

## **Viral gastroenteritis in rotavirus negative hospitalized children <5 years of age from the independent states of the former Soviet Union.**

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### **Abstract**

#### **PURPOSE:**

Rotavirus causes nearly 40% of all hospitalizations for AGE among children <5 years of age in the NIS of the former Soviet Union. The etiologic role of other established gastroenteritis viruses in this age group is unknown.

#### **METHODS:**

Laboratory-confirmed rotavirus negative fecal specimens (N=495) collected between January and December 2009 from children in 6 NIS (Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova and Ukraine) were tested for norovirus, sapovirus, enteric adenovirus and astrovirus by real-time RT-PCR. Genotyping was carried out by sequencing and phylogenetic analysis.

#### **RESULTS:**

Norovirus, enteric adenovirus, sapovirus and astrovirus were detected in 21.8%, 4.0%, 3.2%, and 1.4% of the rotavirus negative specimens, respectively. Mixed infections were identified in 4.1% of the specimens. Phylogenetic analysis showed co-circulation of several different genotypes with GII.4 Den Haag (2006b) norovirus, GI.2 sapovirus, adenovirus type 41, and astrovirus type 1 causing majority of the infections.

#### **CONCLUSION:**

Norovirus, enteric adenovirus, sapovirus and astrovirus account for a significant proportion (30.5%) of AGE in hospitalized children <5 years of age in 6 NIS.

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#### **KEYWORDS:**

Adenovirus; Astrovirus; Gastroenteritis; Norovirus; Rotavirus; Sapovirus