

**A case of fetal goiter : prenatal diagnosis, intrauterine treatment and pregnancy follow up**

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**Objective**

Fetal goiter is found in about 1 in 5, 000 births, usually in association with maternal Graves's disease, due to trans placental passage of high levels of thyroid stimulating antibodies or of anti-thyroid drugs. The intrauterine recognition and treatment of congenital goitrous hypothyroidism may not only reduce the obstetric complications associated with large goiters, but possibly improve the prognosis for normal growth and mental development of affected fetuses



**Methods**

A 28-year-old Caucasian woman in her second ongoing pregnancy 21 weeks, was sent from another clinic to do genetic amniocentesis due to unexplained polyhydramnios. First pregnancy unexplained polyhydramnios, rupture of membrane, placenta abruption at 24 weeks, emergency C/S, death of fetus.

Since the 9th week of pregnancy, prescribed by an endocrinologist she has been receiving Proturil (Propylthiuracil) due to thyrotoxicosis, in a daily dose of 150 mg. Since the 20th week, polyhydramnios has been diagnosed. An ultrasound examination in DDC revealed an enlarged fetal thyroid gland, bilobed symmetrical solid mass in the anterior aspect of the fetal neck with an approximate area of 1.36 cm<sup>2</sup>. The fetal head was extended and amniotic fluid index (AFI) was 35 cm. The fetal stomach appeared quite small. The fetal heart rate 172 bpm. No other abnormality was noted in the fetus and there were good fetal movements. The pregnant woman complained of shortness of breath, a feeling of heaviness in the pelvis.



**Results**

At 22 weeks 0 days, the first amnioreduction was performed, fetal blood was obtained by cordocentesis, thyroid hormones were determined (TSH-25.48  $\mu$ IU/ml T4-0.62 ng/dl T3-1.9 pg/ml).

Repeated amnioreduction were performed at 25 and 28 weeks. After both interventions, Levothyroxine sodium was injected into the amniotic fluid in an amount corresponding to the weight of the fetus. After reduction and cancellation of the dose of Propylthiuracil, in the 3rd trimester the volume of amniotic fluid was within the normal range, the volume of the thyroid gland of the fetus returned to the size relevant to the gestational age. Planned caesarean section was done at 36 w 1 d, a healthy boy was born under spinal anesthesia without complications, Apgar score 8/9. Thyroid hormones were determined 2 hours after birth (TSH-18.31  $\mu$ IU/ml T4-1.92 ng/dl). Tests were repeated 24 hours after birth (TSH-4.56  $\mu$ IU/ml T4-2.67 ng/dl).



At this moment, the boy is 6 months old, completely healthy, with age-appropriate neurodevelopment, under the supervision of an endocrinologist.

**Conclusion**

Despite the rarity of the disease, with correct and timely diagnosis and intrauterine treatment, it is possible to maintain pregnancy and get a healthy newborn.



**After treatment**

