MOLECULAR CHARACTERIZATION OF VIRAL AGENTS IN PATIENTS WITH ACUTE GASTROENTERITIS IN KOREA

H. Jeong, A. Jeong, M. Jo, S. Jeong, J. Ahn, J. Kim, D. Cheon

Division of Enteric and Hepatitis Viruses, Center for Infectious Diseases, National Institute of Health, Korea Center for Disease Control and Prevention, Seoul, South Korea

Background: Gastroenteritis is a major cause of childhood morbidity and mortality worldwide. Group A Rotavirus (RoV), human Norovirus (NoV), enteric adenovirus (AdV), and astrovirus (AsV) are recognized as common viral etiologies of acute gastroenteritis.

Objectives: The incidence and etiology of viral gastroenteritis during 2005-2007 in Korea was determined.

Study design: A total of 74,367 stool specimens were collected from patients hospitalized with diarrhea and analyzed viral agents causing diarrhea with ELISA, RT-PCR, or PCR, and nucleotide sequencing. Phylogenetic analysis of genotype sequences was performed for each of four commonly detected viral pathogens.

Results: At least one viral agent was detected in 21.2% (15,765 of 74,367) of the stool samples. Among these, group A RoV, NoV, enteric AdV, and AsV, were detected in 49.5%, 37.6%, 8.6%, and 6.2%, respectively. The relative contribution of these viruses changed greatly over 2 years. The percentage of rotavirus dropped from 65.1% to 35.9%, whereas NoV increased from 20.6% to 51.6%. Virus associated gastroenteritis was most common from December to May. The prevalent RoV strains were P[8]G1, P[8]G3, P[4]G2, P[6]G4 and relative frequencies of those 4 types changed during this period. And the predominant NoV strains changed from GII3 to GII4.