Disseminated HSV-2 infection: its postnatal and neonatal complications

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INTRODUCTION

Herpes simplex virus has two subtypes – HSV-1 and HSV-2. Disseminated HSV infection is rare in pregnancy and postpartum but can cause devastating outcomes to the mother and baby if unrecognized and untreated (1). Diagnosis of HSV infection can be difficult due to non-specific symptoms and masked by other potential underlying conditions; but the most common presenting symptoms are refractory pyrexia with hepatitis (2).

CASE

A 25-year-old female, G3P0 at 34+6 weeks, initially presenting with PPROM and threatened preterm labour, who progressively became febrile and clinically unwell. Due to suspected chorioamnionitis, the decision was made for IOL which progressed into a non-elective lower segment caesarean section for ongoing maternal pyrexia and fetal tachycardia.

It was an uncomplicated surgery, and the patient was commenced on IV Amoxicillin, Metronidazole and Gentamicin. On day 2 post-op, she spiked another temperature despite being on adequate IV antibiotics. On further investigation, the patient reported a suspected history of PPROM few days prior to her hospital presentation and even reported swimming in water holes, fishing for mud crabs. She was asymptomatic and a thorough septic screen including Arbovirus serology was otherwise normal. As per advice from microbiology, her antibiotics were up-titrated to Tazocin, and even Meropenem and Vancomycin however patient still did not show any clinical improvement with ongoing pyrexia of unknown origin.

Other complicating factors were suspected episode of maternal infective endocarditis on a background history of IVDU, a postpartum PET diagnosis requiring antihypertensives causing a diagnostic dilemma.

On day 5 postpartum, the baby started showing signs of neonatal sepsis and was swiftly screened and treated. The baby tested positive for HSV-2 and mum was then diagnosed with HSV-2 infection, despite an absence of active lesions or skin rash. Both mum and baby were commenced on IV Acyclovir immediately and all antibiotics ceased.

The patient showed excellent clinical improvement with antivirals however the baby suffered significant complications from disseminated HSV-2 infection with multiple end organ involvement including CNS (seizures, hypertonia), respiratory (pulmonary hemorrhage, pulmonary oedema requiring intubation), cardiac (shock requiring inotropes), liver dysfunction, coagulopathy causing hemophagocytic lymphohistiosytosis (HLH).

The baby was admitted into the Special Care Nursery for 63 days and was finally cleared for discharge. Both mother and baby are now doing well and receiving regular follow up with Paediatric Gastroenterologists and Infectious Diseases Specialists.

DISCUSSION

HSV infection in pregnancy and postpartum is rare and often challenging to diagnose due to vague and indolent symptoms. There are often other complicating and concurrent factors that may cause a misdiagnosis of HSV infection.

Maternal HSV infection can be severe; causing fulminant liver failure, coagulopathies and involving the CNS (1), with mortality rates up to 50%. Neonatal HSV infection can cause mucocutaneous infections (45%), CNS involvement with or without skin involvement (30%); and in severe disseminated disease causing liver and adrenal dysfunction (25%), coagulopathy, shock and an 85% mortality rate (1,3).

This case highlights the difficulties of diagnosing HSV-2 infection and the potential adverse outcomes on both mother and baby.

REFERENCES

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