



Case of Hydropfetalis by Ultrasound Scan

KEYWORDS

polyhydramnios, US

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ABSTRACT 40-years old female pregnant woman, G III para II. 34 weeks gestational age was scanned by ultrasound machine by curved linear probe with frequency 3.5 MHz, no past or family history of similar condition. No previous ultrasound done for her. (US) revealed that ascites, pleural and pericardial effusions and polyhydramnios are present.

INTRODUCTION

Hydropsfetalis is a serious condition. It occurs when abnormal amounts of fluid buildup in two or more body areas of a fetus or newborn. It is a symptom of underlying problems. (1,2,3)

Causes

There are two types of hydropsfetalis -- immune and non-immune. The type depends on the cause of the abnormal fluid.

Immune hydropsfetalis is a complication of a severe form of Rh incompatibility. This is a condition in which mother who has Rh negative blood type makes antibodies to her baby's Rh positive blood cells. Rh incompatibility causes a large number of red blood cells in the fetus to be destroyed. This leads to problems including total body swelling. Nonimmune hydropsfetalis occurs when a disease or medical condition upsets the body's ability to manage fluid. There are three main causes for this type: heart or lung problems, severe anemia and genetic or developmental problems, including Turner syndrome. (1,2,3)

Symptoms

Symptoms depend on the severity of the condition. Mild forms may cause: Liver swelling and Change in skin color (pallor). More severe forms may cause: breathing problems, heart failure, severe anemia and total body swelling. (1,2,3)

Treatment

It depends on the cause: during pregnancy, treatment may include: medicine to cause early labor and delivery of the baby, for a newborn may include: direct transfusion of red blood cells that match the infant's blood type. An exchange transfusion to rid the baby's body of the substances that are destroying the red blood cells is also done. (1,2,3)

CASE REPORT

A 40-years old female pregnant woman G III para II. 34 weeks gestational age was referred to ultrasound department of SHIFA AL ALALEEL HOSPITAL, for normal scan. No past or family history of similar condition, no previous ultrasound done for her. The patient was scanned by ultrasound machine by curve linear probe with 3.5 MHz and the image of the patient is shown in (Fig 1,2,3). Ultrasound (US) revealed that fetal ascites, which in its early stage appears as a rim of echolucent fluid just inside the abdominal wall.

DISCUSSION

Ascites an early sign of hydrops is outlining of intraabdominal organs, such as the liver and bladder, by a thin rim of fluid. Sonographic images of the fetal abdomen may reveal fetal ascites, which in its early stage appears as a rim of echolucent fluid just inside the abdominal wall. With larger amounts of ascites, the bowel may appear compressed and its walls accentuated due to increased ultrasound transmission afforded by the excess intraabdominal fluid (4,5).

Pleural effusions in the thorax, pleural effusions may be visualized outlining the lungs, just inside the chest wall. Long-standing effusions developing prior to 20 weeks of gestation may retard the growth and development of lung tissue, which leads to pulmonary hypoplasia, a common cause of neonatal mortality in these infants.

Pericardial effusions may be difficult to visualize with standard two-dimensional (2D) images. It is important not to mistake physiologic pericardial fluid or the hypoechoic myocardium for an abnormal effusion. Use of M-Mode helps to measure pericardial effusions accurately and differentiate between physiologic and pathologic pericardial fluid when the diagnosis is uncertain. Generally, during

second-trimester fetal ultrasonographic examination, visualization of pericardial fluid up to 2 mm is common and should not be regarded as pathologic, and even fluid up to 7 mm may be benign. (6,7,8)

Polyhydramnios is generally defined as an amniotic fluid index (AFI) greater than 24 cm or a maximum vertical pocket greater than 8 cm. It is present in 40 to 75 percent of pregnancies complicated by NIHF and is often the initial indication for the sonographic evaluation of the pregnancy. (9)

Placentomegaly also may appear abnormal. Placentomegaly may occur due to intravillous edema. In general, a placental thickness of greater than 4 to 6 cm is considered abnormal and should prompt further investigation. On the other hand, massive polyhydramnios can cause the placenta to appear thinned or compressed. (10,11)



FIG No (3)TAS showing Hydrocele



FIG (1)TAS showing an ascites around the liver



FIG No (2)TAS showing Pleural effusion and ascites

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