

Outbreak of Astrovirus in Adults with Acute Gastroenteritis in Korea

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Abstract

Astrovirus is generally known for inducing mild diarrhea in infants. However, an outbreak of astrovirus infection occurred in adults on February 14, 2014, in Korea. Astrovirus type 1a is the predominant strain worldwide but was not detected in this study. By contrast, type 5 was detected in all specimens, although type 5 is relatively uncommon in Korea.

Keywords: Astrovirus; Adult outbreak; Genotype 5

Introduction

Astrovirus is a small, round, non-enveloped, single-stranded (+) RNA virus with a diameter of 27-32 nm, and its genome consists of approximately 6800 nucleotides and contains three overlapping open reading frames (ORFs) [1]. Astrovirus genotypes are classified

Microbiological tests were performed at the Chungcheongbuk-do Institute of Health and Environment, following the laboratory diagnosis guidelines of the KNIH and the Ministry of Food and Drug Service (MFDS). The molecular epidemiological investigation was performed at the Division of Enteric Disease, Korea National Institute of Health (KNIH). Pathogens included 10 genera of bacteria, 5 species of enteric virus (norovirus, group A rotavirus, enteric adenovirus, astrovirus, and sapovirus), and 4 species of protozoa. For virus detection, viral RNA was extracted using a commercialized RNA prep

epidemic consideration. In the current study, we sought to address why an outbreak occurred in this adult group.

The first reason an outbreak occurred is that several infection routes existed. Enteric virus is readily transmitted via the fecal-oral route, although outbreaks have often been prolonged due to the ability of

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