A case report of a fetal hydrothorax treated with thoracentesis and pleuroamniotique shunt
Karçalıncaba D, Kutucan H, Özdemir H, Turgut E, Çalış P
Gazi University Faculty of Medicine Hospital, Ankara, Turkey

Objective
Non immune hydrops fetalis can be seen in 1/3000 fetuses. It is described as a collection of fluid in at least two body cavities or one body cavity with subcutaneous oedema. Chromosomal abnormalities, skeletal dysplasies and syndromes, heart failure and infections are the main reasons. We present a case of fetal hydrothorax treated with thoracentesis and pleuroamniotique shunt.

Methods
This is a case report.

Results
36 year old woman, gravida 4, parity 2, diagnosed at 28 weeks of gestation with a bilateral fetal hydrothorax and subcutaneous oedema. She a previous pregnancy complicated by a fetal hydrothorax which required thoracentesis in the third trimester. After delivery she was diagnosed as Lacrimo Auriculo Dento Digital (LADD) syndrome. She has unilateral kidney and hearing impairment. Karyotyping and the molecular analyse of FGFR2 gene for the first child was normal. During this pregnancy, The screening for chromosomal abnormalities was low risk, the second trimester scan did not reveal fetal abnormality. The pregnancy was complicated by a gestational diabetes on diet. At 28 weeks of gestation, there was a fetal subcutaneous oedema, severe pleural effusion and cardiac hypertrophy. The amiotic fluid was of a normal amount and the Doppler studies were within the normal range. A Thoracentesis was performed with aspiration of 115cc of a serous fluid. Parvovirus, Rubella, CMV, VDRL PCR were searched in the the pleural fluid and these tests were negative. A cordocentesis was also performed for karyotyping. During the follo-up, there was a recurrance of the pleural effusion requiring a pleuro-amniotic shunting. Four days after the invasive procedure, the patient went into labor with a delivery of a 1790 g, male baby. The baby was admitted in the neonatal intensive care unit (NICU) and bilateral pleural drainage were placed for one week. Somatostatine treatment with albumine replacement was started after the removal of the pleural drainage. The Karyotype came back as normal and the CGH-Array showed a deletion at 5q11. 1 band, PARP8 gene. This deletion has been rarely reported in literature and has not been associated with any clinical findings and classified as indefinetd clinical sense of copy number variation (CNV).

Conclusion
Non immune hydrops fetalis has usually a bad prognosis especially fetuses with large effusions and pulmonary hypoplasia as a result of undrained large pleural effusions may cause neonatal mortality. We believe that intrauterine thoracentesis which is a relatively simple procedure for mothers and fetuses and should be the initial part of the treatment of a primary fetal hydrothorax. Pleuroamniotic shunting may be beneficial in cases that require repetitive thoracenteses to prevent pulmonary hypoplasia. A deletion at 5q11. 1 band, PARP8 gene may be related to familial non immune hydrops fetalis.