17th World Congress in Fetal Medicine

A case of fetal Graves disease

Theodora M, Maritsa V, Assimakopoulos G, Kataras T, Psarakis A, Antsaklis P, Sindos S, Daskalakis G
1st Dpt Obstetrics Gynecology, National and Kapodistrian University of Athens Greecs, Athens, Greece

Objective

The purpose of this presentation is to outline the role of ultrasound in the management of Fetal graves disease. Neonatal autoimmune hyperthyroidism (neonatal Graves disease [GD]) is a rare but serious disorder that is generally transient, occurring in only about 2% of the offspring of mothers with GD.

Methods

A 32 year old, para 2 lady was referred to us at 26 weeks gestation due to fetal supraventricular tachycardia and fetal hydrops. Medical history was unremarkable except for a total thyroidectomy due to Graves disease six years before the current admission. First uncomplicated pregnancy was six years prior to that. Ultrasonographic examination of the fetus revealed fetal supraventricular tachycardia. Fetal echocardiogram revealed no structural heart abnormalities. In order to control fetal tachycardia, mother was treated with oral digoxin with starting dose at 25mg /day and gradual increase of the dose in order to reach therapeutic levels in maternal serum(1. 1-1. 5). The patient was under continuous heart and rhythm monitoring while taking digoxin. Due to maternal medical history (Graves disease) our patient underwent a full thyroid work up (blood test, thyroid u/s). Thyroid function was normal except high titers of TRAbS (stimulating anti thyroid Antibodies).

Results

Ultrasound examination of the fetus revealed fetal goitre and hydrops. Methimazole 20mg daily orally was administrated to the mother in order to block fetal thyroid function. After three weeks of administration of digoxin and methimazole, although fetal tachycardia was controlled, the fetus was still hydropic. The fetal thyroid size was still increased. Fetal blood was obtained after cordosentesis and thyroid function and TRAbS titres were measured. The fetus had high titers of TRAbs which explained the condition. After 31 weeks gestation, delivery by CS was indicated mainly due to excessive pleural fluid accumulation and abnormal fetal Doppler. A hydropic male weighing 1560g was delivered and admitted to NICU. Methimazole was administered to the newborn and the hydrops was controlled.

Conclusion

Fetuses of mothers with Graves disease may experience hypothyroidism or hyperthyroidism due to transplacental transfer of antithyroid drugs (ATD) or anti-TSH receptor antibodies, respectively. Clinical fetal/neonatal hyperthyroidism occurs in only 1%-5% of mothers with active or past history of Graves. Early diagnosis is essential to successful management.