

IN PREGNANT WOMEN RECEIVING LEVOthyroxine, HIGHER 3RD TRIMESTER TSH AND MATERNAL UNDERWEIGHT ARE ASSOCIATED WITH CESAREAN SECTION DUE TO FOETAL MALPOSITION

Miñambres, I; Aulinas, A; Claramonte, M; Martínez, S; García-Patterson, A; Adelantado, JM; Corcoy, R.
Endocrinology and Nutrition Department, Gynecology and Obstetrics Department, Hospital de la Santa Creu i Sant Pau, Barcelona Spain

Context and Aim

In the background population maternal TSH levels >2.5 mUI/L in late pregnancy have been reported to be associated to breech presentation. This has not been addressed in women treated with levothyroxine.

Our aim was to study the relationship of 3rd trimester maternal TSH with cesarean section (CS) due to foetal malposition in pregnant women treated with levothyroxine since before pregnancy.

Patients

- 222 women with primary pregestational hypothyroidism or differentiated thyroid carcinoma treated with levothyroxine since before pregnancy and delivering at a gestational age of 22 weeks or more.
- Exclusion criteria: **1)** Pregestational diabetes mellitus, **2)** Multiple pregnancies

SETTING:

- Tertiary care centre in Barcelona, Spain.

Results

MATERNAL CHARACTERISTICS

- Age 33 (30-36) years
- BMI 23.33 (21.4-23.8) Kg/m²
- BMI classification:
 - <18.5: 2.3%
 - 18.5-24.9: 61.6%
 - 25-29.9: 21.8%
 - 30-34.9: 11.6%
 - 35-39.99: 2.3 %
 - >40: 0.5%
- 3rd trimester TSH: 1.5 (0.3-2.6)
- Nulliparity: 51.4%

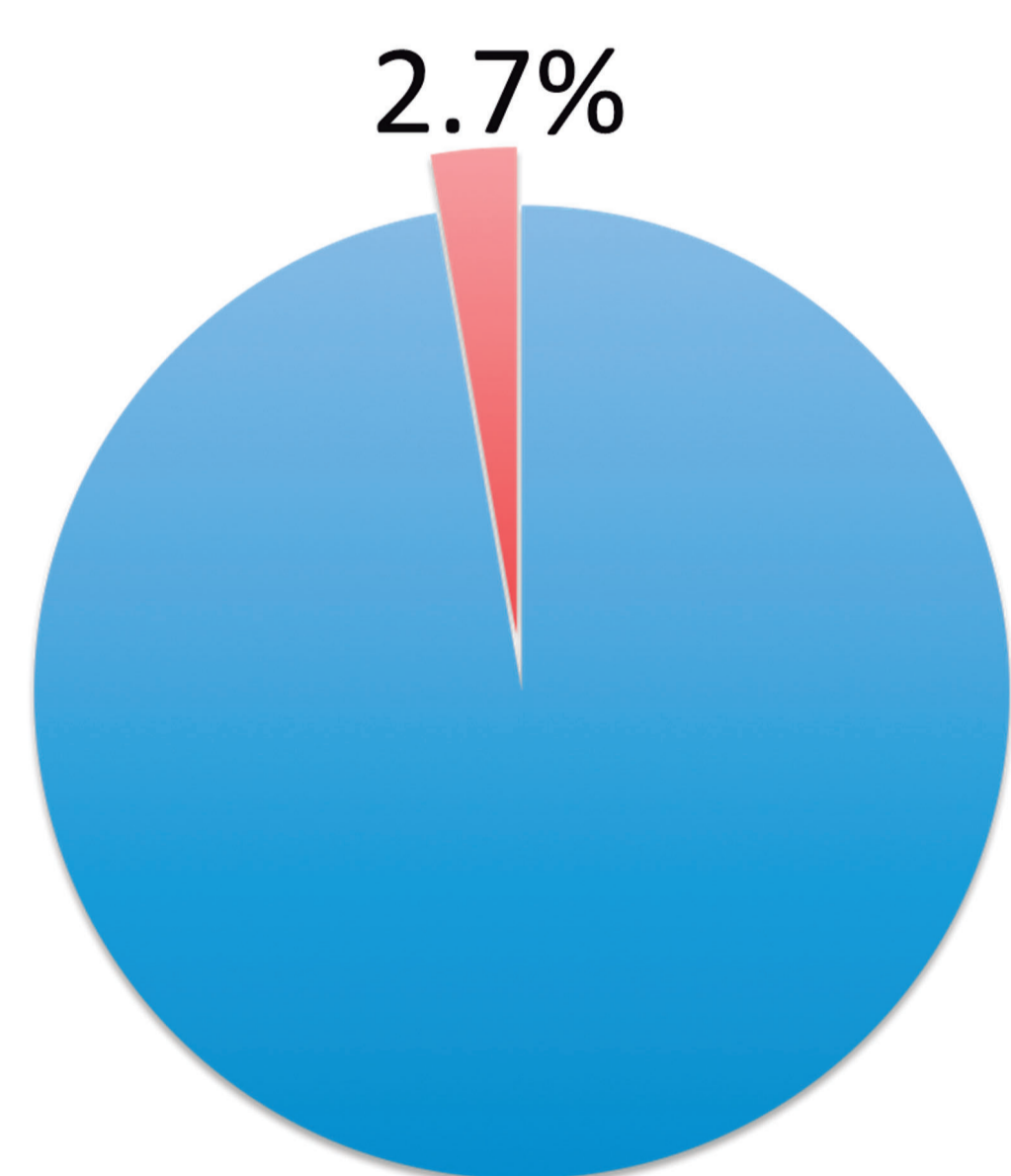
Maternal thyroid disease (%)

- Primary hypothyroidism: 51.9
- Graves disease: 29.7
- Differentiated thyroid Ca: 15.3
- Nodular thyroid disease: 3.2

PREGNANCY CHARACTERISTICS:

- GA at delivery: 40 (39-41) weeks
- Sex: 51.6% females
- Birth weight: 3220 (2945-3502) gr
- Birth weight for GA:
 - Small 8.7%
 - Adequate 81.6%
 - Large 9.6%
- Major malformations: 3.3%

CS DUE TO FOETAL MALPOSITION



Methods

- Retrospective cohort study
- Outcome measure: CS due to foetal malposition.
- Potential predictors:
 - 3rd trimester maternal TSH
 - maternal age
 - body mass index (BMI) classification
 - nulliparity
 - gestational age (GA) at delivery
 - foetal sex
 - birth weight
 - small/adequate/large weight for GA
 - major malformations

Statistics:

- Variables expressed as median (P25-P75) or %.
- Logistic regression analysis with CS due to foetal malposition as the dependent variable and all the potential abovementioned predictors. Different sensitivity analysis were performed.

LOGISTIC REGRESSION ANALYSIS TO PREDICT CS DUE TO FOETAL MALPOSITION:

	OR (CI 95)
• 3 rd trimester maternal TSH	1.29 (1.1-1.5)
• Maternal age	
• Maternal underweight	13.9 (1.17-165.5)
• Nulliparity	
• GA at delivery	
• Foetal sex	
• Birth weight	
• Small/adequate/large weight for GA	
• Major malformations	

Conclusions

In women receiving pregestational treatment with levothyroxine, maternal 3rd trimester TSH and underweight are predictors of CS due to foetal malposition. This extends the findings in the general obstetric population to women receiving treatment with levothyroxine.