TSH Range Is Not Universally Applicable

BY DIANA MAHONEY
New England Bureau

WASHINGTON - The decision to perform fine-needle aspiration on a patient with a thyroid nodule depends on several factors, including nodule size, serum thyroid stimulating hormone level, and presenting symptoms. Dr. Erik Alexander said at a meeting jointly sponsored by the American Thyroid Association and Johns Hopkins University.

Dr. Alexander, who is with the division of endocrinology, diabetes, and hypertension at Brigham and Women’s Hospital in Boston, outlined the algorithm he uses to evaluate a thyroid nodule.

Male gender, young age, and being symptomatic can increase the risk of a nodule being cancerous by about twofold, he said. But even if a nodule turns out to be cancerous, it doesn’t necessarily mean that something has to be done about it.

"I think the answer likely is no," said Dr. Alexander, who is also an assistant professor of medicine at Harvard Medical School. "Lobectomy is the procedure of choice, but only when significant disease is absent in the contralateral lobe.

The threshold for treatment has to be adjusted for patient-specific factors, such as the degree of TSH abnormality, family history of cardiovascular disease, diabetes, insulin resistance, hypertension, smoking, age, and presenting symptoms, Dr. Spencer noted. Additionally, the presence and concentration of thyroid autoantibodies is an important factor. "The higher the thyroid peroxidase autoantibody concentration, the more rapid the progression of disease," she said.

Ultimately, the diagnosis and efficacy of treating subclinical hypothyroidism should not be based on the TSH reference range alone, "but should integrate the degree of TSH elevation with patient-specific risk factors and the concentration of TPO antibodies," Dr. Spencer said.

Algorithm Guides Thyroid Nodule Aspiration

BY JOYCE FRIEDEN
Senior Editor

One recent 10-year study of 630 patients with well-differentiated follicular or papillary thyroid carcinoma found that when papillary thyroid carcinoma, there was essentially a zero risk of extrathyroidal growth in cancers of 10 mm or less in diameter, further validating the idea of a 1-cm cutoff, Dr. Alexander said (Cancer 2005;103:2269-73).

Ultrasound imaging can help further determine the risk of a nodule being cancerous, but cannot rule out the need for fine-needle aspiration, Dr. Alexander noted. That’s because several studies have shown that ultrasound identifies only about 80% of thyroid cancers. "Would any of us be willing to have a 20% false-negative rate? I don’t think so."

On the other hand, "Ultrasound is highly useful; it’s most effective at assessing cancer risk," he continued.

One study done at Alexander’s hospital found that a woman who presents with an irregular or palpable thyroid nodule found that when papillary thyroid carcinoma, there was essentially a zero risk of extrathyroidal growth in cancers of 10 mm or less in diameter, further validating the idea of a 1-cm cutoff, Dr. Alexander said (Cancer 2005;103:2269-73).

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On the other hand, "Ultrasound is highly useful; it’s most effective at assessing cancer risk," he continued.

First, the diagnosis and efficacy of treating subclinical hypothyroidism should not be based on the TSH reference range alone, “but should integrate the degree of TSH elevation with patient-specific risk factors and the concentration of TPO antibodies,” Dr. Spencer said.

TSH is the first abnormality to appear as disease develops,” said Dr. Spencer. Additionally, “there is growing data suggesting that mild subclinical hypothyroidism can exacerbate disease in susceptible individuals,” she said. As such, identifying patients at risk for developing this condition is important.

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BY NANCY WALSH
New York Bureau

CHICAGO — Unilateral thyroidectomy is the procedure of choice for symptomatic benign multinodular goiter, Dr. Sarah Olson said at the annual meeting of the Central Surgical Association.

Multinodular goiter is the most common form of benign thyroid disease in the United States and is characterized by symptoms that include dysphagia and shortness of breath. The extent of surgery required—unilateral lobectomy or bilateral resection—is controversial, however, with many surgeons recommending total thyroidectomy for all patients.

Bilateral surgery is associated with a lower recurrence rate, but also may have potentially higher morbidity, so we undertook a retrospective analysis of data from an ongoing prospective endocrine database,” said Dr. Olson of the University of Wisconsin, Madison.

Between May 1994 and November 2004, 883 patients underwent thyroid surgery at the university. Of these, 237 patients underwent lobectomy for multinodular goiter, with the decision on unilateral or bilateral surgery being at the discretion of the individual surgeon. A total of 140 patients had unilateral lobectomy, with the remaining 97 undergoing total or subtotal thyroidectomy. The patients’ mean age was 51 years, and 196 (83%) were female.

With up to 134 months of follow-up, patients who had unilateral resection had an 11% recurrence rate, whereas those in the bilateral group had a recurrence rate of 3%, a statistically significant difference.

The overall postoperative complication rate in the bilateral resection group was significantly higher, at 9%, compared with the unilateral group, at 2%. This difference in complication rate was in large part because of transient hypocalcemia, which was seen in 6% of the bilateral group but in none of the unilateral group, Dr. Olson said.

Of the 18 patients who subsequently required a second procedure for a recurrence of multinodular goiter, there was only one postoperative complication, for a complication rate of 5.5%. “This compares favorably with patients undergoing initial thyroidectomy,” she said.

An audience member, Dr. Christopher R. McHenry of MetroHealth Medical Center, Cleveland, said that “lobectomy is the procedure of choice for symptomatic unilateral multinodular goiter, but only when significant disease is absent in the contralateral lobe.”