

RESEARCH NOTE

GENETIC CHARACTERIZATION OF GROUP A ROTAVIRUS VP6 GENE IN STRAINS FROM HOSPITALIZED CHILDREN WITH DIARRHEA, JAKARTA, INDONESIA

Andi Yasmon, Elisabeth D Harahap and Beti Ernawati Dewi

Department of Microbiology, Faculty of Medicine, Universitas Indonesia,
Jakarta, Indonesia

Abstract. VP6 is a key protein for determination of rotavirus groups and for development of a vaccine because it can induce an effective immune protection. Thus, a 379-bp DNA fragment of VP6 gene of 15 rotavirus strains collected from stool samples of pediatric patients (<5 years old) with symptoms of acute diarrhea in three hospitals in Jakarta, Indonesia from February to July 2010 were characterized, of which 11 strains were assigned as VP6 genotype I2 with serogroup (SG) I characteristic, while 4 were VP6 genotype I1, SG II. When compared with two vaccine strains and two vaccine candidates, the 11 VP6 genotype I2, SG I strains were closely related to vaccine strain WC3, while the four VP6 genotype I1, SG II strains were closely related to vaccine strain AROLA490AB and vaccine candidates 116E and RV3. These findings of rotavirus VP6 genotypes and serogroups can provide information for appropriate application of rotavirus vaccines containing VP6 protein.

Keywords: rotavirus, genotype, serogroup, vaccine, VP6, Indonesia

Correspondence: Andi Yasmon, Department of Microbiology, Faculty of Medicine, Universitas Indonesia, Jl Pegangsaan Timur No. 16, Jakarta 10320, Indonesia.

Tel: +6221 3160492

E-mail: andi.yasmon@ui.ac.id