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ePoster Viewing

Public health and community-acquired infections

Investigation of rotavirus, adenovirus, norovirus and astrovirus in children with acute gastroenteritis and evaluation of epidemiological features

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Objectives: Viral agents are the most common causes of childhood gastroenteritis over the world. The aims of this study were to determine the frequencies of rotavirus, adenovirus, norovirus and astrovirus infections in children with acute gastroenteritis in our region, and to evaluate these frequencies according to age, gender and seasonal features.

Methods: During a two year period (2012-2013) a total of 1875 stool specimens were examined for enteric viruses. The study population were children < 5 years which visited the outpatient clinics with symptoms of acute gastroenteritis for medical advice or hospitalized. The presence of rotavirus, adenovirus and norovirus genogroups I and II were screened by rapid immunochromatographic test, while astrovirus was tested using enzyme immunoassay.

Results: Viral gastroenteritis was diagnosed in 675 cases (an overall rate 36%). The positivity rates of rotavirus, adenovirus, norovirus and astrovirus were 19%, 10%, 6% and %1 respectively. Three of the patients (0.4%) yielded triple viral antigen positivity in their stool samples, and 42 (6.2%) of the patients yielded two at a time. Rota+adenovirus (37/675; 5.5%) associations were the most frequently detected coinfections. Viral gastroenteritis occurred in 56% boys versus 44% girls. In a high rate of viral gastroenteritis (87.6) suffered children aged less than years while 48.5% belonged in the age group of 6-24 months. A seasonal fluctuation of the rotavirus disease was observed with the highest rate of the illness (71%) documented between Winter and Spring, while norovirus infections peaked in Winter (79%). In contrast astrovirus infections occurred all year-round.

Conclusion: Rotavirus remain still the main causative viral agent for the majority of viral gastroenteritis cases in the paediatric population in Turkey. The childhood gastroenteritis cases (36%) were due to viral agents in our region, testing for the viral antigens may guide the clinical approach to the patients with acute diarrhea especially in 1-3 years old children and in winter season.