

Hubungan antara Status Malaria Asimtomatik dan Konsentrasi IL-10, TNF- γ , dan IFN- γ pada Penduduk Kecamatan Nangapanda, Nusa Tenggara Timur = The Association between Asymptomatic Malaria Status and IL-10, TNF- γ , and IFN- γ Concentration Among Residents in Nangapanda Subdistrict, Nusa Tenggara Timur Province

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Abstrak

ABSTRAK

Pendahuluan: Malaria merupakan masalah kesehatan global dengan angka kesakitan dan kematian yang tinggi. Namun, sampai saat ini, mekanisme imunitas terhadap malaria asimtomatik masih belum dimengerti secara jelas sehingga sistem kontrol malaria pun belum berhasil dikembangkan. Tujuan: Meneliti hubungan status malaria asimtomatik dengan konsentrasi IL-10, TNF- γ , dan IFN- γ pada penduduk di Kecamatan Nangapanda, Nusa Tenggara Timur. Metode: Penelitian ini menggunakan data sekunder dari studi "Does treatment of intestinal helminth infections influence malaria? Background and methodology of a longitudinal study of clinical, parasitological and immunological parameters in Nangapanda, Flores, Indonesia ImmunoSPIN Study". Data dianalisis dengan uji Mann-Whitney SPSS versi 20.0. Hasil: Dari 116 sampel, prevalensi malaria asimtomatik sebesar 11,2%. Konsentrasi IL-10, TNF- γ , dan IFN- γ pada kelompok status malaria asimtomatik positif: 29,36 pg/ml; 3,20 pg/ml; dan 111,89 pg/ml; pada kelompok status malaria asimtomatik negatif: 21,74 pg/ml; 3,20 pg/ml; dan 1,60 pg/ml. Tidak ditemukan adanya perbedaan bermakna antara status malaria asimtomatik dengan konsentrasi IL-10 dan TNF- γ ($p > 0,05$), namun terdapat kecenderungan adanya perbedaan bermakna dengan konsentrasi IFN- γ ($p = 0,051$). Kesimpulan: Tidak terdapat hubungan yang bermakna antara status malaria asimtomatik dengan konsentrasi IL-10 dan TNF- γ pada penduduk di Kecamatan Nangapanda, Nusa Tenggara Timur, namun terdapat kecenderungan adanya hubungan bermakna dengan konsentrasi IFN- γ .

ABSTRACT

Introduction Malaria is a global health problem. However, the immune mechanism of asymptomatic malaria has not been clearly understood. Thus, an effective malaria control system is still unavailable. Aim To analyze the association between asymptomatic malaria status and IL 10, TNF γ , and IFN γ concentration among residents in Nangapanda District, East Nusa Tenggara Province which is malaria endemic. Method This study uses secondary data from "Does treatment of intestinal helminth infections influence malaria? Background and methodology of a longitudinal study of clinical, parasitological and immunological parameters in Nangapanda, Flores, Indonesia ImmunoSPIN Study". Data were analyzed using Mann Whitney SPSS version 20.0. Result From 116 samples, the prevalence of asymptomatic malaria was 11.2%. The IL 10, TNF γ , and IFN γ concentration on positive asymptomatic malaria residents were 29.36 pg ml 3.20 pg ml and 111.89 pg ml on negative asymptomatic malaria residents were 21.74 pg ml 3.20 pg ml and 1.60 pg ml. There were no significant differences between asymptomatic malaria status and IL 10 and TNF concentration $p > 0.05$, however, there was a tendency of a significant difference with IFN concentration $p < 0.051$. Conclusion No

significant associations between asymptomatic malaria status and IL 10 and TNF concentration were found. However, there was a tendency of a significant association with IFN concentration.