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Associations between TNFa1.1, TNFa1.2 and TNFa2.2 genotypes and plasma TNFa levels in Plasmodium falciparum infected patients in relation to severity of disease

Plasma TNFα and TNF α genotypes have currently been in central focus in the studies of severe *P. falciparum* malaria (1,2,3).The present study was to investigate the

associations between TNFα genotypesof P.*falciparum* infected patients and their plama TNF levels. Clinically characterized 22 severe and complicated (SC) and 34 uncomplicated (UC) types of *P. falciparum* infected Sri Lankan patients were recruited into this study. The TNFα geno-typing of patients was done by PCR and by specific oligonucleotide probing and TNFα levels were measured in patient's plasma by using ELISA. The results indicated that 1) the presence of TNF α 1.1 genotype in UC and SC type of patients did not have an impact on the plasma levels found in these patients (p=0.15) , 2) the presence of TNF α levels than that of UC patients (p=0.016), 3) further, even among the SC type of patients the presence of TNF α 1.2 or 2.2 genotype associated with significantly higher levels of plasma TNF α (p=0.33), however the presence of TNFα 1.2 or 2.2 genotype did not make any significant difference of plasma TNFα levels in the case of UC patients (p=0.37). These results indicate that the presence of TNFα 1.2 or 2.2 genotype among the SC type of patients may be related with the generation of severe pathology copared to UC type. However among the SC type of patients, there may by some other contributory factors for developing severe disease such as differences in parasite virulence and other cytokines in addition to TNF α .