

Introduction: Autoantibodies against thyroperoxidase (TPOAb), thyroid ultrasound (US) and laboratory assessment of thyroid function are crucial in the diagnostics of autoimmune thyroid disorders (AITD). The aim of this project was to analyse the relationship between TPOAb and US findings in pregnant women and in women after spontaneous abortion (SpA). Methods: Using a self-developed classification system for semi-quantitative assessment of thyroid disorders we analysed data of 186 pregnant women screened positive for thyroid disorders during first trimester of pregnancy and 119 women with history of recent early SpA. Statistical analysis was performed using Chi-square, Mann-Whitney and ANOVA tests. Results: Nearly half of the positively screened pregnant women had normal thyroid US (86/186, 46,2 %); thyroid nodules were found in 34 (18,3 %) and US signs of AITD in 66 (35,5 %). More than half of the TPOAb-positive pregnant women had normal thyroid US (71/131, 54,2 %). However, normal thyroid US was found only in 2/12 (16,6 %) of TPOAb-positive women after SpA ($p=0,029$). Pregnant women with pathological thyroid US had significantly higher serum concentrations of TPOAb compared to women with normal US (1487 kIU/l vs. 354 kIU/l; $p<0,001$). Furthermore, pregnant TPOAb-positive women with US signs of AITD had a higher frequency of premature delivery compared to women with normal thyroid US (9/60; 15,0 % vs. 2/71; 2,8 %; $p=0,029$). Conclusions: TPOAb-positivity correlates better with US image in women after SpA than in pregnant women. US is not sufficiently sensitive for AITD screening in pregnant women. However, it seems that the combination of TPOAb-positivity and pathological US image might carry an increased risk of premature delivery.