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CASE REPORT**Hydrops Fetalis**

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Abstract

Objective: To report cases of hydrops fetalis

Method: Case report

Results: The case was a female patient aged 36 years, with a diagnosis of G3P1A1H1 gravid 23-24 weeks + Hydrops Fetalis + 1x SC former. On ultrasound examination at 23-24 weeks of age, fetal biometry was found; BPD: 58.9 mm, HC: 211.0 mm, AC: 202.5 mm, FL: 44.4 mm, HL: 40.7 mm, EFW: 417 gr, SDP: 12.79 cm, FHR: 162x / minute, shows anasarcoma edema (+), hydrothoric (+), ascites (+), impression: gravid 23-24 weeks according to biometry, live fetus, Hydrops fetalis, polyhydramnios. Then amniocentesis was carried out followed by a chromosome analysis examination carried out by the G-Banding technique. The chromosomes from 18 cells from 3 different cell culture preparations were carried out and obtained the number of chromosomes in each cell studied was 46, XY, which means that the number of chromosomes is 46. fruit with the fetal sex chromosome is XY. No major structural abnormalities were seen. At 25-26 weeks of gestation, the baby was born by SC with BBL: 2100 gr, PB: 32 cm, maceration degrees 2- 3, Hydrops Fetalis.

Conclusion: Hydrops Fetalis is an abnormal accumulation of fluid in 2 or more compartments of the fetal body. The prenatal diagnosis of Hydrops Fetalis can be confirmed by fetal imaging, maternal hematology, amniocentesis.

Keywords: Hydrops Fetalis, polyhydramnios

INTRODUCTION

Hydrops Fetalis in Latin for edema in the fetus. Ballantyne was the first to describe Hydrops Fetalis in 1892, although the condition has been known for nearly 200 years. Fetal hydrops is a serious fetal condition defined as abnormal accumulation of fluid in 2 or more compartments, including ascites, pleural effusions, pericardial effusions, and skin edema. In some patients, this may coexist with polyhydramnios and placental edema.^{1,2,3}

The three main mechanisms associated with hydrops are intrauterine anemia, intrauterine heart failure, and hypoproteinemia. In addition to these three basic mechanisms, fetal hydrops has a causal relationship with various structural abnormalities that interfere with the fetoplacental circulation. Chromosomal anomalies (aneuploidy, deletion, duplication, genetic mutation) and skeletal dysplasia can also be associated with hydrops through various mechanisms.^{3,4}

The diagnosis of Hydrops Fetalis is confirmed by ultrasound examination. The suspicion of Hydrops Fetalis is confirmed if there is a family history and the presence of hydramnios. Ultrasound examination to establish Hydrops Fetalis is confirmed by the presence of abnormalities or an increase in fluid in at least 2 organs baby.^{5,6,7}

Hydrops Fetalis carries a poor prognosis, but several etiologies can be treated intrauterine with potentially good outcomes. More and more etiologies are being discovered requiring a comprehensive and systematic examination of causes, particularly for treatable or recurring conditions.^{8,9,10}

CASE REPORT

A female patient aged 36 years, with a diagnosis of G3P1A1H1 gravid 23-24 weeks + Hydrops Fetalis + 1x SC scar.

On ultrasound examination at 23-24 weeks of age, fetal biometry was found; BPD: 58.9 mm, HC: 211.0 mm, AC: 202.5 mm, FL: 44.4 mm, HL: 40.7 mm, EFW: 417 gr, SDP: 12.79 cm, FHR: 162x / minute, looks anasarcoma Edema (+), Hydrothoric (+), Ascites (+), impression: gravid 23-24 weeks according to biometry, live fetus, Hydrops fetalis, polyhydramnios.

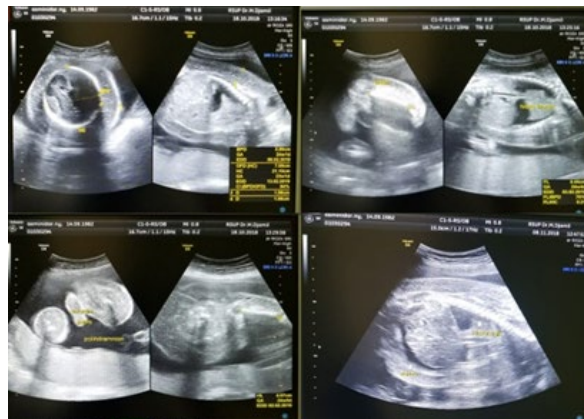
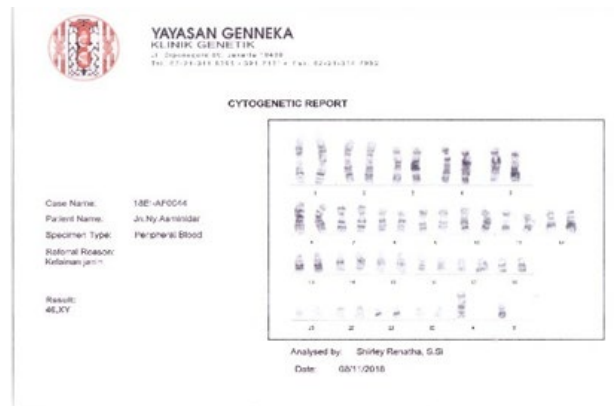


Figure 1. Ultrasound overview

In the laboratory examination, the mother's blood type was A, Rhesus (+), VDRL (-), negative Coomb test. Amniocentesis was carried out followed by an examination of chromosome analysis carried out by the G-Banding technique which obtained the number of chromosomes in each cell was 46, XY, which means that the number of chromosomes was 46 with fetal sex chromosomes is XY. No major structural abnormalities were seen.

**Figure 2.** Chromosome examination results

At the age of the fetus 25-26 weeks, it was found that the child's movement was not felt by the mother, an ultrasound examination was carried out and the impression was: Gravid 25-26 weeks according to biometry, the fetus died, Hydrops Fetalis. The baby was born by caesarean section with the sex of a boy, body weight 2100 grams, body length 32 cm, maceration degrees 2-3, Hydrops Fetalis. Placenta size 20x17x5 cm, cord length 32 cm, insertion of paracentralis.

DISCUSSION

A case of Hydrops Fetalis has been reported, the diagnosis is confirmed by obtaining fetal biometry; BPD: 58.9 mm, HC: 211.0 mm, AC: 202.5 mm, FL: 44.4 mm, HL: 40.7 mm, EFW: 417 gr, SDP: 12.79 cm, FHR: 162x / minute, looks anasarcoma edema (+), hydrothoric (+), ascites (+), impression: gravid 23-24 weeks according to biometry, live fetus, hydrops fetalis, polyhydramnios.

In this case, the antenatal ultrasound results were consistent with the fetal features of Hydrops Fetalis where abnormal accumulation of fluid in 2 or more compartments of the body was found, including ascites, pleural effusions, pericardial effusions, and skin edema generally > 5 mm, in this patient along with polyhydramnios and placental edema.

Blood type and rhesus examination were carried out and the mother's blood type was A with rhesus (+), the Coomb test results (-) rule out the possibility of rhesus incompatibility if the mother is rhesus (-) and the cause of immunity. Other tests that have been done are VDRL and HBsAg tests with negative results.

In this patient, amniocentesis was carried out followed by chromosome analysis which was carried out using the G-Banding technique. The chromosomes of 18 cells from 3 different cell culture preparations were studied and the number of chromosomes in each cell studied was 46, XY, which means that the number of chromosomes is 46 pieces with fetal sex chromosomes are XY. No major structural abnormalities were seen.

Examination steps for patients with suspected fetal Hydrops Fetalis:

1. Urgency, namely with fetal imaging and complete maternal hematology examinations (Kleihauer-Betke test, ABO and Rhesus blood groups, Coombs test, syphilis, acute phase titers (parvovirus, TORCH (toxoplasmosis, rubella, cytomegalovirus)), liver function tests, gout, coagulation tests, G6PD deficiency).
2. Invasive, namely amniocentesis of amniotic fluid, taking fetal blood samples, aspiration of fluid in the cavity (performed during amniocentesis).
3. Post-Natal ie placenta assessment, neonatal assessment (live fetus and IUFD by autopsy).

The choice of termination in this patient is by cesarean section. Caesarean section was chosen because the patient's previous labor history was cesarean section.

In this case the cause of Hydrops Fetalis is non-immune, but it still has to be proven by various further tests.



Figure 3. Placenta and post natal views

CONCLUSION

Hydrops Fetalis is an abnormal accumulation of fluid in 2 or more compartments of the fetal body. The prenatal diagnosis of Hydrops Fetalis can be confirmed by fetal imaging, maternal hematology, amniocentesis. In this patient an ultrasound examination, blood group, Rhesus, VDRL and Coomb test have been carried out. The cause of Hydrops Fetalis in this patient is probably non-immune originating from infections that have not been eliminated such as TORCH and Human parvovirus B19 infections.



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