HUMAN PARAINFLUENZA VIRUS INFECTION IN THAI CHILDREN WITH LOWER RESPIRATORY TRACT INFECTION FROM 2010 TO 2013

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Abstract. Human parainfluenza virus (HPIV) is a common cause of upper and lower respiratory illness in infants and young children. In order to classify the HPIV isolates circulating in the central part of Thailand, 650 samples obtained from the lower respiratory tract of patients from two hospital pediatric wards during 2010 to 2013, were analyzed for the presence and types of HPIVs by multiplex semi-nested PCR of hemagglutinin-neuraminidase (HN) gene. The results showed that 4.8% of the samples were positive for HPIV, among which 0.5%, 2.5% and 1.5% were positive for HPIV-1, HPIV-3, and HPIV-4, respectively, and none were positive for HPIV-2. A phylogenetic tree constructed from 31 HPIV HN gene sequences compared to those in GenBank showed greater than 80% identity to other reference strains. Prevalence of HPIV infection and phylogenetic characteristics of the circulating HPIVs may help explain the impact of HPIVs infection in Thai children.

Keywords: human parainfluenza virus (HPIV), classification, epidemiology, hemagglutinin-neuraminidase gene, Thailand

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