

# Selenium Slows Chronic Thyroiditis in Pregnancy

BY PATRICE WENDLING  
Chicago Bureau

VERONA, ITALY — For the first time, selenium supplementation has been shown to lessen the progression of autoimmune chronic thyroiditis in pregnant women.

Pregnant women who are positive for thyroid peroxidase antibodies are prone to develop postpartum thyroid dysfunction and permanent hypothyroidism.

Selenium supplementation during and after pregnancy reduced the incidence of both conditions in a large prospective, randomized controlled trial of euthyroid pregnant women, Dr. Roberto Negro and associates reported in an award-winning poster at a joint meeting of the Italian Association of Clinical Endocrinologists and the American Association of Clinical Endocrinologists.

“Giving adequate selenium supplementation may reduce the inflammatory ac-

tion of the thyroid gland after delivery,” Dr. Negro said in an interview. “This is not sufficient to recommend this treatment for all pregnant women affected by chronic autoimmune thyroiditis, but it may be considered.”

Of the 2,143 women who participated in the study, 7.9% were positive for thyroid peroxidase antibodies (TPOAb). Of the TPOAb-positive women who both remained in the study and did not miscarry, Dr. Negro and associates randomized 77 to

200 mcg/day selenomethionine beginning at the 12th week of pregnancy until 12 months after delivery, and 74 to placebo. Of the TPOAb-negative women, 81 were age matched and served as the control. Thyroid function tests were performed at 20 and 30 weeks’ gestation, at delivery, and after delivery at months 1, 2, 5, 9, and 12.

Blood selenium concentrations were measured at the first endocrinologic visit (at an average 9.4 weeks’ gestation), at 20 and 30 weeks’ gestation, at delivery, and at 6 and 12 months after delivery. Thyroid ultrasound scans were performed by an independent radiologist at the first endocrinologic visit during pregnancy, at delivery, and at 12 months after delivery.

At baseline, there were no significant differences between the three groups in



**Postpartum thyroid problem rates were lower in women who took selenium supplements.**

DR. NEGRO

average age (28 years, 28 years, and 27 years, respectively), in free thyroxine levels, and in the time supplementation began (average 12 weeks). Significant differences were noted between groups in baseline thyroid-stimulating hormone (1.6 mIU/L, 1.7 mIU/L, and 0.9 mIU/L, respectively) and in those requiring levothyroxine during pregnancy (19.4%, 21.6%, and 2.5%, respectively).

At 12 months after delivery, rates of postpartum thyroid dysfunction (28.6% vs. 48.6%) and permanent hypothyroidism (11.7% vs. 20.3%) were significantly lower in women taking the selenium supplements than in placebo-treated patients, the authors reported.

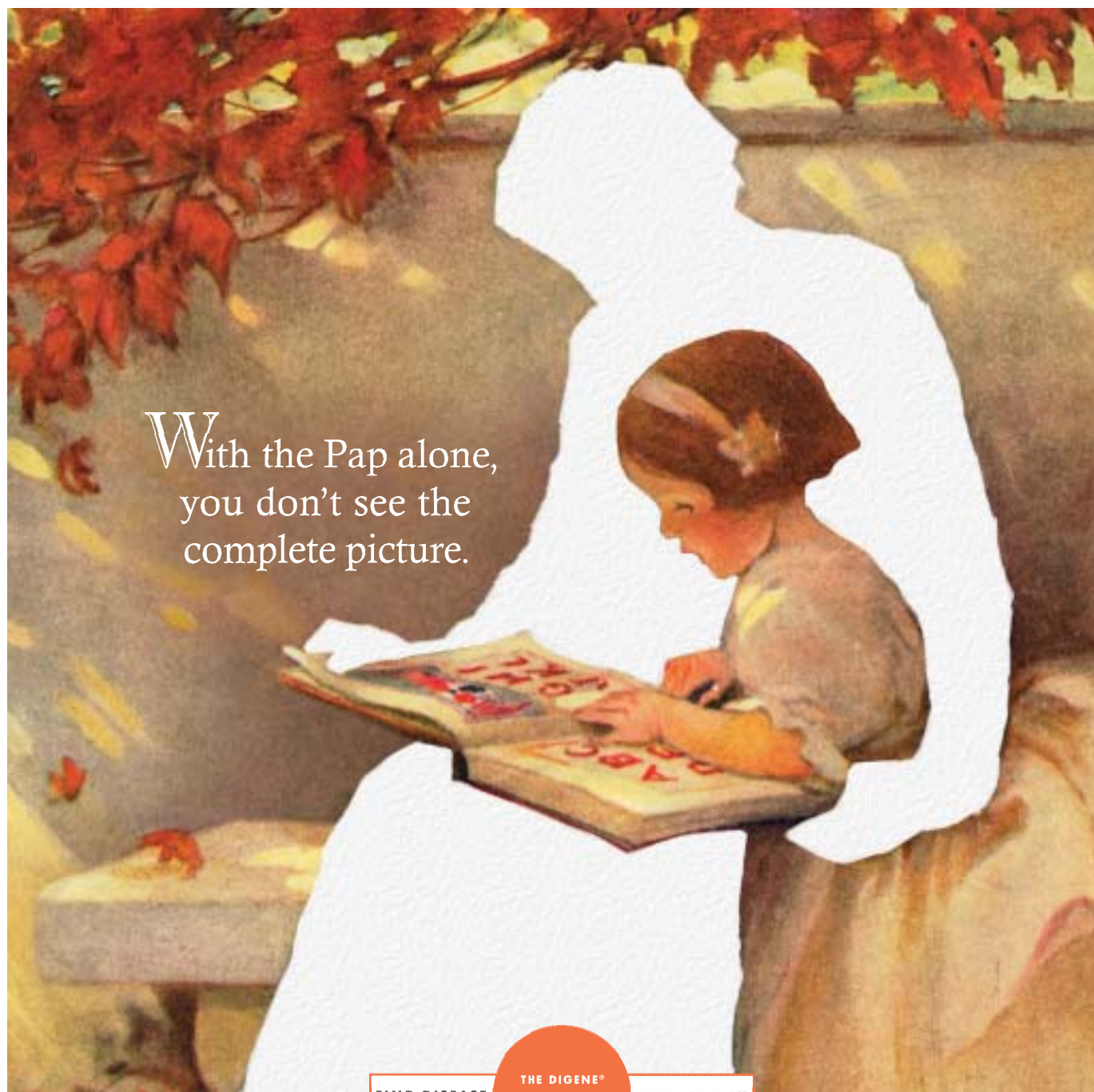
In addition, TPOAb titers were significantly lower in the supplement group compared with placebo-treated patients, with a 62.4% versus 43.9% reduction during pregnancy and lower titers during the postpartum period (323.2 kIU/L vs. 621.1 kIU/L).

When the ultrasound echogenicity patterns of the two groups were compared, the selenium-supplemented group displayed a significantly lower percentage of moderate to advanced thyroiditis (grades 2-3) at the end of the postpartum period (27.3% vs. 44.6%), the authors reported.

No side effects were reported in the mothers and no families have been recalled for newborn thyroid dysfunction, said Dr. Negro, of the endocrinology department at Azienda Ospedaliera “Vito Fazzi,” Lecce, Italy.

“Relatively high doses are needed to obtain a significant response on postpartum thyroid dysfunction,” he said.

Further investigations are required to know whether these beneficial effects are reversed if selenium supplementation is interrupted or whether they can be maintained for a long time if selenium is continued, the authors concluded. ■



With the Pap alone,  
you don't see the  
complete picture.

FIND DISEASE **THE DIGENE® HPV TEST** PREDICT RISK

DNAwithPAP

Even newer liquid-based cytology techniques can miss as much as 35% of CIN 3 or cancer.<sup>1</sup> But a Pap combined with The Digene® HPV Test\* detects the cause of high-grade cervical disease and cancer with sensitivity as high as 100%.<sup>2</sup> It can also identify women at risk of developing disease in the future.<sup>3</sup> So if you're not supplementing the Pap with The Digene® HPV Test in women age 30 and older, imagine what you might be missing.

1. ACOG Practice Bulletin, Clinical management guidelines for obstetrician-gynecologists. Number 61, April 2005. Human Papillomavirus. *Obstet Gynecol.* 2005;105:905-918. 2. Loricz AT, Richart RM. Human papillomavirus DNA testing as an adjunct to cervical screening programs. *Arch Pathol Lab Med.* 2003;127:959-966. 3. Wright TC, et al. Interim guidance for the use of human papillomavirus DNA testing as an adjunct to cervical cytology for screening. *Obstet Gynecol.* 2004;103:304-309.

\*The Digene® HPV Test was approved by the US FDA and is also known to laboratories and physicians as the “Hybrid Capture 2 High-Risk HPV DNA Test” and the “DNAwithPAP test.” This does not refer to the Digene® product that tests for several types of the virus commonly referred to as “low-risk HPV,” which is not associated with cervical cancer.