Hydrops fetalis and Down syndrome: Ultrasound and prenatal diagnosis in the first trimester

Bogavac M , Ilić Đ, Tatić Ž, Jakovljević B

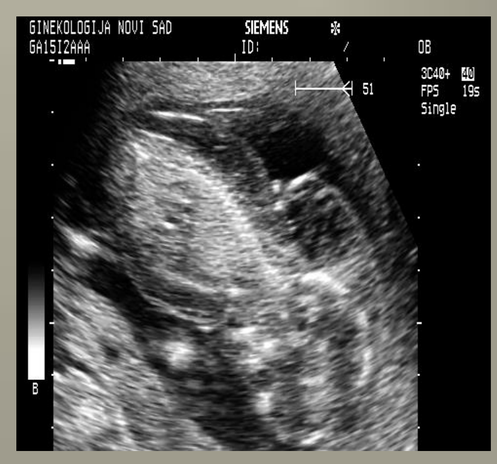
University of Novi Sad, Medical faculty, University Clinical centre of Vojvodina Novi Sad, Department of obstetrics and gynecology

Introduction: Fetal hydrops may be present as a result of any number of fetal disorders. The incidence of fetal hydrops occurs in approximately 1 out of 2500–3000 pregnancies.
The reasons for fetal hydrops are infections, chromosomal abnormalities, genetic syndromes (sy turner and trisomy of 13, 16, 18 and 21 chromosome), structural anomalies and fetal tumors.

Objective: The aim of this issue concerns presentation of prenatal detection of fetal hydrops and the general role of the first trimester screening as a screening tool in diagnosis of fetal congenital anomalies.

Methods: A case of the first trimester pregnancy was presented, the ultrasound diagnosis of fetal hydrops confirmed with a prenatal test and amniocentesis - Down's syndrome. After a discussion with the parents an option of pregnancy termination was offered. Medical abortion was performed.

THE RESULTS-CASE STUDY: This is one of the cases from the medical record - fetal hydrops diagnosed in 13.4 WG during the first trimester scanning. Ultrasound examination showed a gestational age of 13.4 WG. Generalized hydrops fetus with an accumulation of fluid in the abdomen was present. The nuchal fold was 13 mm. On the ultrasound examination, the flow through the ductus venosis with a reverse wave was present. Fetal heart rate was 144 in minute.. Trofoblast was on the posterior wall of the uterus , with no visible morphological changes. The Amount of the amniotic fluid was normal. The prenatal test with a fetal fraction of 12%. indicated a high risk of Tr 21. An early amniocentesis was performed to determine the karyotype of the fetus . The result of the amniocentesis confirmed that it is Down syndrome - trisomy of chromosome 21 and a normal number of chromosomes 13 and 18.
A classic completion of pregnancy was performed, and curettement as sent to cytogenetic analysis.
Cytogenetic analysis revealed abnormal karyotype.



Conclusion: The case study points to the importance of ultrasound screening in the first trimester as the first method of choice in early diagnosis of fetal hydrops, associated with high rates of karyotype abnormality such as Down syndrome.