Thyroid Disorder Guidelines Miss ACOG’s Mark

BY PATRICE WENDLING
Chicago Bureau

VERONA, ITALY — Newly developed consensus guidelines recommend thyroid-function screening in high-risk pregnant women, but stop short of calling for universal screening.

An international task force, under the auspices of the Endocrine Society, examined 10 key topics related to pregnancy and thyroid. The end result was an 86-page, single-spaced document encompassing 35 recommendations, many of which were reached after a diplomatic search for compromise. Dr. Daniel Glenoer said at a joint meeting of the Italian Association of Clinical Endocrinologists and the American Association of Clinical Endocrinologists. The difficulty stemmed from the paucity of prospective randomized trials in the field, the contrasting approaches of endocrinologists and ob/gyns on some controversial issues, and the appearance of additional data even as the task force was writing the guidelines. “Altogether, this effort represented a tremendous challenge that was much more difficult than anticipated,” said Dr. Glenoer, who represented the European Thyroid Association on the task force and is chief of the thyroid investigation clinic at the Centre Hôpitalier Universitaire Saint-Pierre, Brussels.

Despite compromises on many recommendations, the American College of Obstetricians and Gynecologists (ACOG) opted not to endorse the final guidelines. Dr. Sarah Kilpatrick, who represented ACOG on the task force, acknowledged that a great deal of time and work went into the guidelines. “Unfortunately, the data available are not consistently good, and there are still many differences of opinion between endocrinologists and perinatologists about how to interpret the data and best manage pregnant women,” Dr. Kilpatrick, professor and head of the department of obstetrics and gynecology at the University of Illinois at Chicago, said in an interview. ACOG did not endorse these guidelines because many of the recommendations made by the guidelines were based on poor evidence with a recommendations level of inconclusive.” For screening purposes, the task force identified high-risk women as those with a personal history of thyroid or autoimmune disorders; a family history of thyroid disorders; or a personal history of infertility or preterm delivery.

For maternal hyperthyroidism, which affects 2.5%-3% of preg-
nant women, the task force recommended a targeted case-finding approach at the first prenatal visit or at diagnosis of preg-
ancy. The preconception thyroid dosage should be adjusted to reach a serum thyroid-stimulating hormone (TSH) level no higher than 2.5 microU/L. The thyroid dosage usually needs to be increased by 4.8 weeks of gestation, and these patients may require a 30%-50% increase in dosage, said Dr. Glenoer.

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If overt hyperthyroidism is diagnosed during pregnancy, thyroid-function tests should be normalized as rapidly as possible, in view of the potential obstetric complications and risks for the offspring associated with undi-
closed prolonged hyperthyroidism. Because the dosage should be titrated to rapidly reach and thereafter maintain serum TSH concentrations of less than 2.5 microU/L in the first trimester or less than 3 mi-
croU/L in the second and third trimesters, or to trimester-specific normal TSH ranges, which, Dr. Glenoer admitted, haven’t been universally established.

There was a consensus against advising termination of preg-
nancy, even if overt hyperthyroidism is diagnosed late, he said. If a subnormal serum TSH concentration is detected, hyperthyroidism must be distinguished from both normal physiology and hyperemesis gravidarum because of the adverse effects of overt hyperthyroidism on mother and fetus. Antithyroid drug (ATD) therapy should be either initiated for those with a new diagnosis of hyperthyroidism resulting from Graves’ disease or adjusted for those with a prior history to maintain maternal free thyroxine levels in the trimester-specific normal pregnancy range if available, or near the upper limit of the nonpregnant refer-
ence range, he said.

Because it suggests that methimazole may be associated with congenital anomalies, the task force recommends propylthiouracil (PTU) as first-line medication, especially during the first trimester. Methimazole may be prescribed if PTU is not available, or if a patient can’t tolerate or has an adverse reaction to PTU.

The task force concluded that subtotal thyroidectomy may be indicated for maternal Graves disease if there are severe adverse reactions to ATD therapy, if per-
 sistently high ATD doses are required, or if a patient is nonadherent to ATD therapy and has uncontrolled hyperthyroidism.

The best time to perform surgery is the second trimester. There is no evidence that treat-
ing maternal hyperthyroidism improves pregnancy outcome, and it could potentially adversely affect the fetus, he said.

Mild Hyperthyroidism May Be Best Bet in Graves’ Pregnancy

BY HEIDI SPLSTEIN Senior Writer

PHOENIX — Infants are rarely born with suppressed thyroid function if their mothers have Graves’ disease but continue to take lower doses of thyroid medication during pregnancy, based on data from 249 pregnant Graves’ disease patients.

Maternal free thyroxine (FT4) levels just above normal (at least 1.9 ng/dL) were associated with normal FT4 levels in the newborn, Dr. Naoko Momotani said at the annual meeting of the American Thyroid Association.

Although previous research has suggested that a mother’s thyroid hormone level is linked to her newborn’s health, this study is the first to show such a relation-
ship, said Dr. Momotani of the Tokyo Health Service Association in Tokyo.

Graves’ disease involves overactivity of the entire thyroid gland, which can cause underactivity of the thyroid in the develop-
ing fetus. When a pregnant woman with Graves’ disease takes a thyr-
oxine medication, the TSH receptor antibodies are transferred to the fetus, which pre-
vents fetal hypothyroidism.

“Mothers who are taking T4 in lower doses are ideal for the mother but might be too much for the fetus,” Dr. Momotani said.

Keeping pregnant Graves’ disease pa-
tients in a mild hyperthyroid state may be a noninvasive way to care for these women and prevent thyroid problems in the fetus, he said.

The women in the study took an-
ti-thyroid drugs throughout pregnancy. The highest reported maternal FT4 lev-
els was 4.1 ng/dL. Overall, 41 fetuses had elevated TSH, but none had a vis-
bale goiter at birth.

There were no cases of below-normal fetal FT4 levels and only one case of el-
vated TSH in a fetus among women whose FT4 levels were greater than 1.9 ng/dL (that is, higher than the upper normal range of 1.2-1.9 ng/dL). By contrast, a total of 102 mothers had normal fetal T4 levels (0.6-1.2 ng/dL) at the time of delivery, and 23 of their in-
fants had low FT4, and/or high TSH lev-
els at birth. But only 1 of these 23 infants had an elevated TSH level when the in-
fant was screened for congenital hypothy-
roidism, and the mother’s FT4 in this case was 4.1 ng/dL. Overall, 41 fetuses were transferred to the fetus, which pre-
vents fetal hypothyroidism.

“The drugs that are ideal for the mother might be too much for the fetus,” Dr. Momotani said.

Majority of Post–Heart Transplant Pregnancies End in Live Births

BY JEFF EVANS
Senior Writer

BOSTON — Live births occurred in 70% of heart transplant recipients who became pregnant after surgery, according to a review of 36 patients with 60 singleton preg-
nancies reported to the National Trans-
plantation Pregnancy Registry.

Of 42 live-born children, 36 were healthy and developing well at the time of follow-up.

Three children were receiving medical management for cardiomypa-
thy, the same diagnosis for which their mothers received transplants. Among the other three children, one underwent a hy-
poplasia repair, one was treated for at-
tention-deficit hyperactivity disorder, and one died from a traumatic injury. Lisa A.

Coscia reported during a poster session at the 2006 World Transplant Congress.

These 42 children were born at a mean gestational age of 37 weeks (5 were pre-
mature) and with a mean birth weight of 2.67 kg. A cesarean section was performed in 14 deliveries. Neonatal complications developed in 11 cases.

In the 18 unsuccessful pregnancies, 11 fetuses were aborted spontaneously and 5 for therapeutic reasons. One woman had an ectopic pregnancy and another had a prior miscarriage, which was followed by a transplant. Ms. Coscia, a registered nurse in the depart-
mament of surgery at Temple University, Philadelphia.

The 36 patients conceived their preg-
nancies a mean of 5 years after their trans-
plants, although this ranged from as little as 0.2 years to as much as 15 years. They had an average age of 28 years at concep-
tion, ranging from 18 to 39 years.

During pregnancy, hypertension was the most common comorbidity (43%) among the women, followed by infections (14%), preeclampsia (11%), and gestational diabetes (8%).

Nine of the mothers (25%) died after pregnancy, although all of the deaths oc-
curred more than two years post partum. These deaths were attributed to cardiac ar-
est (two), acute rejection (two), and in one patient each, vasculopathy, athero-
sclerosis, sepsis, lymphoma, and non-
compliance. The other 27 mothers (75%) had adequate graft function at follow-up.

According to data collected by the U.S. Organ Procurement and Transplantation Network, the 5-year Kaplan-Meier pa-
tient survival rate for heart transplants performed in women between 1997 and 2004 (pregnancies not considered) is just over 69%.

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