

Transitory pleural effusion in a Trisomy 21 fetus at 14 weeks' gestation: case report

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Introduction

Fetal pleural effusions are important because they may indicate an underlying serious problem, such as chromosomal abnormalities, viral infection or cardiac anomaly. A case of a trisomy 21 fetus complicated with transitory pleural effusion at 14 weeks of gestation is described.

Case Report

A 25-year-old woman, gravida 3, para 2, Rh positive, was referred at 13 weeks' gestation for prenatal follow-up. No abnormal sonographic findings were detected. The fetal biparietal diameter (BPD) measured at 250 mm, corresponding with a gestational age of 13 weeks. Maternal blood samples were examined for cytomegalovirus, toxoplasma gondii and rubella infection, and showed no evidence of recent infection. Ultrasonography performed at 14 weeks' gestation revealed bilateral fetal pleural effusion (Fig. 1) but one week later did not. Amniocentesis performed at the same time documented trisomy 21 (47XX +21). After genetic consultation, the pregnancy was interrupted at 17 weeks of gestation. Chromosome analyses of the patient and her husband showed normal karyotype.

Discussion

When fluid is found in the fetal chest, a number of other fetal problems must be considered. Congenital chylothorax is the most frequent cause of fetal pleural effusion (hydrothorax) seen in the fetal period, excluding hydrops fetalis as well as intrauterine infection [1]. An association between two types of chromosomal abnormalities and congenital chylothorax in the neonatal period has been reported. One is 45, X (Turner syndrome), which has been shown to include malformations of lymphatic vessels [1, 2]. The other is trisomy 21 (Down's syndrome). Pleural effusion in the fetus with chromosomal abnormalities can be diagnosed by transvaginal ultrasound as early as eight weeks' gestation [2]. In the present case, transitory pleural effusion lasting for no more than two weeks detected by ultrasound ex-



Figure 1 — Transverse section of fetal thorax showing bilateral pleural effusion

amination led to the diagnosis of trisomy 21. Chromosomal analysis should not be excluded from the workup of even transitory pleural effusion in the early stage of pregnancy because the discovery of aneuploidy may greatly alter prenatal counseling and perinatal management.

References

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