Abstract

Context: Recent studies have suggested that fetal microchimerism (transplacental passage of fetal cells followed by engraftment into maternal tissues) may play a role in the pathogenesis of autoimmune thyroid disease. If that is true, then parity should be a risk factor for autoimmune thyroid disease.

Objective: The objective of this study was to examine parity as a risk factor for autoimmune thyroid disease.

Design, Setting, and Participants: TSH, thyroid peroxidase antibody, and thyroglobulin antibody concentrations were measured on archived sera from 1045 female participants in a 1981 community health survey in Busselton, Western Australia.

Outcome Measures: Odds ratios (ORs) for positive thyroid antibodies (increased concentration of either antibody) or thyroid dysfunction (abnormal serum TSH) were used.

Results: After adjustment for age, women who had previously been pregnant did not have a significantly increased risk of positive thyroid antibodies [OR, 1.20; 95% confidence interval (CI), 0.74–1.97; P = 0.46], raised TSH (OR, 0.93; 95% CI, 0.46–1.87; P = 0.84), or reduced TSH (OR, 0.87; 95% CI, 0.33–2.30; P = 0.79) compared with women who had never been pregnant. For each additional pregnancy, the OR was 1.02 (95% CI, 0.94–1.11; P = 0.57) for positive antibodies, 1.02 (95% CI, 0.91–1.14; P = 0.67) for raised TSH, and 1.03 (95% CI, 0.87–1.22; P = 0.73) for reduced TSH. Analysis using number of live births gave similar results. The results were similar in younger and older women.

Conclusions: Parity is not a risk factor for thyroid autoimmunity or thyroid dysfunction. These data do not support a key pathogenic role for fetal microchimerism in chronic autoimmune thyroid disease.