

Short Communication

Detection of rotavirus genome by new silver staining method

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Abstract

Background and Objective: Rotaviruses are the members of the Reoviridae family containing double-stranded RNA (dsRNA) genome which are the main cause of gastroenteritis particularly in children less than three years. This study was designed to evaluate the detection of rotavirus genome by new silver staining method using polyacrylamide gel electrophoresis (PAGE).

Method: In this descriptive study, the samples were collected from infected MA-104 cell culture and the RNA electrophoresis was performed in 10% polyacrylamide slab gels after RNA extraction.

Results: According to polyacrylamide gel electrophoresis and sensitive staining analysis, rotavirus RNA segments were divided into 4 groups and single-nucleotides differences were clearly detected rapidly.

Conclusion: New silver staining method using polyacrylamide gel electrophoresis has the capacity to detect the rotavirus electerophertype within a few minutes even in small DNA/RNA pieces up to 7 picograms.

Keywords: Rotavirus, Polyacrylamide gel electrophoresis, Silver staining

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Received 27 Feb 2013

Revised 3 Mar 2014

Accepted 17 Aug 2014