Monitor TSH Suppression in Cancer Survivors

BY MICHELE G. SULLIVAN

FROM THE INTERNATIONAL THYROID CONGRESS

PARIS – Frequent thyroid function tests during pregnancy can ensure that thyroidstimulating hormone levels are optimally suppressed in women with a history of thyroid cancer.

In a small prospective study, TSH was adequately suppressed without dose adjustments in 39% of 36 pregnancies in 28 women. In the other pregnancies, additional thyroxine was needed as pregnancy progressed. This variability suggests that women who have undergone a total thyroidectomy experience a wide range of changes in TSH concentration throughout pregnancy, and argues for frequent monitoring and thyroxine dosage adjustment, according to Dr. Nikola Besic.

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"This is why we perform thyroid function tests every 4-6 weeks in these women," said Dr. Besic of the Institute of Oncology, Ljubljana, Slovenia. "This gives us the opportunity to change doses quickly and prevent elevation of the TSH."

All 28 women in the study had undergone a total thyroidectomy followed by radioiodine ablation, and all were on suppressive doses of levothyroxine.

Thyroid function tests were performed before pregnancy, every 6-8 weeks during pregnancy, and after pregnancy. Adequate suppression was considered to be a TSH of 0.01-0.29 mU/L and a free T3 in the normal range.

Before conception, the group's mean TSH level was 0.9 mU/L. With pregnancy, the mean level rose to 2.01 mU/L in the second trimester, 1.46 mU/L in the third, and fell to 0.05 mU/L after delivery.

Before conception, the mean levothyroxine dose was 139 mcg daily. TSH remained adequately suppressed on the woman's baseline dosage in 14 pregnancies (39%); these women were taking a mean daily dose of 139 mcg.

In the remaining 22 pregnancies (61%), thyroxine dose had to be increased over time. The mean dose was 141 mcg in the first trimester, 150 mcg in the second, and 171 mcg in the third. After delivery, the mean dose was 156 mcg daily. The mean dose change necessary to maintain adequate TSH suppression throughout pregnancy was 31 mcg.

Dosing changes did not ensure adequate suppression at all times; 23% of pregnancies were adequately suppressed at all times during gestation, Dr. Besic said. "In these 22 pregnancies, TSH concentration remained suppressed in 4 pregnancies, in the normal range in 13, and elevated in 5."

During the discussion period, panel

Major Finding: Among 36 pregnancies, 14 subjects needed no additional thyroxine to maintain adequate suppression; 22 needed dosage increases and, of those, 4 were still not adequately suppressed during the entire pregnancy.

Data Source: Prospective study of thyroid function testing at 4-6 weeks throughout 36 pregnancies in 28 women.

Disclosures: Dr. Besic had no relevant financial disclosures.

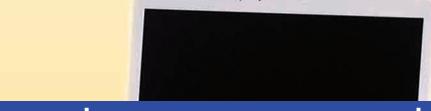
chairman Dr. Bryan McIver of the Mayo Clinic, Rochester, Minn., asked about the common practice of automatically giving a 25- to 30-mcg increase in levothyroxine dose after conception, rather than performing consecutive thyroid function tests throughout pregnancy in women with a history of thyroid cancer. Dr Besic said that more than one-third of the patients in his study did not need an increase in their dosage to maintain suppression. "However, TSH should not be elevated at all during pregnancy, and in our patients, despite our attempt to increase the dosage, some still had elevated levels."



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