



A Rare Presentation of Congenital Cytomegalovirus Meningitis

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Introduction

Congenital Cytomegalovirus Meningitis (CMV) is very rare. We report a term baby who was diagnosed with CMV meningitis by the BioFire FilmArray (BFA) simultaneously tests for 14 different pathogens including CMV, allowing for quicker diagnosis and shorter time to definitive treatment within one hour. (Lebar, Everhart, & Llasat, 2016). This is the first diagnosis of Congenital CMV to our knowledge to be diagnosed using the BFA.

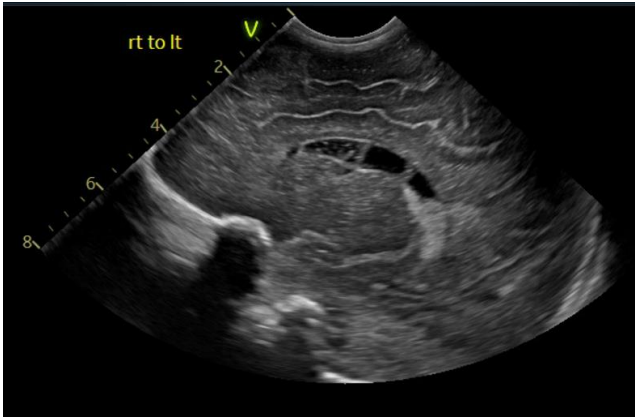
Case Report

Full term with antenatal diagnosis of Intra Uterine Growth Retardation, born by emergency caesarean section due to pathological CTG with birth weight was 2.27kg. Pregnancy was uneventful. Baby was admitted to the intensive care unit at one hour of age with respiratory distress. Baby had a septic screen including blood investigations and chest X-ray. TORC screen was sent as part of IUGR work up. Baby was commenced on Benzyl penicillin and Gentamicin. Initial blood test revealed unremarkable WBC and CRP (<1) with normal platelet counts. Repeat CRPs were 17 and 21 with thrombocytopenia. The TORC screen results showed positive CMV-specific immunoglobulin M and immunoglobulin G antibodies, urine CMV PCR revealed 924000 DNA copies/ml. Baby had a lumbar puncture with CSF cell count suggestive of meningitis. Blood and CSF cultures were negative. CSF was positive for CMV by BFA.

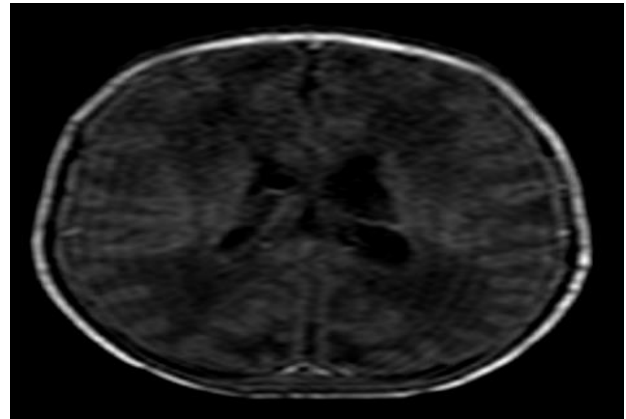
Baby was commenced on intravenous Ganciclovir. Cranial ultrasound scan (picture A) showed septations in the ventricles as well intraventricular cysts.

Brain MRI showed small cysts within the body of the lateral ventricle as well as along the left temporal horn (Picture B& C). Ophthalmological examination and auditory brainstem response were normal. Lumbar puncture was repeated two weeks after the treatment which was negative for CMV and the urine CMV load was decreasing.

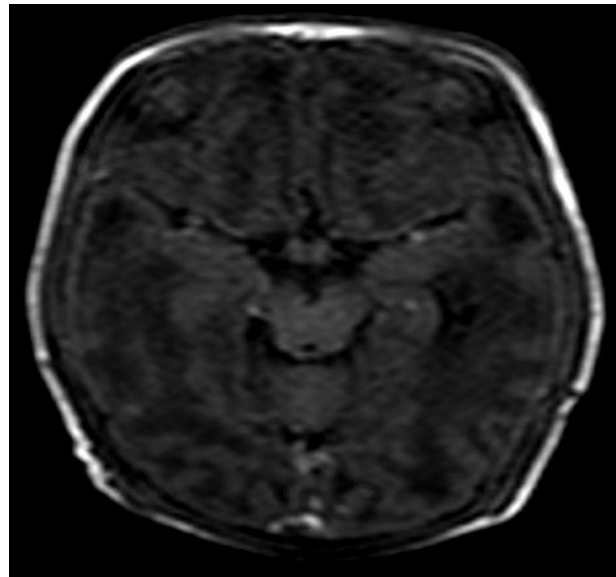
Baby was discharged after three weeks of IV Ganciclovir, followed by 6 weeks of oral treatment with Valganciclovir. outpatient clinic follow-ups revealed that his development is appropriate to his age and no reports of hearing or visual impairments so far.



Picture A



Picture B



Picture C

Discussion

Congenital CMV meningitis is very rare and associated with neurological, audiological and visual complications. In our case, CMV meningitis was diagnosed quite early and was treated. So far, the baby appears not to have any auditory, visual, or neurological sequelae, though it is early to comment. This baby will be followed in pediatric, neurology, infectious disease, and audiology and ophthalmology clinics.

References

Leber, A., Everhart, K., & Llasat, J. (2016). Multicenter Evaluation of BioFire FilmArray Meningitis/Encephalitis Panel for Detection of Bacteria, Viruses, and Yeast in Cerebrospinal Fluid Specimens. *Journal of Clinical Microbiology*, 54(9), 2251.