

EDITORIAL

Norovirus outbreaks occurred in different settings in the Republic of Korea

Norovirus is major cause of epidemic acute nonbacterial gastroenteritis in human in the worldwide. Norovirus infection is common in all age groups and characterized by a low infection dose and efficient transmission with typical fecal-oral routes, besides airborne spread and environmental contamination [1–3]. Human norovirus GII.4 was prominent in all genogroup and genotype and GII.4 variants were divided into 13 sub-cluster types along with epidemic year and genetic characterization. Especially, GII.4 Sydney strain, named as 2012 variant, was relatively new and predicted next prominent strain [4–6]. There were several reports about GII.4 associated gastroenteritis but had been lack of environmental and molecular-epidemiological data.

In the current issue of *Osong Public Health and Research Perspectives*, a study was conducted to identify GII.4 variants in outbreaks in Korea, 2004–12. Partial VP1 sequence of NoV GII.4-related outbreaks was analyzed 2004 to 2012. Partial VP1 were detected with RT-PCR and semi-nested PCR, and nucleotide of 312–314 base pairs sequenced for phylogenetic comparison. Nine variants were emerged in outbreaks, with the Sydney variant showing predominance recently. The authors concluded that this predominance may persist for at least three years, although new variants may appear in Korea [7].

Another study reported epidemiological feature of 3 outbreak cases of norovirus in Korea, and described the clinical symptom and distribution of causative genotypes. In this study, authors described the investigation of three outbreaks caused by GII.4 Sydney variant, which traced contaminated groundwater to supply manufacturing company. In Korea, three outbreaks associated with norovirus GII.4 Sydney variant occurred in middle and high school setting in different city on November 21–30, 2011. The incidence rates of A, B, C outbreaks were 16.24% (326/2,007), 4.1% (27/656) and 16.8% (36/214),

respectively. The patients in these three outbreaks were affected by acute gastroenteritis. These schools were provided from same manufacturing company to unheated-food. Two genotypes (GII.3 and GII.4) of norovirus were detected in these cases. Among them major causative strains GII.4 (Hu-jeju-47-2007KR-like), were identified in patients, food-handlers and groundwater from manufacturing company of unheated-foods. GII.4 (Hu-jeju-47-2007KR-like) strain of norovirus, the nucleotide sequences were identical and identified to GII.4 Sydney variant. The authors concluded that combined epidemiological and laboratory results were closely related with contaminated groundwater, and causative pathogen is GII.4 Sydney variant strains [8].

References

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