SERUM MEDIATED PARASITE KILLING EFFECT AND CLINICAL SYMPTOMS IN P.VIVAX MALARIA ARE ASSOCIATED WITH TUMOUR NECROSIS FACTOR (TNF) AND COMPLIMENTARY FACTOR (S)

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During acute human P.Vivax malaria infections, the cytokine Tumour Necrosis Factor (TNF) was produced, at the time of clinical paroxysms coinciding with the rapture of schizont infected erythrocytes in the circulation. TNF in conjunction with other complementary serum factor(s) mediated the killing of blood stage malaria parasites and was associated with the clinical symptoms of malaria. Clinically immune P.vivax malaria patients resident in malaria endemic regions had significantly lower serum levels of TNF and complementary parasite killing factor(s) than did clinically non-immune patients from non-endemic regions. The sera of clinically immune individuals but not of non-immunes, neutralized parasite antigens that stimulated the production of TNF and parasite killing factor(s) by human blood mononuclear cells in vitro. Thus, clinical immunity or "tolerance" to malaria acquired by adults living in malaria endemic regions may be achieved by avoiding the induction of high levels of these factor(s) and cytokines.