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Abstract

Anemia is an important complication of malaria. The pathogenesis of malaria anemia is not well understood. Some inflammatory cytokines such as TNF-α was believed to be involved in the pathogenesis of malaria anemia because concentration of plasma TNF-α was increased in malaria patients with anemia. The aim of this study was to compare the concentration of plasma TNF-α in malaria patients with anemia and without anemia. Concentration of plasma TNF-α in 20 malaria patients with anemia and 20 plasma samples malaria patients without anemia from patients at Tanjung and Gangga primary health centers, west Lombok during December 2007 until June 2008 was measured using ELISA. The results were analyzed using 2 sample t test. The average concentration of plasma TNF-α in falciparum malaria patients with anemia 145.27 ± 24.18 pg/ml while the average concentration of plasma TNF-α in falciparum malaria patients without anemia 36.26 ± 16.18 pg/ml. The average concentration of plasma TNF-α in vivax malaria patients with anemia 97.83 ± 13.96 pg/ml while the average concentration of plasma TNF-α in vivax malaria patients without anemia 30.41 ± 14.57 pg/ml. We conclude that TNF-α concentration in malaria patients with anemia is significantly higher than the TNF-α concentration in malaria patients without anemia (p = 0.000...).

Keyword : Falciparum, malaria, vivax, malaria, Anemia, TNF-α,

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