

## Diagnosis of Rotavirus Infection among Egyptian Children by Using Different Laboratory Techniques

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**Abstract :** Background: Rotavirus is the leading etiologic agent of severe diarrheal disease in infants and young children worldwide. The present study was aimed 1) to detect rotavirus infection as a cause of diarrhoea among children under 5 years of age using the two serological methods (ELISA and LA) and the PCR technique (2) to evaluate the three methodologies used for human RV detection in stool samples. Materials and Methods: This study was carried out on 247 children less than 5 years old, diagnosed clinically as acute gastroenteritis and attending Alexandria University Children Hospital at EL-Shatby. Rotavirus antigen was screened by ELISA and LA tests in all stool samples, whereas only 100 samples were subjected to RT-PCR method for detection of rotavirus RNA. Results: Out of the 247 studied cases with diarrhoea, rotavirus antigen was detected in 83 (33.6%) by ELISA and 73 (29.6%) by LA, while the 100 cases tested by RT-PCR showed that 44% of them had rotavirus RNA. Rotavirus diarrhoea was significantly presented with a marked seasonal peak during autumn and winter (61.4%). Conclusion: The present study confirms the huge burden of rotavirus as a major cause of acute diarrhoea in Egyptian infants and young children. It was concluded that; LA is equal in sensitivity to ELISA, ELISA is more specific than LA, and RT-PCR is more specific than ELISA and LA in diagnosis of rotavirus infection.

**Keywords :** rotavirus, diarrhea, immunoenzyme techniques, latex fixation tests, RT-PCR

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