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A case of non-therapeutic intervention of maternal parvovirus B19 infection in pregnancy

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Objective

Case report of spontaneous resolution of hydrops fetalis associated with parvovirus B19 infection.

Methods

We present this case report in the light of current literature.

Results

Clinical Presentation: A 24-year-old woman, G2P1, was referred at 20 weeks of gestation to our Fetal Medicine Department for fetal hydrops. Ultrasonographic examination revealed moderate fetal ascites and pericardial effusion suggestive of fetal hydrops. There was no other obvious fetal defect and the MCA PSV was within the normal range. We performed TORCH and parvovirus screening, while no atypical antibodies were detected at the booking bloods. Parvovirus B19 IgM antibodies were positive in maternal serum by enzyme immunoassay, while there was no evidence of recent infection for toxoplasma, rubella, cytomegalovirus, and herpes (TORCH). One week later, the sonogram demonstrated a significant improvement as the ascites was resolved completely, whereas there was a mild pericardial effusion and the MCA PSV was within the normal range. In all subsequent examinations ascites and pericardial effusion were undetectable. Background: Parvovirus B19 affects 1 to 5 percent of pregnant women. In 20–50% of infected pregnant women with parvovirus B19, vertical transmission occurs and leads to fetal infection in 1-2%, with significantly increased mortality rate. Fetal anemia develops in general in 6 weeks and hydrops in 5 weeks. Later ultrasonographic findings of fetal infection include ascites, cardiomegaly, placentomegaly, effusions, skin edema, polyhydramnios, hyperechogenic bowel and decreased fetal movements. Up till now, the antenatal management of Parvovirus B19 infection has been controversial, because of the variety of outcomes. Intrauterine transfusion of red cells is usually performed from 22 weeks, indicated by fetal anemia (MCA-PSV > 1. 5 MoM), ascites or hydrops. However, cases of conservative management have been reported with spontaneous resolution of hydrops fetalis 1 to 7weeks after the initial diagnosis.

Conclusion

In this case, the MCA-PSV was within the normal range and the hydrops fetalis, caused by B19 parvovirus infection, was spontaneously resolved within 5 weeks of diagnosis. This observation may occur more frequently than previously suspected. There have been a few cases of spontaneous resolution of hydrops demonstrating that an alternative route of management can be proposed without in utero fetal therapy. On the basis of these findings, a conservative management, can be reasonable and perhaps further criteria, such as the continuous assessment and monitoring of the MCA-PSV, could be established in order to differentiate these cases from those that will progress to fetal anemia.