

Please note: Maternal thyroid function appears to be related to breech presentation at term, yet we do not understand how or why. Further research is needed to clarify that relationship between a mother's thyroid function and her baby's fetal position.

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Maternal thyroid function during gestation is related to breech presentation at term.

Kuppens SM, Kooistra L, Wijnen HA, Crawford S, Vader HL, Hasaart TH, Oei SG, Pop VJ.

Department of Obstetrics and Gynecology, Catharina Hospital, Eindhoven.

Abstract

OBJECTIVE: To study the relationship between suboptimal maternal thyroid function during gestation and breech presentation at term.

DESIGN: Prospective follow-up study during three trimesters of gestation.

PATIENTS: A total of 1058 Dutch Caucasian healthy pregnant women were prospectively followed from 12 weeks gestation until term (>or=37 weeks) delivery.

MEASUREMENTS: Maternal thyroid parameters [TSH, free T4 (FT4) and auto-antibodies to thyroid peroxidase] were assessed at 12, 24 and 36 weeks gestation as well as foetal presentation at term.

RESULTS: At term, 58 women (5.5%) presented in breech. Compared with women with foetuses in the cephalic position, those women who presented in breech at term had significantly higher TSH concentrations, but only at 36 weeks gestation ($P = 0.007$). No between group differences were obtained for FT4 level at any assessment. The prevalence of breech presentation in the subgroup of women with TSH >or= 2.5 mIU/l (90th percentile) at 36 weeks gestation was 11%, compared with 4.8% in the women with TSH < 2.50 mIU/l ($P = 0.006$). Women with TSH below the 5th percentile had no breech presentations. Breech position was significantly and independently related to high maternal TSH concentration (>or=2.5 mIU/l) at 36 weeks gestation (O.R.: 2.23, 95% CI: 1.14-4.39), but not at 12 and 24 weeks gestation.

CONCLUSIONS: Women with TSH levels above 2.5 mIU/l during end gestation are at risk for breech presentation, and as such for obstetric complications.

<http://www.ncbi.nlm.nih.gov/pubmed/19832853>

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Maternal thyroid hormones in early pregnancy and risk of breech presentation.

Salehidobakhshari M, Bamforth F, Burstyn I.

Department of Medicine, Faculty of Medicine and Dentistry, University of Alberta, Edmonton, AB, Canada.

Abstract

OBJECTIVE: To evaluate the relationship between breech presentation at term (\geq 37 weeks of gestation) and maternal thyroid hormone activity in early gestation.

METHODS: We conducted a case-control study of thyroid hormone activity in 179 women who delivered a live term infant in breech presentation (cases) and 849 women who delivered a live term infant in cephalic presentation (control subjects). We used serum samples from prenatal screening at 15 to 16 weeks of gestation in 2006 and 2007 in Edmonton, Alberta. Maternal free thyroxin (fT4) and thyroid-stimulating hormone (TSH) were assayed. Logistic regression was used to estimate the odds of breech presentation in relation to the levels of thyroid hormones while controlling for potential confounders.

RESULTS: There were no significant differences between the breech and cephalic groups when comparing fT4 levels (OR 0.94 per pmol/L; 95% CI 0.88 to 1.00) or TSH levels (OR 1.16 per mU/L; 95% CI 0.97 to 1.38) levels, after adjustment for all potential confounders. Segregating fT4 and TSH into quintiles showed the same pattern. Neither hypothyroidism nor hyperthyroidism was associated with risk of breech presentation.

CONCLUSION: Our results provide evidence that maternal thyroid hormone levels at 15 to 16 weeks of gestation are not related to risk of breech presentation at birth in term infants.