

Abstract

The incidence of thyroid diseases in pregnancy in the Czech Republic reaches 10-15%. Emphasis on early diagnosis and treatment is laid not only during pregnancy but also in the time preceding conception due to the impact of thyroid diseases on fertility, the course of pregnancy, birth and fetal development. The aim of the dissertation was to assess the effectiveness and economical aspects of screening for thyroid disease in pregnancy and in women with fertility disorders in the conditions of the Czech Republic. The dissertation consists of four published studies. The first study is a prospective cross-sectional study of 200 positively screened pregnant women. In the study we come to conclusion that pregnant women who are at high- and low-risk for thyroid disease have similar clinical and laboratory characteristics and screening, currently focused only on risk groups, is ineffective. The second study of 5 223 pregnant women is a case-control study. We find that the age of women over 30 cannot be regarded as a risk factor for thyroid disease in pregnancy, although addition this age criterion to the case-finding screening strategy improve its efficiency and ATA (American Thyroid Association) include it in their guideline 2011. The third publication is a retrospective cross-sectional study of 188 pregnant women treated with levothyroxine who were followed and laboratory examined according to the recommended algorithm by ATA 2011 and ES (Endocrine Society) 2012. We come to a conclusion that laboratory examination in the third trimester doesn't leads to medically justified changes of levothyroxine therapy and only produce high costs. The fourth and last publication is a prospective cohort study of 258 women after spontaneous abortion. The study showed that screening for thyroid diseases after spontaneous abortion has positive effect on subsequent reproductive health (improves fertility) and is cost-saving strategy in terms of lowering subsequent infertility.

Key words: screening, hypothyroidism, pregnancy, thyroid stimulatory hormone, antibodies against thyreoperoxidase, fertility, costs, cost-effectiveness analysis