ANALYSIS HB, MCV AND MCHC LEVEL OF LONG-TAILED MACAQUE (Macaca fascicularis) EXPERIMENTALLY INFECTED WITH ATTENUATED POLIO VIRUS

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ABSTRACT
The aim of this research was to determine a blood profiles specially the haemoglobin, MCV and MCHC level of Long-Tailed Macaque (Macaca fascicularis) after infected with WHO Reference Poliovirus and Oral Polio Vaccine 2 (OPV2). There were 28 monkeys used in this research, the monkeys were divided into two groups. The first 14 monkeys were injected with WHO Reference poliovirus and the other 14 monkeys were injected with OPV2 vaccine. Before treatment, the monkeys have been adapted in new environment for 5 days in BSL3 given feed and water ad libitum daily. After adaptation period, the blood was collected on the day one under anesthetized then the monkeys were observed for 21 days. On the 22 days’ observation the blood was collected from medial femoral vein under anaesthetized condition. Blood samples were analysed by automated machine (haematology analyser). The pre and post treatment between OPV2 vaccine and WHO Reference poliovirus lead statistically significant increase (p<0.05), meanwhile between both WHO reference poliovirus and OPV2 did not experienced significant changes (p>0.05), it means both vaccines have same effect. However, WHO Reference poliovirus and OPV2 vaccine can causes change in hematology level but still within the normal level and does not cause any illness that’s why the vaccine is safe to use and does not cause any harmful effect such as anemia. Meanwhile this vaccine can increase the hemoglobin level in the body but still within the normal range.

Keywords: Macaca fascicularis, poliovirus, haemoglobin, MCV, MCHC.