Maternal and child health

PO - (8289) - ASSOCIATION BETWEEN PLASMA LEVELS OF IL-27, IL-6 CYTOKINES AND P. FALCIPARUM INFECTION IN PREGNANT WOMEN LIVING IN MBALMAYO, CAMEROON

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Background: The appropriate balance between anti-inflammatory and pro-inflammatory cytokines is necessary for protection against pregnancy associated malaria and poor pregnancy outcomes. This study therefore aims to investigate relationship the between plasma levels of some regulatory cytokines and P. falciparum infection in Cameroonian women in the course of pregnancy. Methods: Peripheral blood was collected from 131 women during pregnancy and 27 non pregnant women living in Mbalmayo area between May and December 2014. Parasitaemia was determined microscopically and hemoglobin level using hematological counter. Plasma levels of IL-27 and IL-6 cytokines were measured using the Magnetic Luminex Screening Assay technique. Results: Parasitemia associated negatively with hemoglobin level ($r_s = -0.43; p < 0.001$). The plasma level of IL-6 was higher in pregnant women than in non-pregnant women ($p = 0.05$). Regarding parasitaemia, plasma level of IL-27 was significantly higher in non-infected than in infected women ($p = 0.028$) while that of IL-6 was significantly higher in infected women ($p < 0.0001$). Moreover, parasitaemia correlated negatively with the plasma level of IL-27 ($p = 0.034$) and positively with that of IL-6 ($p < 0.0001$). In addition, level of IL-6 was significantly higher in anaemia-positive than in anaemia-negative women ($p = 0.028$). In the other hand, level of IL-27 negatively associated with the parity ($p = 0.022$) and gestation age ($p = 0.014$). Conclusion: These results show that in pregnant women, P. falciparum malaria infection is associated with high plasma level of IL-6 and low level of IL-27, suggesting that IL-27 could have protective effect against pregnancy associated malaria while IL-6 seem to be a potential biomarker of the disease.