Conclusions: Adopting the new UTD classification system helps in predicting the probability of surgical intervention in postnatal life irrespective of the pathology causing UTD. Therefore, it can reliably be used as an aid to counselling the patients regarding postnatal management and prognosis.

VP12: INFECTIONS, HYDROPS AND ANEMIA

VP12.01

Unexpected congenital cytomegalovirus infection as a cause of severe fetal anemia: description of three cases

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We report 3 cases of severe congenital cytomegalovirus (cCMV) infection identified during diagnostic work-up for suspected fetal anemia. Blood screening test for CMV revealed maternal immunity in all cases.

Case 1: Primigravida referred at 21 wks' GA for fetal ascitis. Ultrasonographic (US) evaluation revealed signs of fetal anemia, with middle cerebral artery peak systolic velocity (MCA-PSV) >1.5MoM, cardiomegaly & hyperechogenic hepatic spots. Fetal blood sampling (FBS) showed Hb 8.4g/dL and a platelet count of 14,000/microL. Intrauterine blood transfusion (IUT) was performed. CMV-DNA in the amniotic fluid (AF) was 2,720,000 copies/mL. The fetus died 24 hours after the procedure.

Case 2: Primigravida referred at 21 wks' GA for hyperechogenic bowel and pericardial effusion. US revealed a short corpus callosum, periventricular hyperechogenicity, absence of scissures, biventricular myocardial hypertrophy and MCA-PSV >1.5MoM. CMV-DNA in the AF was 7,420,000/mL. After magnetic resonance (MR) indicated encephalitis, the parents opted for termination.

In both cases 1 and 2 authopsy confirmed prenatal findings.

Case 3: Primigravida referred at 20 weeks for pericardial effusion, dilation of right cardiac ventricle & hyperecogenic bowel. MCA-PVS was >1.5MoM. FBS showed Hb 9gr/dL, a platelet count of 4,000/microL & IUT was performed. AF and fetal blood were positive for CMV-DNA (5820000/mL in the AF, 1098000/mL in the blood). MR was negative for major lesions (at 21, 23 & 28 weeks GA). Caesarean section was performed at 34+5 weeks for Doppler deterioration. The male infant weighed 2,210g, Apgar score 8–9, had thrombocytopenia, needing repeated platelet transfusion. Postnatal MR showed only sequelae of ependymitis.

These cases show that, in presence of severe fetal anemia, cCMV should always be considered as a possible cause. A screening test and a correct diagnosis of primary infection are of paramount importance but even a non-primary infection can cause severe anemia.

VP12.02

Conservative management of presumed fetal anemia secondary to maternal chemotherapy for acute myeloid leukemia

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Acute myeloid leukemia (AML) occurs rarely during pregnancy, but when it is diagnosed remote from term, treatment in the form of daunorubicin plus cytarabine induction with consolidative cytarabine is typically undertaken after the first trimester. Because of the rarity of this clinical scenario, there is a paucity of data to guide fetal monitoring, in particular, whether and how often middle cerebral artery peak systolic velocity (MCA PSV) should be measured to screen for fetal anemia. Cytarabine may be particularly myelosuppressive to the fetus, but information pertaining to the management of this complication is also lacking. We present a case of treatment of AML starting at 14 weeks gestation. Sonographic monitoring, including MCA PSV, was instituted weekly from 18 weeks. MCA PSV became elevated after each cycle of chemotherapy, and normalised without intervention. While MCA PSV was abnormal, we performed ultrasound twice per week, to rule out hydrops fetalis or other signs of decompensation. To our knowledge, we present the first case of expectant management of presumed severe fetal anemia related to maternal chemotherapy. This case suggests that in the absence of hydrops fetalis or other signs of fetal decompensation, expectant management with twice weekly ultrasound, including MCA PSV, is appropriate management of fetal anemia due to maternal chemotherapy for AML. Ultrasounds may be decreased to once weekly when MCA PSV normalises. Screening for fetal anemia can provide helpful information to guide timing of chemotherapy administration and delivery.

Supporting information can be found in the online version of this abstract

VP12.03

Outcome of fetuses with congenital cytomegalovirus infection: a systematic review and meta-analysis

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Objectives: To report the outcome of fetuses with congenital cytomegalovirus (CMV) infection.

Methods: Medline, Embase, Cinahl and Cochrane databases were explored. Inclusion criteria were fetuses with confirmed CMV infection and normal ultrasound assessment at the time of initial evaluation. The outcomes observed were anomalies detected at follow-up ultrasound scan, at prenatal magnetic resonance imaging (MRI) and at postnatal assessment, perinatal mortality, symptomatic infections at birth, neurodevelopmental outcomes, hearing and visual deficits. Random-effect meta-analysis of proportions were used to analyse the data.

Results: 27 studies (2675 fetuses) were included. The overall rate of associated anomalies detected exclusively at follow-up ultrasound was 6%, while those detected exclusively by MRI or postnatally were 12% and 4.3%, respectively. Both IUD and PND occurred in 0.7% of cases. A symptomatic infection was shown in 1.5% of cases and the rate of overall neurodevelopmental anomalies was 2.8%, with hearing problems affecting 6.1% of children. Sub-analyses according to the trimester at infection were affected by the very small number of included cases and lack of comparison of the