Molecular epidemiological study of Norovirus related outbreak in Korea

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Viral gastroenteritis was generally induced in a child less than 5 year old by type A rotavirus, enteric adenovirus, astrovirus, Sapovirus, except for norovirus. These were designated as surveillance required pathogens legally and this was performed by KNIH (Korea National Institute of Health) as a name of EnterNet-Korea. In this point, we analyzed genotype of enteric virus in Korea to investigate evasion of host immune system. Norovirus is typical single-stranded (+) RNA virus and is divided into 5-genogroup. Genogroup I and II generally infect human. Norovirus GII.4 was main genotype in the world. GII.4 strain continuously mutated their genome and several GII.4 variants induced outbreaks, like as Sydney variant associated outbreak. In recent, GII.17 is emerging genotype in south-east Asia and induced several outbreaks last winter seasons. This is the huge antigenic change of norovirus in south-east Asia and it may spread to other area. Recently, the genotype of other virus also changed and sometimes induced outbreak by minor genotypes in Korea. Genotypes provide important information about evading strategy of enteric virus from host immune system and this also provides tactical information to diagnose and prevent pathogens. Although we are not able to catch up the mutation rate of enteric virus, we must continuously follow up to decrease disease.

Biography
Deog-Yong Lee has completed his Doctor of Veterinary Medicine (DVM) and PhD at Seoul National University. He is a Staff Scientist and team leader of enteric virus team in Division of Enteric Disease, KCDC. He has published more than 100 papers in reputed journals.

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