

DISTRIBUTION OF HUMAN ROTAVIRUS G AND P GENOTYPES IN A HOSPITAL SETTING FROM NORTHERN INDIA

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Abstract. Rotavirus gastroenteritis is a major cause of severe dehydrating diarrhea in children worldwide. Rotavirus G and P genotyping is essential for epidemiological surveillance and for better formulation of candidate rotavirus vaccines. Out of 862 diarrheal stool samples collected from hospitalized children aged < 2 years during February 2005 - March 2007, 318 (36.9%) were positive for rotavirus by ELISA. G and P genotyping was performed on 100 randomly selected positive samples using a seminested multiplex RT-PCR assay. The result of G genotyping indicates G1 (60%) was the most predominant VP7 type, followed by G2 (16%), G9 (8%) and G3 (3%). Two cases of G12 genotype were also observed. P genotypes identified were P[8] (40%) followed by P[4] (26%) and P[6] (17%). The most common G-P combinations were G1P[8] (26%), followed by G1P[4] and G1P[6]. Mixed infection involved 28% of strains. In this study the G1 and P[8] genotypes were the leading G and P types. Two cases with G12 genotype were also observed during the study.

Key words: rotavirus, G type, P type, India

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