A CASE OF SEVERE HUMAN PARECHOVIRUS INFECTION REQUIRING INTENSIVE CARE IN AN INFANT

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Introduction: Human parechovirus (HPeV), previously known as echovirus, is a Picornaviridae family member. HPeV infection is most commonly associated with mild gastrointestinal or respiratory symptoms. There are 16 HPeV genotypes, of which HPeV3 causes septic shock and meningitis in infants. Here, we present a case of severe HPeV infection in an infant who required intensive care management.

Objectives: Case presentation: A 2-month-old boy presented with fever, an irregular breathing pattern, and a severely deteriorated general condition. Brain magnetic resonance imaging was performed to investigate the cause of apnea. The patient then developed severe respiratory failure and produced a large amount of bloody, foamy sputum. He was intubated immediately. A computed tomographic lung scan revealed poor permeability of the entire lung, indicating pulmonary edema. As echocardiography revealed severely impaired left ventricle contraction, congestive heart failure was suspected as the cause of acute respiratory failure. The patient was admitted to the pediatric intensive care unit and received high-frequency oscillatory ventilation with milrinone and epinephrine. On the second day after admission, the patient’s cardiac function improved considerably. As his respiratory condition improved, the ventilator setting was gradually reduced toward weaning, beginning on the third day after admission. Subsequently, the patient was extubated on the ninth day after admission. Because of concern regarding sepsis development, he was also given empirical antibiotics and acyclovir along with systemic steroids. Polymerase chain reaction, which was performed later, indicated the presence of HPeV in his serum and cerebrospinal fluid at admission. Accordingly, he was diagnosed with sepsis and meningitis due to HPeV infection. The patient was discharged on the tenth day after admission without any neurological deficits.

Methods: None

Results: HPeV infections present with various symptoms such as fever, irritability, sucking weakness, exanthema, and respiratory and gastrointestinal symptoms. HPeV infection is also a well-known cause of septic shock and encephalopathy in infants. Polymerase chain reaction assays are useful for rapid HPeV detection in such patients.

Conclusion: HPeV infection can lead to death or serious neurological impairment, and therefore early recognition of sepsis and appropriate management of patients with such severe disease are necessary to improve prognosis.