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Introduction:

Cytomegalovirus is a common virus with a prevalence of 50% in developed countries.¹ Primary maternal CMV infection carries a 30% to 40% risk of vertical transmission to the fetus of which only 10-20% of the fetuses have evidence of clinical infection at birth.^{1,2} Although most fetuses are asymptomatic but there is an increased risk of complications, if infection occurs in early pregnancy.

Case Report:

History:

We are hereby sharing the case of a 39 years old lady Gravida 4 Para 2 with two previous emergency caesarean sections and a background of ulcerative colitis, who presented with abnormal LFTs during her routine antenatal blood screening at 23 weeks of gestation.

Antenatal Investigations:

Viral Screening - Positive CMV immunoglobulins (IgG, IgM) and CMV PCR.
Anomaly scan - Unremarkable with normal growth, AFI and doppler studies.

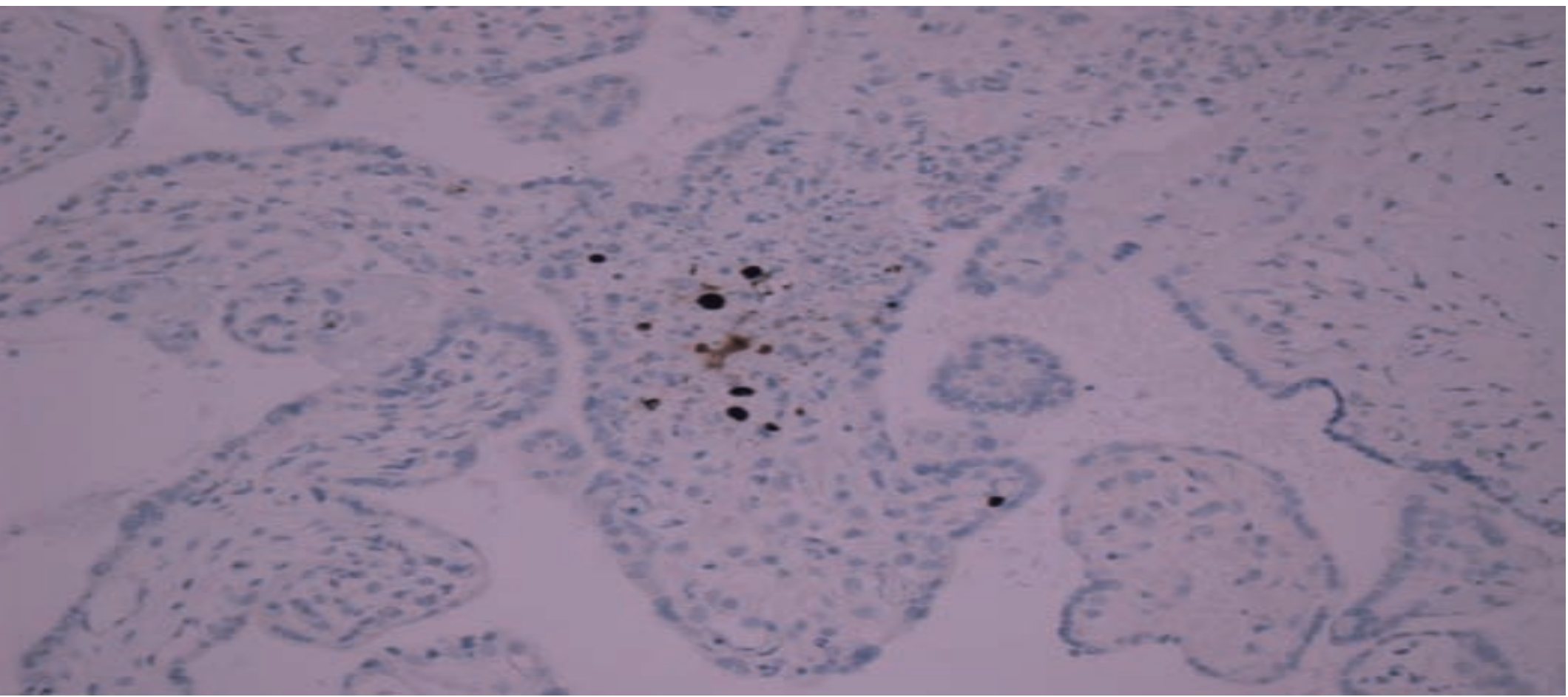
Antenatal Counselling:

She was thoroughly counselled about the implications of CMV infection on the fetus including growth failure, microcephaly, cerebral calcifications, cataracts, cardiac lesions and deafness.

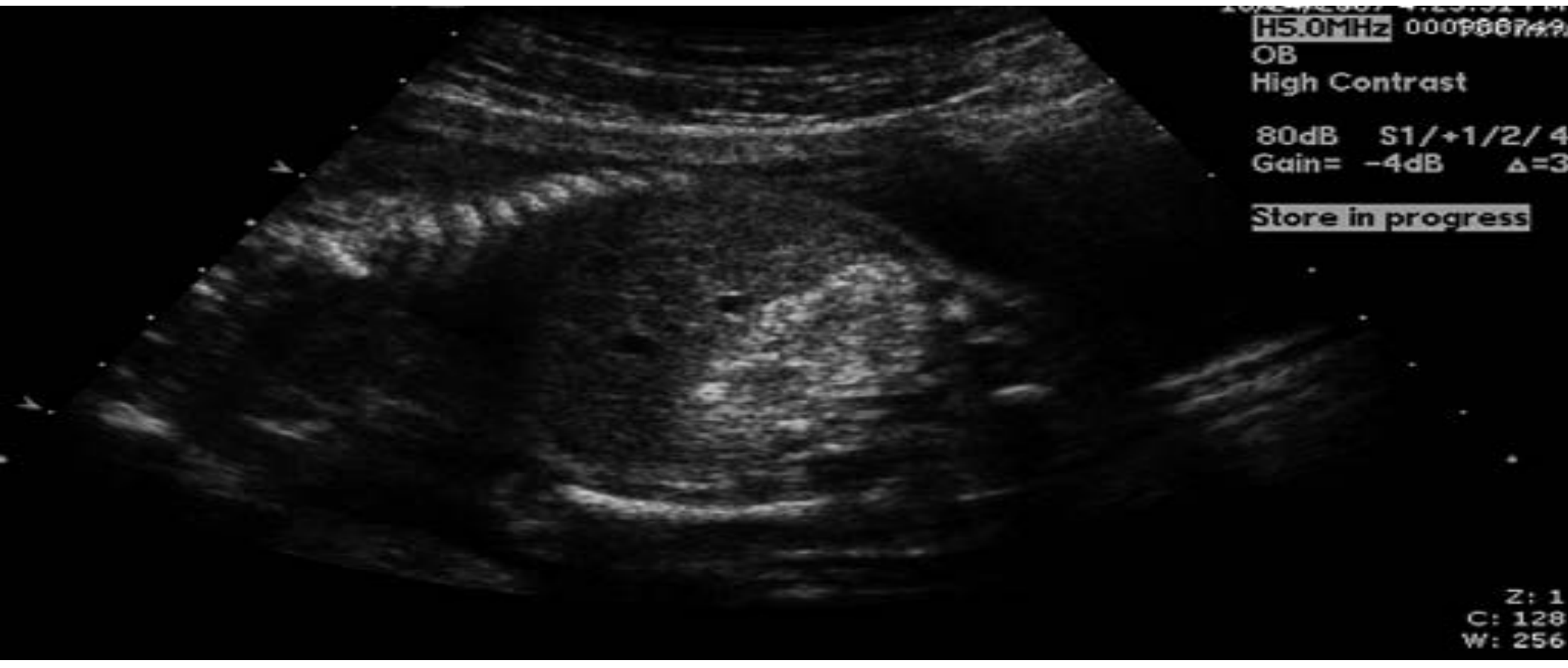
Plan:

Serial growth scans at 28, 32, 36 weeks of gestation
Fetal brain MRI
Fetal blood sampling as a predictive marker of the potential outcome of the baby to some extent.
A urine PCR for CMV as a part of the postpartum care plan of the baby.

She had an uneventful antenatal period and successfully delivered by an elective caesarean birth. The baby weighed 3550g which was on the 67.9th Centile with a negative urine PCR.



Specific immunostaining confirms the presence of CMV infection ²



Perinatal Ultrasound image showing fetal echogenic bowel ²

Discussion:

CMV infection in early pregnancy poses a significant risk of mental handicap, epilepsy and other developmental problems. Serial growth scans, fetal brain MRI along with fetal blood sampling to detect thrombocytopenia should significantly reduce the risk of these findings but the risks still remain inspite of negative test results. As far as pregnant women are concerned, maternal CMV tends to be asymptomatic with mothers rarely diagnosed by clinical symptoms alone. Although evidence of maternal seroconversion is sufficient to confirm the diagnosis of a primary infection the accuracy of maternal anti-CMV IgM to predict primary maternal infection is complicated by the fact that IgM antibodies persist long after a primary infection and also can be found in the setting of reactivation or reinfection with a different strain of CMV. Hence this was taken over by antibody avidity measurement.²

Conclusion:

Pregnant women should be advised to seek medical advice for minor flu-like illness during pregnancy. That will allow prenatal diagnosis of infections during pregnancy and planning for the management of the neonate afterwards. Studies in favour of using valacyclovir during pregnancy for prevention and treatment of congenital CMV infection are emerging but are still few.³

References :

1. A Bhide, AT Papageorghiou. Managing primary CMV infection in pregnancy. BJOG 2008;115:805-807.
2. Amanda Carlson, Errol R Norwitz, Robert J Stiller. Cytomegalovirus Infection in Pregnancy: Should All Women Be Screened? Reviews in Obstetrics and Gynaecology 174 Vol. 3 No. 4 2010
3. L. Zammarchi et al. Clinical Microbiology and Infection. 2020;26:1151