To Screen or not to Screen for Subclinical Hypothyroidism in Pregnancy?

Abstract:

Not unlike screening for gestational diabetes, controversy prevails over the value of screening for thyroid disease in pregnancy. Fortunately, overt hypothyroidism is rare in pregnancy (0.3-0.5%) because it is associated with infertility and increased rates of first trimester miscarriage. Studies suggest that obstetric complications such as hypertension, placental abruption, preterm delivery, perinatal morbidity and mortality are increased in women with hypothyroidism in pregnancy and there is evidence that the offspring of untreated mothers have neuropsychological and cognitive impairment.

Subclinical hypothyroidism (Elevated TSH and normal Free T4) is estimated to be present in 2-2.5% of pregnant women. It is not as clearly associated with adverse obstetric and neonatal outcome but there is some evidence that maternal subclinical hypothyroidism is associated with impaired psychomotor development in the offspring.

Most expert groups advise targeted screening of mothers who have risk factors for thyroid disease e.g. if symptomatic, residence in an area of iodine deficiency, family or personal history of thyroid disease, known Thyroid Peroxidase antibodies, Type I diabetes mellitus, history of preterm labour or miscarriage, history of head or neck radiation, BMI > 40 kg/m2, infertility and Age >35 years. It is estimated, however, that one third of cases will be missed with targeted screening and some experts are calling for universal screening claiming that this will be more cost effective with an estimated saving of more than 8 million dollars for every 100,000 women screened. This study was designed to examine the impact of screening and treatment on IQ at 5 years of age not designed to examine for all of these end points. There is currently another RCT focusing on the intellectual function of offspring at five years of age will hopefully shed more light on the subject. Secondary outcomes include motor and psychomotor development, behavioural and social competences and some obstetric complications.

The paper by Lazarus et al. is important in the interim because it provides randomized controlled data on neurocognitive outcome following screening for subclinical hypothyroidism and treatment with thyroxine. Bloods were repeated six weeks later and dose adjusted to a target TSH of 0.1-1.0 mIU/L. The primary study outcome was IQ at 3 years of age in the children of the women who tested positive.

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