



EP09.45 Non-immune hydrops revealing fetal parvovirus B19 infection: case series and response to intrauterine transfusions.

Antonia Varthaliti¹, Angeliki Rouvali¹, Alexandros Psarris¹, Maria Ioanna Chatziioannou¹, Afroditi Pegkou¹, Ioakeim Sapantzoglou¹, Nikolaos Antonakopoulos², Panos Antsaklis¹, George Daskalakis¹, Marianna Theodora¹

1. 1st Department of Obstetrics and Gynecology, National and Kapodistrian University of Athens, Greece

2. Department of Obstetrics and Gynecology, University of Patras, Greece

Objective

To present the clinical management and outcomes of three cases of fetal anemia due to Parvovirus B19 identified at the 20-24 week anomaly scan, highlighting the necessity of individualized intrauterine transfusion (IUT) protocols during the recent resurgence of parvovirus B19 infection.

Methods

A retrospective review of three cases (Gravida 2-4) referred to a tertiary fetal medicine unit between 22 and 24 weeks' gestation following the identification of non-immune hydrops fetalis (NIHF) during the routine second-trimester anomaly scan. In all cases, ultrasound revealed signs of fetal anemia, such as severe ascites and pericardial effusion, and elevated Middle Cerebral Artery Peak Systolic Velocity (MCA-PSV) >1.5 MoM. Maternal serology (IgM/IgG) and amniotic fluid PCR were utilized for diagnosis. Cordocentesis confirmed fetal anemia and IUT was performed when indicated.

Results

Case 1: A 44-year-old with systemic lupus erythematosus (SLE) presented at 23+5 weeks with fetal hydrops. Despite a blunted maternal IgM response (0.78), amniotic fluid PCR was positive. Fetal anemia (Hb 1.9 g/dL) was confirmed by cordocentesis and

the fetus required a rare total of five IUTs, due to persistent erythroid suppression before hydrops resolved. Delivery occurred at 30+4 weeks following PPRM; the neonate required NICU admission and 2 postnatal transfusions, but demonstrated normal growth and neurodevelopment at 6-month follow-up.

Case 2: A 31-year-old woman presented with fetal ascites and pericardial effusion at the anomaly scan. Diagnosis was confirmed via maternal IgM and amniotic PCR. This case followed a more "typical" clinical course, as it required two IUTs to achieve hematologic stability. Delivery was by elective cesarean section at 38+2 weeks due to previous

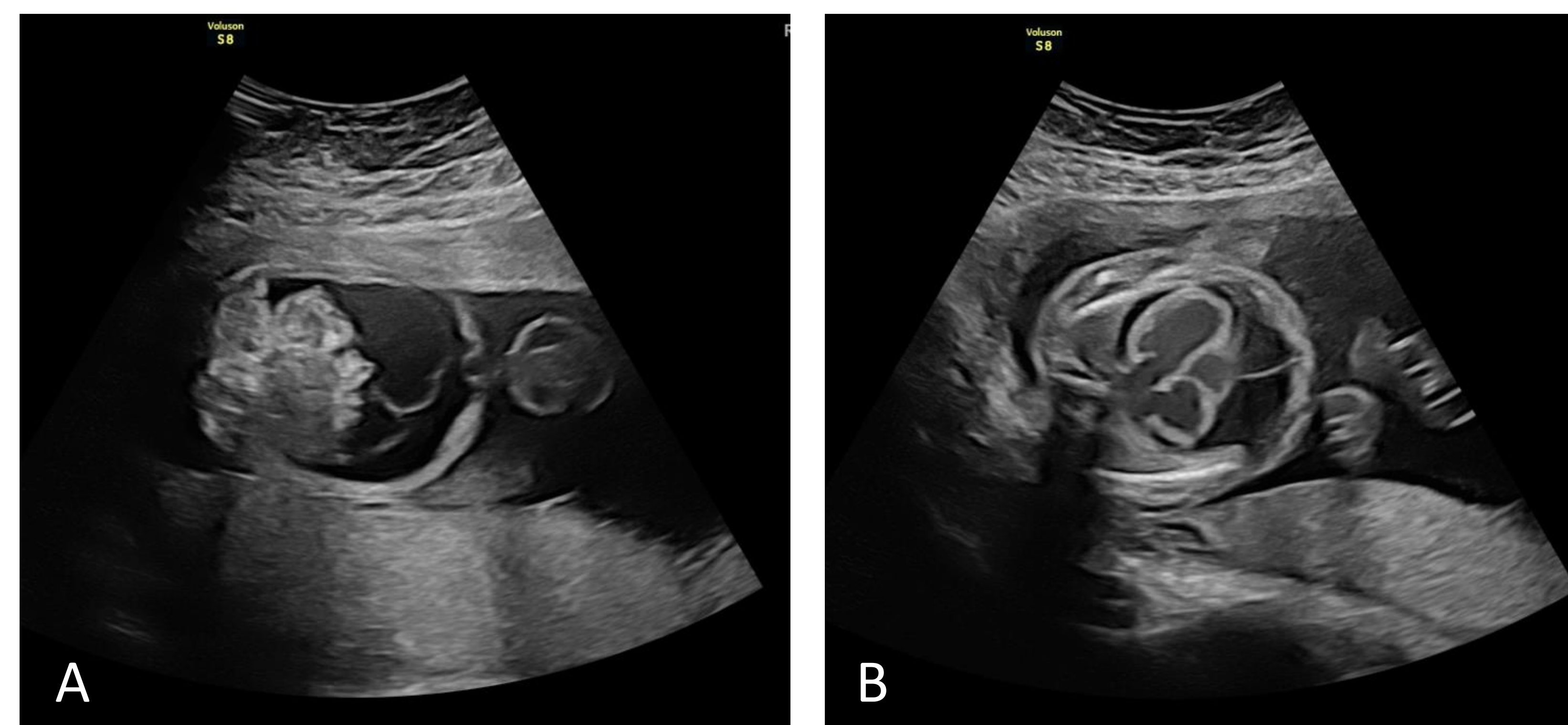


Figure. Ultrasound findings from Case 1 demonstrating non-immune fetal hydrops due to parvovirus B19 infection. (A) severe fetal ascites, (B) pericardial and pleural effusion.



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cesarean section, with no need for postnatal transfusion with no requirement for postnatal transfusion.

Case 3: A 17-year-old woman presented with fetal ascites and pericardial effusion, and after a single IUT had complete resolution of hydrops; delivery was by elective cesarean section at 37 weeks with no postnatal complications.

All cases occurred between 2024-2025 in the summer months in the post-COVID-19 era; notably, the first patient initially attributed her prodromal symptoms to a confirmed COVID-19 infection, potentially delaying the suspicion of Parvovirus B19.

Conclusion

While many cases of Parvovirus-induced fetal anemia resolve with 1-2 transfusions, there are refractory cases requiring aggressive, multiple IUTs, particularly in the context of maternal autoimmune disease, where the fetal immune response may be impaired. Furthermore, in patients with SLE or those on immunosuppressants, maternal serology can be unreliable; thus, amniotic PCR remains the gold standard for diagnosis. The "masking" of symptoms by other viral infections like COVID-19, as well as post-COVID resurgence of parvovirus B19 infections, underscore the need for high clinical suspicion when NIHF is detected at the anomaly scan.