

995. Comparing the Clinical Presentation of Viral Causes of Pediatric Acute Gastroenteritis

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Background. Children with acute gastroenteritis (AGE) present with vomiting, diarrhea, or both. The objective of our study was to compare the clinical presentation of viral causes of AGE when seeking medical care.

Methods. AGE surveillance for children ≥15 days and <18 years was performed at Vanderbilt Children's Hospital outpatient (OP) clinics and emergency department (ED). Stool specimens were tested by RT-PCR at the TN Department of Health central laboratory for norovirus (NoV) genogroups 1 and 2, sapovirus (SaV), and astrovirus (AsV). ELISA for rotavirus (RoV) VP6 antigen (Rotaclone[®]) was performed at Vanderbilt. AGE presentation was characterized as fever, vomiting only, diarrhea only, or both.

Results. From December 1, 2012-November 30, 2013, 1217 AGE cases (763 [63%] ED, 454 [37%] OP) were enrolled, and 965 stool specimens (590 [61%] ED, 374 [39%] OP) were collected, with 52% males; 59% white, 36% black, and 38% Hispanic and a median age of 43 months. 422 (44%) patients had at least one virus detected, with 55 (13%) with more than one virus detected. Frequencies of viruses were: NoV G1, 15 (2%); NoV G2, 142(15%); NoV G1 and G2, 5 (<1%); RoV, 155 (16%); SaV, 117 (12%); and AsV, 49 (5%). One patient was excluded from the analysis because diarrhea

status was unknown. Table 1 summarizes AGE presentation overall. Table 2 summarizes presentation by each virus, without co-detection.

Table 1: AGE presentation

	Vomiting	Diarrhea	Both	Fever	Total
All AGE	342 (28%)	230 (19%)	644 (53%)	782/1211 (65%)	1216
AGE with stool	246 (26%)	191 (20%)	527 (55%)	625/960 (65%)	964

Table 2: AGE presentation by Virus, no co-detection

	NoV	RoV	SaV	AsV	No Virus
Vomiting	38 (28%)	22 (18%)*	22 (26%)	7 (26%)	149 (28%)
Diarrhea	8 (6%)*	11 (9%)*	13 (16%)	7 (26%)	144 (27%)
Both	88 (66%)*	89 (73%)*	49 (58%)	13 (48%)	249 (46%)*
Fever	69 (51%)*	77 (64%)	51 (61%)	21 (78%)	377 (70%)*
TOTAL	134	122	84	27	542

*p<0.05, fisher exact comparing study cohort

Conclusion. Cases of RoV and NoV were more likely to have both vomiting and diarrhea, but less frequently had symptoms of diarrhea alone. In contrast, isolated vomiting was less common among subjects who tested positive for RoV. Children with NoV were less likely to present with fever, while children with no detected virus were more likely to present with fever.

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