

11th world congress on

VIROLOGY AND INFECTIOUS DISEASES

May 17-18, 2018 Tokyo, Japan

The concurrent circulation of multiple recombinant norovirus genotypes in 2016/17 and 2017/18 epidemic season in Nanjing, China**Jie Ding**

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Noroviruses are the most common cause of Acute Gastroenteritis (AGE) worldwide, remaining a significant public health problem in both high-income countries and developing countries. In 2016/17 Norovirus epidemic season, 34 out of 40 AGE clusters/outbreaks were laboratory-conformed as GII positive, outnumbering the total number of Norovirus clusters/outbreaks in the past three epidemic seasons in Nanjing area. The unusual active Norovirus activity and the sharp rise in the AGE outbreaks were presumably due to the predominance of an emergent genotype GII.P16/GII.2 and the concurrent circulation of several other genotypes among which GII.P7-GII.6 and GII.P22-GII.5 were rare recombinant strains. The previously predominant novel GII.P17-GII.17 came second as one of the causative genotypes. Altogether 27.5% of the Norovirus outbreaks due to GII.P16-GII.2 strains occurred in kindergartens and elementary schools. The inter-variant GII.4 recombinant form GII.P4_New Orleans_2009/GII.4_Sydney_2012, which was considered to have the potential to become an epidemic or pandemic variant, had not been detected. In the current 2017/18 winter season, however, the circulating Norovirus genotypes which have caused the majority of Norovirus AGE outbreaks are GII.P16/GII.2 and GII.Pe-GII.4. In conclusion, we have observed the tendency that multiple genotypes instead of one single predominant variant have been responsible for the seasonal Norovirus epidemic since GII.4 decreased its prevalence from 2014 onwards. The novel GII.P17-GII.17 replaced GII.4 in 2014/15 winter season and the emergent GII.P16/GII.2 surpassed the novel GII.P17-GII.17 in 2016/17 winter season. It remains unknown, however, whether the continuous emergence of novel Norovirus variants capable of spreading may occur.

Biography

Jie Ding has completed her PhD in 2009 from Institute of Microbiology, Chinese Academy of Sciences. She is the Deputy Director of Nanjing Center for Disease Prevention and Control. She has published more than 30 papers in reputed journals and has been serving as a Reviewer for several journals.

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