidism (Overactive): https://www.thyroid.org/hyperthyroidism/
Hypothyroidism (Underactive): https://www.thyroid.org/hypothyroidism/
Older Patients and Thyroid Disease: https://www.thyroid.org/thyroid-disease-older-patient/
Thyroid Function Tests: https://www.thyroid.org/thyroid-function-tests/

THYROID AND BRAIN FUNCTION, continued

ABBREVIATIONS & DEFINITIONS

Subclinical Hypothyroidism: a mild form of hypothyroidism where the only abnormal hormone level is an increased TSH. There is controversy as to whether this should be treated or not.

Overt Hypothyroidism: clear hypothyroidism an increased TSH and a decreased T_4 level. All patients with overt hypothyroidism are usually treated with thyroid hormone pills.

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

Dementia: a general term for memory loss, language, problem-solving and other thinking abilities that are severe enough to interfere with daily life. Alzheimer's is the most common cause of dementia.

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THYROID CANCER

What are the TSH targets for patients with thyroid cancer?

BACKGROUND

Thyroid cancer has been the fastest rising cancer in women. Fortunately, there are excellent treatment options that result in an excellent prognosis for most patients. Surgery is the first treatment in most patients followed by levothyroxine therapy. In high risk patients, radioactive iodine therapy is an option as well. While levothyroxine can be seen as a replacement for the removed thyroid gland, it is actually an important part of the long-term treatment for thyroid cancer. In the past, the usual treatment was to achieve TSH suppression with a low TSH. However, current American Thyroid Association guidelines for the management of thyroid cancer recommend a TSH target in the low normal range for most low risk thyroid cancers. This is because the risks of TSH suppression generally outweigh the potential benefits of a further reduced rate of recurrence. However, real-world approaches toward TSH suppression are not well understood. The present survey study sought to understand TSH suppression practices in a diverse group of clinicians caring for patients with thyroid cancer.

THE FULL ARTICLE TITLE

Papaleontiou M et al. 2021 Thyrotropin suppression for papillary thyroid cancer: A physician survey study. Thyroid. Epub 2021 Apr 23. PMID: 33779292.ummary of the study

WHO WAS STUDIED AND HOW DID THEY DO THE STUDY?

Physicians participating in the care of patients with thyroid cancer were surveyed for the study. Physicians practicing into different locations in the United States were included in the survey. The survey included 41.7% endocrinologists and 58.3% surgeons (roughly half were endocrine or general surgeons and the other half otolaryngologists). Roughly half of clinicians had been in practice ≥20 years (versus <20 years), and 51.9% had cared for 0 to 20 thyroid cancer patients in the past year, 21% cared for 21 to 40 patients, and 27.1% cared for >40 patients.

A total of 80.4% of physicians were likely or extremely likely to recommend TSH suppression for intermediate-risk papillary thyroid cancer, 48.8% recommended it for low-risk papillary thyroid cancer and 29.7% recommended it for very-low-risk papillary thyroid cancer. Of those likely to recommend TSH suppression therapy, a little less than half would continue TSH suppression for >5 years. In general, surgeons were significantly less likely to recommend TSH suppression than endocrinologists. High-volume clinicians (those with >40 thyroid cancer patients in the past year) also were less likely than low-volume clinicians (≤20 cases) to recommend suppression for patients with low-risk papillary thyroid cancer and physicians who estimated a higher risk of recurrence (especially in excess of actual risk) were much more likely to recommend TSH suppression.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The study revealed that the target TSH level for patients who had low risk of recurrence of thyroid cancer was often lower than what was recommended by the current clinical guidelines from the American Thyroid Association. This means a higher dose of levothyroxine to keep the TSH levels lower than the normal range as is typically done for patients with thyroid cancers with a moderate to higher risk for recurrence. However, those physicians who had a higher volume of patients diagnosed with thyroid cancer were more likely to follow the current guidelines for maintaining TSH level in the low normal range which would typically require a lower dose of levothyroxine.

The results of the study indicate a need for further education for physicians and providers who take care of patients who have thyroid cancer. More familiarity with the current clinical guidelines for the management of this condition would likely lead to more standardization of therapy and less side effects from higher doses of thyroid hormone.

—Vibhavasu Sharma, MD, FACE

THYROID CANCER, continued

ATA THYROID BROCHURE LINKS

Thyroid Cancer (Papillary and Follicular): https://www.thyroid.org/thyroid-cancer/

Thyroid Function Tests: https://www.thyroid.org/thyroid-function-tests/

Thyroid Hormone Treatment: https://www.thyroid.org/thyroid-hormone-treatment/

ABBREVIATIONS & DEFINITIONS

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 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.

Papillary thyroid cancer: the most common type of thyroid cancer. There are 4 variants of papillary thyroid cancer: classic, follicular, tall-cell and noninvasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP).

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ATA Alliance for Thyroid Patient Education

GOAL The goal of our organizations is to provide accurate and reliable information for patients about the diagnosis, evaluation and treatment of thyroid diseases. We look forward to future collaborations and continuing to work together toward the improvement of thyroid education and resources for patients.

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GRAVES' DISEASE & THYROID FOUNDATION®

ThyCa: Thyroid Cancer Survivors' Association, Inc.℠ www.thyca.org

Light of Life Foundation checkyourneck.com

BITE ME CANCER!

MCT8 - AHDS Foundation

THYROID CANCER ALLIANCE

Thyroid Cancer Canada / Cancer de la thyroïde Canada

Thyroid Federation International

American Thyroid Association
www.thyroid.org
ATA Patient Resources:
www.thyroid.org/thyroid-information/
Find a Thyroid Specialist: www.thyroid.org
(Toll-free): 1-800-THYROID
thyroid@thyroid.org

Bite Me Cancer
www.bitemecancer.org
info@bitemecancer.org

Graves' Disease and Thyroid Foundation
www.gdatf.org
(Toll-free): 877-643-3123
info@ngdf.org

Light of Life Foundation
www.checkyourneck.com
info@checkyourneck.com

MCT8 – AHDS Foundation
mct8.info
Contact@mct8.info

Thyca: Thyroid Cancer Survivors' Association, Inc.
www.thyca.org
(Toll-free): 877-588-7904
thyca@thyca.org

Thyroid Cancer Alliance
www.thyroidcanceralliance.org
www.thyroidcancerpatientinfo.org
Rotterdam, The Netherlands

Thyroid Cancer Canada
www.thyroidcancercanada.org
416-487-8267
info@thyroidcancercanada.org

Thyroid Federation International
www.thyroid-fed.org
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- *Friends of the ATA e-news*, providing up-to-date information on thyroid issues, summaries of recently published articles from the medical literature that covers the broad spectrum of thyroid disorders., and invitations to upcoming patient events
- Updates on the latest patient resources through the ATA website and elsewhere on the world wide web
- Special e-mail alerts about thyroid topics of special interest to you and your family

We will use your email address to send you *Friends of the ATA e-news* and occasional email updates. We won't share your email address with anyone, and you can unsubscribe at any time.

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