Abstract

While several past studies dealt with the effects of latent toxoplasmosis on the function of the thyroid gland and on the pregnancy separately, the former one with varied results, this work combines the two areas together with goals to determine whether the latent toxoplasmosis affects levels of antibodies against thyroid peroxidase (TPO) in the 1st trimester of pregnancy, to analyze the effect of toxoplasmosis on the levels of the thyrotrophic hormone and to learn whether the interactions between latent toxoplasmosis and autoimmune thyropathies affect conception, foetal development, length of pregnancy and mode of delivery in childbirth. The work follows on the recent years' discoveries of our laboratory that showed the latent toxoplasmosis to affect both the course of pregnancy and the prenatal development of a child. It also takes up directly on a screening of autoimmune thyropathies in pregnant women conducted in years 2006 to 2009 in General University Hospital. The retrospective study comprised of 1434 pregnant women who underwent serological examination as a part of the 1st trimester screening and whose serum was subsequently examined for toxoplasmosis. The data set obtained from medical databases contained results of serological screening of the mothers, ultrasound examination of the foetuses, information about conception, the course of pregnancy and the mode of delivery. Our results showed the Toxoplasma-positive women to have more often positive screening for anti-TPO over 500 mU/l. The effects on the overall screening of the thyroid gland and on the overall anti-TPO screening weren't observed. Toxoplasma-positive women had lower average level of thyrotrophic hormone than the negative controls. Toxoplasma-positive women underwent an in vitro fertilization more often than uninfected women. The highest number of IVF was observed in both Toxoplasma-positive and anti-TPO positive women. Anti-TPO positivity affected the prenatal development of a foetus in both Toxoplasma-positive and Toxoplasma-negative women, no effect was, however, found for the length of pregnancy as well as for the mode of delivery in both Toxoplasma-positive and Toxoplasma-negative groups of women. The results of this work are anticipated to contribute to many discussions in the area of clinical research.