THE DIAGNOSIS OF SYSTEMIC DISEASE IN A PREGNANT WOMAN BASED ON ULTRASOUND FINDINGS

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Introduction: Our case report describes a diagnosis of systemic disease in a pregnant woman based on ultrasound findings in the fetus.

Case: Patient, 30 years old, II.para, in history there is spontaneous stillbirth (2008, 35th week of pregnancy, the cause of fetal death was concluded as suspicious thrombosis of the umbilical cord), followed by Caesarian section (2009, 38th week of pregnancy). After the second birth she underwent deep venous thrombosis with a pulmonary embolism and thrombophilia (mutation of genes for clotting factors I, VIII, IX and PAI-1) was diagnosed. In 2014 she spontaneously conceived and from the beginning of the pregnancy Fraxiparine 0.4ml s.c. was applied during the entire pregnancy. Blood group was A RhD negative, screening of irregular anti-erythrocyte antibodies was negative. Combined screening in the first trimester of pregnancy was negative (risk of trisomy 21, 18 and 13 were negative) and no morphological defects in the fetus were found, as well the detailed morphology of the fetus by ultrasound examination at 20 to 22 weeks was normal.

During regular ultrasound examination in the 27th week, fetal bradycardia was observed and the patient was sent by her gynecologists to the Centre of Fetal medicine and Ultrasound Diagnosis. Specialized ultrasound examination of the fetal heart was performed and a children's cardiologist diagnosed complete atrio-ventricular block (IIIrd degree of atrioventricular block, atrial rate 133-145 / min., the frequency of ventricular 50 / min.) with signs of heart failure and generalized hydrops of fetus. The diagnosis was subsequently verified in a specialized center for Pediatric cardiology at the University Hospital Brno and the patient was informed about the current status and prognosis. In the 28th week of pregnancy applied for termination of the pregnancy by induced abortion. A pharmacologically induced abortion was performed and the fetus of female sex, weight 1655 g, length 40cm was aborted. The pathological-anatomical autopsy of the fetus didn’t describe any morphological defects. The patient received RhD alloimmunization prophylaxis before the abortion (Immunoglobulin G anti-D 625 Ul i.m.).

During hospitalization antibodies ENA, anti-Ro(SS-A), anti-La(SS-B) were detected in this patient, which raised suspicion of undetected systemic disease, probably Systemic lupus erythematosus or Sjogren syndrome. Neonatal lupus erythematosus (NLE) is a rare disease of the fetus and newborn, which is due to the transition of certain maternal autoantibodies (anti SS-A / Ro, anti SS-B / La) through the placenta into the fetal circulation. It is most commonly manifested as a congenital cardiac block and lupus rash. Congenital cardiac block of the fetus because of neonatal lupus erythematosus is present in 2% of mothers with positive-Ro(SS-A), anti-La(SS-B).

Risk factors for the development of congenital cardiac block:
1) a history of childbirth with congenital atrio-ventricular blockage
2) positive anti-Ro(SS-A), anti-La(SS-B) simultaneously
3) presence of anti-Ro and anti-La Ro52 directed against the antigen

The prognosis of Ith and IIth degree blockage is quite good, the blockage of the IIIrd degree is irreversible, and the prognosis is therefore inauspicious.

Conclusion:
Ultrasound diagnosis of complete atrio-ventricular block of the fetus in our case report enabled diagnosis of previously undetected systemic disease in pregnant woman (Sjogren syndrome).

It is very important to pay attention to the examination of the fetal heart rate and persisting abnormal findings should be indicated for a specialized ultrasound examination of the fetal heart by a children's cardiologist.
If autoantibodies anti-Ro(SS-A), anti-La(SS-B) are detected in the woman in early pregnancy, it is advisable to perform a specialized ultrasound examination of the fetal heart and a children's cardiologist consultation in the 14th week. Congenital atrioventricular block in the fetus occurs in 2% of cases, the risk of recurrence during the next pregnancy is 20%.