学 位 論 文 の 要 旨

三 重 大 学

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主論文の題名

Molecular Epidemiology of Norovirus (NoV) Infection in Mie Prefecture: The Kinetics of Norovirus Antigenemia in Pediatric Patients

主論文の要旨

Few studies have shown the presence of norovirus (NoV) RNA in blood circulation but there is no data on norovirus antigenemia. We examined both antigenemia and RNAemia from the sera of children with NoV infections and studied whether norovirus antigenemia is correlated with the levels of norovirus-specific antibodies and clinical severity of gastroenteritis. Both stool and serum samples were collected from 63 children admitted to Mie National Hospital with acute NoV gastroenteritis. Norovirus antigen and RNA were detected in sera by ELISA and real-time RT-PCR, respectively. NoV antigenemia was found in 54.8% (34/62) and RNAemia in 14.3% (9/63) of sera samples. Antigenemia was more common in the younger age group (0-2 years) than in the older age groups. There was no correlation between stool viral load and norovirus antigen (NoV-Ag) levels (r_s = -0.063; CI -0.3150 to 0.1967; p = 0.6251). Higher levels of acute norovirus-specific IgG serum antibodies resulted in a lower antigenemia OD value (n = 61; r = -0.4258; CI -0.62 to -0.19; p = 0.0006). Norovirus antigenemia occurred more commonly in children under 2 years of age with NoV-associated acute gastroenteritis. The occurrence of antigenemia was not correlated with stool viral load or disease severity.