Sonographically documented spontaneous resolution of isolated fetal ascites

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Abstract

Objective: To present spontaneous resolution of isolated fetal ascites diagnosed at antenatal period.

Case: A 30-year-old, G3, P2 patient admitted to our perinatology clinic in 26th week of pregnancy with a diagnosis of severe, isolated fetal ascites without any other anomalies revealed by ultrasound examination. The workup for Parvovirus B19, cytomegalovirus, toxoplasmosis, herpes simplex, rubella, hepatitis A, B, C and infectious markers were negative. Fetal karyotyping was reported as normal. As the persistence of fetal ascites was seen at 32 and 34 weeks gestation, a complete resolution of the ascites was detected at 36 weeks' gestation. A normal 4,200 grams male infant was vaginally delivered at 39 weeks gestation.

Conclusion: Isolated fetal ascites are a rare ultrasound finding and diagnosis is to be confirmed with exclusion of related fetal anomalies, immunologic and nonimmunologic causes. Parents should be counseled about other rare concomitant and undetectable anomalies despite detailed evaluation.

Key words: Isolated fetal ascites, ultrasonography.

In this case report, we aimed to present according to the literature the case of isolated fetal ascite which had spontaneous remission during antenatal follow-up and to discuss its obstetric management.

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Received: October 18, 2012; Accepted: November 16, 2012

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Available online at: www.perinataljournal.com/20120203007
doi:10.2399/prn.12.0203007
QR (Quick Response) Code:
nal center. In her first ultrasonography, single 26-week fetus with common ascites in fetal abdomen was observed (Fig. 1). No pathologic indication was detected in fetus during ultrasonography and no renal or developmental defect was found. In Doppler ultrasonography examination (umbilical artery Doppler, mid-cerebral artery Doppler), no pathology was found. Parvovirus B19, cytomegalovirus, toxoplasmosis, herpes simplex, rubella, hepatitis A, B, and C infection indicators of the patient were found as negative. All other blood values of the patient were evaluated as normal except anemia (hemoglobin: 11 g/dL). Karyotyping was done by taking sample amniotic fluid and karyotyping of the patient was reported as normal.

The patient and her family were informed in detail about pathologies which cannot be detected although examination results were found normal. In the follow-ups, fetus had severe fetal abdominal ascites until 35 weeks gestation and fetal ascites had spontaneous remission at 36 weeks gestation. Healthy 4,200 gram male baby was delivered vaginally at 39 weeks gestation. Examination findings of the newborn were found as normal.

Discussion

Fetal ascites can be defined as finding free fluid in fetal peritoneal cavity in ultrasonographic examination. Hydrops fetalis is the advanced state of these cases and it is free fluid accumulation in more than one compartment together with generalized edema. Non-immune fetal hydrops incidence varies between 1/1500 and 1/4000. Developmental pathologies are observed in the background in most of the cases. Ascite pathology found in the fetus is a case which always requires advanced examination. Genetic (chromosomal or syndrome associated) reasons are reported in case series in a range between 11% and 20%. However, it is not possible to determine accurate prevalence as limited number of case series is reported.

In the case series of Schmider et al. including 26 patients, ascites was reported as the only diagnosis in 1 patient while other cases were associated with different anomalies. In the cases series of El Bishry including 12 patients with isolated fetal ascites who had no additional anomalies in antenatal follow-up where fetal ascites moving to hydrops were excluded from the

Fig. 1. Free abdominal fluid within fetal abdomen.
study, fetal loss rate was found as 16.6% and it occurred during antenatal follow-up in 30% of spontaneous remission patients and after delivery in 20% of patients. Similar to this rate, Boutall et al. reported fetal loss rate as 17%. In this series, fetal ascites underwent resolution in 3 of 5 patients (60%) during antenatal follow-up and resolution occurred at postnatal 2nd month in 1 patient.

When it is evaluated together with other anomalies, perinatal mortality rates were reported as 57% and 72%. Our case was referred to our clinic for advanced examination and treatment at her 26 weeks gestation from an external center, and in her examinations no additional pathology explaining fetal abdominal ascites etiology was detected. In the antenatal follow-up of the patient, it was observed that fetal ascites continued until 36 weeks gestation and delivery was done at 39 weeks gestation. In this case, detecting no additional anomaly and finding karyotype analysis good as well as advanced gestational week were interpreted as elements defining good prognosis. Nose et al. reported elements determining prognosis in isolated fetal ascites cases as gestational week during diagnosis and the level of fetal abdominal distention. Detecting ascites presence before 24 weeks gestation and also the presence of hydrops fetalis are shown among the bad prognostic factors.

Although the presence of fetal ascites is not an absolute indication for elective cesarean, delivery timing and obstetric risk management should be considered as patient-specific. If ascites continues, it will be appropriate to plan delivery management together with fetal abdominal circumference measurement. Analyzing cases with fetal ascites for elements within the etiology is quite essential in terms of follow-up and management of patient and the information to be given to family. Multiple anomaly presence, hydrops fetalis, infection and cardiac anomalies are among the bad prognostic factors associated with fetal loss (100%, 80%, 71%, 91%, respectively). In cases with isolated fetal ascites, taking maternal blood (Parvovirus B19, toxoplasmosis, rubella, cytomegalovirus, herpes simplex, varicella, hepatitis) in terms of blood type and infection indicators should be planned as well as the detailed anamnesis. Intestine pathologies and cystic fibrosis should be researched in all cases with fetal ascites. Displaying fetal growth by serial ultrasonographic measurements, evaluating the course of fetal ascites, fetal anemia and following up placental sufficiency are essential. Families should be informed about possible chromosomal anomalies and fetal karyotyping. Also, it should be remembered that metabolic diseases which are hard to detect during antenatal period may progress with fetal ascites.

**Conclusion**

It should be known that isolated fetal ascites cases rarely may have spontaneous remission during pregnancy. However, when such a case is met, it should be remembered that an additional pathology may accompany most probably, and such cases should be referred to perinatology centers where advanced examination and treatment can be carried out.

**Conflicts of Interest:** No conflicts declared.

**References**