Viral etiology and epidemiology of acute pediatric gastroenteritis in southern region of Saudi Arabia

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This study was desgined and conducted to determine the viral etiology and prevalence of acute gastroenteritis among pediatric patients in southern region of Saudi Arabia (KSA) through December 2015- December 2018. The presence of rotavirus, adenovirus and astrovirus was tested in a number of 461 diarrheal samples collected randomly from hospital-admitted children under five years of age in three different localties. The dual (coinfection) rates, sex and age distribution of infection were also assessed in this study. Immunochromatographic technique (ICT) was employed to investigate the presence of the antigens of these three viral agents. Out of the 461 specimens, 85 (18.4%) were noted positive for at least one viral agent. Among the 85 positive specimens, a total of 104 virus was detected with the frequency of 72 (69.2%), 25 (24.0%) and 7 (6.7%) for rotavirus, adenovirus and astrovirus respectively. A number of 19 cases (22.4%) revealed dual viral infections (co-infections). In conclusions, rotavirus is detected as the most causative agent of acute gastroenteritis in children in the study area, followed by adenovirus, and astrovirus. ICT is confirmed and suggested as a rapid, sensitive and routine serological tests for detection of diarroeal viruses in among pediatic patients.

Table 1: *Distribution of enteric viruses co-infection*

Coinfection pattern	*Number of patients*
Rotavirus + adenovirus	14 (16.5%)
Rotavirus + Astrovirus	4 (4.7%)
Astrovirus + adenovirus	1(1.2%)
Rotavirus + adenovirus + Astrovirus	0 (0.0%)
Total	19 (22.4%)

Recent Publications

1. Abdulrahim Hakami, Abdelwahid Saeed Ali and Ahmed Hakami (2013). Effects of Hepatitis B Virus Mutations on Its Replication and Liver Disease Severity. Open Virol J 7:12-18.
2. Wafa Ibrahim Elhag, Hummodi Ahmed Saeed, Elfadhil Elobied omer and Abdelwahid Saeed Ali (2013). Prevalence of Rotavirus and Adenovirus Associated with Diarrhea among Displaced Communities in Khartoum, Sudan. BMC Infectious Diseases 13:209-214.
3. Abou M A, Eltahir Y M and Abdelwahid Saeed Ali (2009). Seroprevalence of Hepatitis B virus and Hepatitis C virus among blood donors in Nyala, South Dar Fur, Sudan. Virol J 6:146.

Biography

Abdelwahid Saeed Ali is currently serving as a Professor of Virology and Medical Biotechnology in the College of Medicine at King Khalid University in Saudi Arabia. He has obtained his PhD in Medical Virology at Puta University of Malaysia in 2000 and had a Postdoctoral Fellowship in Medical Biotechnology at Duke Unievsrity, USA from 2005 to 2007. He also pursued and lead many research projects related to clinical virology and epidemiology of some viral infections. He has published his reserach data in most reputable journals worldwide.

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