Tropical Medicine and Health

Vol. 36 (2008) , No. 2 p.93

CTLA-4 polymorphisms and anti-malarial antibodie endemic population of Papua New Guinea

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(Accepted March 28, 2008)

Abstract: In malaria endemic areas, people naturally acquire an ag
malaria. Part of this immunity involves anti-malarial specific antibodi
malaria-specific antibodies depends not only on exposure to malaria
the human genetic predisposition. CTLA-4 is a costimulatory molec
inhibitory signal to suppress T-cell as well as B-cell responses. We
between malaria-specific antibody levels and CTLA-4 polymorphis
in a hyper-endemic area of Papua New Guinea (PNG), where both
vivax are prevalent. We determined *P. falciparum*/ *P. vivax* speci
IgG, Pv-IgG, Pf-IgE, Pv-IgE) and polymorphisms in the CTLA-4 g
promoter region (A/G), the +49 exon 1 non-synonymous mutation
3'-UTR (A/G). All quantified antibody levels were significantly high
(n = 150) than in subjects ≤ 5 years of age (n = 39). In children ≤ 5
associations were detected between CTLA-4 +49 (GG/AG vs. AA
18.7 vs. 13.7 Mg/ml, P = 0.017) and Pv-IgE (266.6 vs. 146.5 pg/m
significant difference was observed in subjects > 5 years old. These
CTLA-4+49 polymorphism influenced Pv-IgG and Pv-IgE levels a
five years old in the studied population, which may regulate the age-
clinical outcomes of malaria infection.

Key words: CTLA-4, IgG, IgE, malaria, polymorphism

[PDF (64K)] [References]

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To cite this article:

Hikota Osawa, Marita Troye-Blomberg, Kenji Hirayama, Mihoko
Hombhanje, Takeo Tanihata, Rachanee Udomsangpetch, Anders
Kobayakawa and Akira Kaneko: "CTLA-4 polymorphisms and a
hyper-endemic population of Papua New Guinea". Tropical Medic
pp.93-100 (2008) .