THE EFFECT OF REPEATED ARTEMISININ EXPOSURE ON HISTOPATHOLOGICAL VIEW OF MICE (*Mus musculus*) LIVER WITH THE INFECTION BY *Plasmodium berghei*

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ABSTRACT

Malaria is one of the world's health problems. A variety of antimalarial drugs have been used to overcome the malarial disease, artemisinin is one of the drug choice. Artemisinin is used because it has an excellent safety profile, the effect of artemisinin has faster working and has a complex mechanism of action. This study was conducted to determine the effect of repeated artemisinin exposure on histopathological view of mice (*Mus musculus*) liver with the infection by *Plasmodium berghei*. A total of 48 male mice used in this study were divided into control group, treatment group, donors and isolates. In the control group were only infected with *Plasmodium berghei* at $1x10^5$ in 0.2 ml of blood without the artemisinin drug exposure, used 20 mice for 4 control groups that is K1, K2, K3 and K4. In the treatment group were infected with *Plasmodium berghei* at $1x10^5$ in 0.2 ml of blood and repeatedly exposed with artemisinin drug, also used 20 mice in 4 groups, that is P1, P2, P3 and P4. The parameters observed in this experiment is portal inflammation, degeneration and necrosis of the liver of mice. The data was presented in table form microscopic scores and histopathology assessment of the degree of liver cells, were analyzed with the Kruskal-Wallis test than followed by the Z test for multiple comparisons. From the results of statistical data indicate that there are significant differences in portal inflammation, but there is no real difference to the degeneration and necrosis. This study shows that repeated exposure to the antimalarial drug artemisinin could affect the view of portal inflammation, degeneration and necrosis of mice liver with the infection by *Plasmodium berghei*.

Keyword : artemisinin, histopathology, liver, *Plasmodium berghei*