Association of TSH concentrations and thyroid autoimmunity with IVF outcome in women with TSH concentrations within normal adult range

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Abstract

This study aimed to evaluate the association of TSH concentrations and presence of thyroid autoimmunity (TAI) with live birth rate in euthyroid women undergoing in vitro fertilization (IVF). This study of retrospective design included one hundred and fifty eight euthyroid women (TSH 0.5-4.5µIU/mL) that underwent IVF from January 2006 to December 2010. Thyroid parameters were measured on day 3 of the previous non-treatment cycle. Women were subgrouped and analyzed according to their TSH concentrations (low: 0.5-2.5 vs. high: 2.6-4.5µIU/mL) and TAI (present vs. absent). No difference in live birth rate was found between the TSH (low: 34.2% vs. high: 36.8%, P=0.763) or TAI (present: 26.7% vs. absent: 34.3%, P=0.568) subgroups. In conclusion, this study found no evidence that increased TSH concentrations or presence of TAI determined before IVF affect live birth rate in euthyroid women. A better insight to the role of thyroid function during application of IVF is needed.