ABSTRACT

Introduction: Malaria is one of serious international health problem. According to Riskesdas (2013), the incidence of malaria in Indonesia is 0,35% or 3,5 of 1000 population. Plasmodium sp. that infect erythrocytes cause malaria infection. Malaria patient usually suffers splenomegaly. That condition is caused by immune response to malaria infection. Antimalarial drug resistance such as Chloroquine and Sulfadoxine-Piremetamin has been reported. Alternatively is using traditional medical plants such as kelakai (*Stenochlaena palustris*) that has been used by Dayak Kenyah community as traditional medicine to cure fever and other diseases. Kelakai contains alkaloid and flavonoid and steroid that had been reported have antimalarial activity. The aims of this study was to find out antimalarial activity of ethanol extract of kelakai leaves to parasitemia and splenomegaly of *Plasmodium berghei* ANKA infected BALB/c mice.
Methods: This research was based on a modified Peter method using BALB/c mice infected *P. berghei* ANKA treated with ethanol extract kelakai leaves, with chloroquine diphosphate as a positive control. Then negative control was *P. berghei* ANKA infected mice without any additional treatment. Administration of ethanol extract of kelakai leaves was carried out for 4 days with a serial doses of 100, 10, and 1 mg/kg body weight and positive control was given chloroquine diphosphate 20 mg/kg body weight. Parasitemia was observed daily prior to calculation of percentage of parasite growth and inhibition of parasite growth. At the end of test, mice were sacisficed and spleens were isolated to measure their sizes. Probit analysis was done to obtain ED_{50} to find out the effect of extract in parasite killing by 50%. Spearman test was done to analyze the correlation of doses of extract against splenomegaly.
Results: Result of probit analysis showed ED_{50} at 77,05 mg/kg body weight. Result of correlation showed insignificant relation between doses and splenomegaly p=1,0 (significancy<0,05).
Conclusion: Ethanol extract of kelakai leaves has antimalarial activity and there is no correlation between doses of extract and splenomegaly.

Keywords: *Stenochlaena palustris, Plasmodium berghei* ANKA, antimalaria, splenomegaly.