



Background

Enteroviruses are small ribonucleic acid viruses classified into five groups: polio viruses, Coxsackie A viruses, Coxsackie B viruses, and enteroviruses 68-72. Eighty to ninety percent of Enterovirus infections occur in children less than sixteen years old and information regarding infection in adulthood is lacking. Infection can lead to a variety of clinical presentations from fever to severe sepsis, with infection in pregnancy leading to adverse obstetric outcomes.

Discussion

Enterovirus infection is via the faecal oral route where the virus replicates within the lymphoid tissue of the gastrointestinal tract. While the majority of infections are asymptomatic, the virus can disseminate to secondary organs typically manifesting as a non-specific febrile illness but can also cause respiratory symptoms, aseptic meningitis, encephalitis, myocarditis, or hand-foot-and-mouth disease.

Enteroviruses can cause severe disease and even death when infection occurs in the first ten to fourteen days of life. Case reports of newborns with enterovirus infections suggests that vertical transmission is possible. However, the relatively high incidence of neonatal infection is thought to be due to nosocomial infection in the nursery not the result of vertical transmission.

Amongst case reports, Enterovirus infection in early pregnancy has been linked with miscarriage, severe intrauterine growth restriction, and stillbirth, while fetal Enterovirus infection has been described to be associated with sonographic findings including cerebral ventriculomegaly, cardiomyopathy, and polyhydramnios with ascites, pericardial and pleural effusions. The diagnosis of in utero transmission of the Enterovirus is by detection in the amniotic fluid or at pathology examination of the placenta or cerebral tissues.

While there is no validated approach to surveillance of pregnancies complicated by maternal Enterovirus infection, there are reports recommending monthly ultrasound follow-up with consideration of amniocentesis with PCR for Enterovirus if abnormalities are found.

Case Presentation

The patient is a 39-year-old, G3P1, who presented to a tertiary institution at 28+6 weeks gestation with a one day history of severe headache, nausea, photophobia and neck stiffness with subjective fevers. Her past medical history included Hashimoto's thyroiditis, a spontaneous miscarriage, and a previous normal vaginal delivery at term in 2019.

On examination, the patient was haemodynamically stable and febrile to 38.4 degrees. There were no focal neurological findings.

The patient underwent a lumbar puncture and Enterovirus was detected in the cerebrospinal fluid with polymerase chain reaction. She was diagnosed with Enterovirus meningitis and the course of her admission was uncomplicated.

Management was supportive with simple analgesia and hydration. She made a full recovery and was discharged home. A 36-week ultrasound scan showed a normally grown fetus with normal amniotic fluid index and anatomy.