

# Hyperthyroidism in a pregnant, previously hypothyroid patient.

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Servicio Canario de la Salud



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## Case report

An 33 year-old woman with a two-year history of hypothyroidism treated with 75 mcg of levothyroxine presented in her 9th week of gestation with fatigue, sweating, palpitations and nervousness.

### Physical examination

Diffuse goitre, tachycardia (110 bpm) and distal tremor.

### Laboratory tests

· TSH <0.04 mU/L (Normal range: 0.34-5 mU/l), free T4 1.66 pg/ml (Normal range: 0.6-1.6 pg/ml).

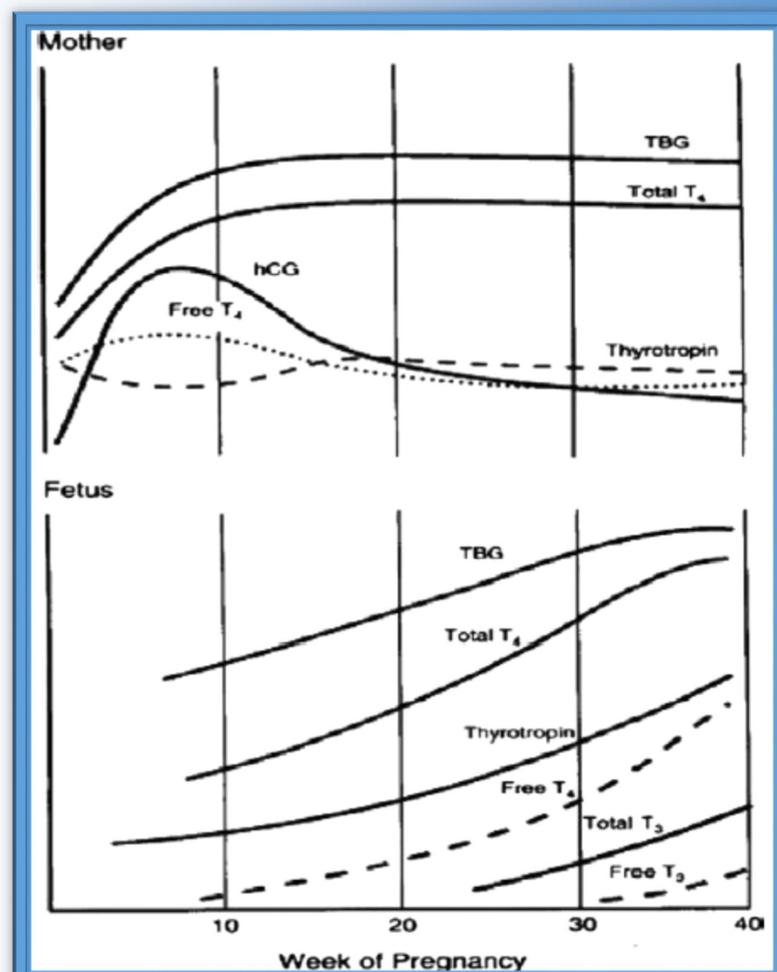
### Imaging

· Thyroid ultrasound: global enlargement; an 8 mm hyperechoic nodule in the right thyroid lobe.

## Evolution

Levothyroxine dose was halved. Two weeks later hyperthyroidism worsened (TSH 0.01 mU/L, free T4 4.22 pg/ml, total T3 3.9 ng/ml). TPO and TSI antibodies were positive. Levothyroxine was stopped and 100 mg/d propylthiouracil (PTU) was started; further doses changes were required. In the third trimester of pregnancy TSH was still suppressed, but T3 and free T4 were in the normal range.

Cesarean delivery was performed at 41 weeks. Anti-thyroid treatment was continued and 7,5 mCi radioiodine was given one year after delivery, due to persistent hyperthyroidism. Two months later, the patient developed hypothyroidism, so levothyroxine was resumed.



Evolution of thyroid markers along pregnancy on the mother and the fetus

| Date                          | 2 years before pregnancy | 9th week of gestation | 11th week of gestation | 23th week of gestation | 31th week of gestation | 39th week of gestation | 2 week after delivery | 1 year after delivery | 2 months after I131 |
|-------------------------------|--------------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|-----------------------|-----------------------|---------------------|
| TSH (mU/L)<br>(0.34-5 mU/l)   | 1,2                      | <0,004                | 0,01                   | 0,02                   | 0,01                   | 0,3                    | 0,1                   |                       | 20,99               |
| T4 (pg/mL)<br>(0,6-1,6 pg/mL) |                          | 1,66                  | 4,22                   | 2,96                   | 1,15                   | 1                      | 1,6                   |                       | 0,15                |
| T3 (pg/mL)<br>(1,4-4,4 pg/mL) |                          |                       |                        | 4,8                    | 2,96                   | 2                      | 2,26                  |                       |                     |
| Other                         |                          |                       | TPO, TSI (+)           |                        |                        |                        |                       |                       |                     |
| Treatment                     | Eutirox 75mcg            | Eutirox 75mcg         | Eutirox 37,5mcg        | PTU 100mg/d            | PTU 100mg/d            | PTU 100mg/d            | Tirodril 2-3 pills    | Tirodril 2-3 pills    | None                |
| Treatment                     |                          | Eutirox               | Eutirox stopped;       |                        |                        |                        |                       | 7,5 mCi I131          | Eutirox             |

## Discussion

Conversion of autoimmune hypo- to hyperthyroidism is exceptional during pregnancy. To our knowledge, there are only three cases previously reported.

Although conversion is exceptional on pregnancy, clinical and thyroid function evaluation should be recommended before modification of levothyroxine dose.