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Detection of Rotavirus genotypes with conventional PCR in a group of Iraqi children with acute viral gastroenteritis

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Statement of the Problem: Rotaviruses are one of the major causes of acute viral gastroenteritis in children under 5 years old worldwide, the highest mortality is observed in developing countries. The genome of the rotavirus is composed of 11 segments of double-stranded RNA, according to the antigenic characteristics of the middle layer protein VP6 the virus can be classified into A to I serogroups, the most common serogroup that can cause more than 90% of the rotavirus infections in human is the rotavirus A. This study aimed to detect the rotavirus genotypes in the infected children with acute viral gastroenteritis as this disease causes many deaths in children and cost the country a lot of money for treatment, additionally if the diagnosis of the virus is early the disease will be under control.

Methodology and Theoretical Orientation: This study was conducted during March 2017 to September 2017; the study included 200 stool samples collected from hospitalized children with acute gastroenteritis. Samples were of two groups, 150 stool sample of patient with acute viral gastroenteritis, the other 50 stool samples were collected from healthy children also under 5 years old, The result considered positive if ELISA and/or conventional PCR gave positive result, while the result considered negative if both of them gave negative result.

Findings: The incidence of the rotavirus in the patient group was (70/150) while only two cases (2/50) of the control group showed positive result with rotavirus, the most prevalence serotype was G2P serotype with (40/150) in the patient group, additionally this serotype was the only serotype that was detected in control group in both two cases that showed positive result with rotavirus.

Conclusion and Significance: Rotavirus genotyping is a major risk factor of acute viral gastroenteritis in children under 5 years old as the percentage of the virus was high.

Recommendation: Prophylaxis and treatment of the infants and children under 5 years old is very important especially for children that attend hospitals.

Biography

Hiba Sabah Jasim she was graduated from the college of science, University of Baghdad, Department of Life Sciences, specialized microbiology, appointed in the Medicine College, University of Baghdad, branch of microbiology in 2005, and then obtained Master degree from the same branch in 2009. And thus become a faculty in the medicine college. In 2013 got the scientific title lecturer and then she was accepted in the medicine college, University of Al- Nahrain department of microbiology and received her PhD degree in January 2018.

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