EDITORIAL

Rotavirus in the Neonatal Intensive Care Unit: Different Clinical Characteristics in Premature Neonates

Rotavirus is one of the most common causes of diarrhea in infants and young children.1 In children, the most common clinical features of rotavirus infection are diarrhea and vomiting. However, the symptoms and signs of rotavirus infection may be different from those in children.

In this issue of Pediatrics and Neonatology, Shim et al report a prospective observational study of rotavirus infection in a neonatal intensive care unit (NICU) in Korea.2 About 25% of the infants in the NICU were infected with rotavirus. The most common manifestations of the infection among the premature neonates were feeding difficulty, abdominal distension and lethargy but the symptoms commonly seen in the full-term neonates were fever, diarrhea and vomiting. In another study of rotavirus infection, in the neonatal nursery of a tertiary care hospital in India, infection was found to be associated with diarrhea, vomiting, feeding intolerance, necrotizing enterocolitis, hematochezia, and gastroesophageal reflux.3 It is evident, therefore, that rotavirus infection in different geographical locations and among different age groups may result in different clinical outcomes. As premature babies may not display typical symptoms of rotavirus infection, these babies need careful observation, with appropriate tests to identify rotavirus infection.

Rotavirus infection, especially in premature babies, may have complications such as necrotizing enterocolitis and secondary bacteremia.4–6 Among the infected preterm babies in Shim et al’s study, nosocomial infection accounted for 93% of infections,2 which was an extremely high proportion. Rotavirus infection is easy to spread in institutional care or hospital settings.7 Rotavirus vaccine cannot be administered to neonates, so the prevention of infection in this group, by such methods as hand washing and cohort care, is particularly important. Rotavirus is non-envelope virus that cannot be inactivated by alcohol, so strict hand washing must be advocated.

Shim et al reported that the G4P[6] rotavirus was the dominant strain, whether among nosocomial infections, institutional infections, or infections at home.2 The G or P types of rotavirus differ over time and in different areas, so it is important to maintain surveillance of the types of rotavirus in circulation and thus monitor the efficacy of the current vaccine.

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References