COINFECTION IN ACUTE GASTROENTERITIS PREDICTS A MORE SEVERE CLINICAL COURSE IN CHILDREN

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The objectives of this study were to determine the incidence of enteric pathogens causing acute gastroenteritis among hospitalized children in an Italian hospital, to measure the incidence of coinfections with viral or bacterial agents, and to compare the clinical characteristics of those infected with one versus multiple agents. A prospective study was conducted from March 2010 to April 2011 at the Bambino Gesù Pediatric Hospital in Rome. All patients between 1 month and 16 years of age admitted to the Pediatric Department with a diagnosis of AGE. Two stool samples for each patient were tested for gastrointestinal pathogens. We summarized the clinical severity of episodes describing duration of diarrhea, duration and frequency of vomiting, fever and severity of dehydration. All the patients underwent medical evaluation with estimation of dehydration (Gorelick score). One or more etiological agents were detected in 151 out of 232 patients (65.1%), while we did not detect any etiological agent in 81 (34.9%). Rotavirus was detected in 96 (63.6%), Adenovirus in 17 (11.2%), Norovirus in 7 (4.6%), toxin producing C. difficile in 23 (15.2%), Salmonella spp. in 15 (9.9%, B group in 12/15 and D group in 3/15); C. perfringens in 12 (7.9%), Campylobacter spp. in 6 (4%) and VTEC in 2 (1.3%). In 27 children out of 151 (17.9%), we found evidence of coinfection. Coinfection with Rotavirus and toxin producing C. difficile was the most common (63%). Children with coinfection had a more severe clinical presentation and had a higher probability to be severely dehydrated.