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Virological and clinical characteristics and viral shedding of children with norovirus gastroenteritis

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Norovirus (NoV) is an emerging enteric pathogen and being recognized as a global health burden as leading viral cause of outbreaks of gastroenteritis worldwide. The rapid transmission of NoV via person-to-person contact makes infection control difficult. Our study is to establish the standardization of viral load in NoV AGE to investigate and correlate clinical features, disease characteristics, viral shedding and transmissibility. Fecal specimens from recruited children in Chang Gung Children's Hospital under diagnosis of *norovirus* gastroenteritis examined by RT-PCR and their clinical features of hospitalization were characterized. *Norovirus* real time RT-PCR assay with viral copy numbers [(log)/g feces] calculation as viral load was performed. Fisher exact test was used to determine differences between clinical features. The viral load increasing varied from the 3rd day to the 8th day forming an unsmooth plateau feature without peaking. After the 8th day, the viral load declined and shedded at the 15th day after illness onset. In regard to correlate viral load with clinical manifestations, we found there is a longer shedding period in patients in 17 febrile patients (16.3 days after disease onset) than in 21 afebrile ones (12.7 days after disease onset) (P=0.03) also a significantly longer shedding period of patients infected by GII.4 Sydney strain (17.6 days after illness onset) then by non- GII.4 Sydney (12.3 days after disease onset) strain *norovirus* (P<0.01). In conclusion, the copy numbers based method viral load evaluation provides a more specific and precise way for assessment noroviruses detection, viral shedding, transmissibility, and even clinical correlation.

Biography

Shih-Yen Chen is currently an Attending Physician in the Department of Pediatrics, Chang Gung Children's Hospital and Chang Gung University in Taiwan. He has received his Doctor of Medicine degree from Taipei Medical College and Doctor of Philosophy degree from Chang Gung University College of Medicine.

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