PREVALENCE OF MALARIA ANAEMIA AND ITS ASSOCIATION WITH RANTES AND MCP-1 IN CHILDREN AT APAC HOSPITAL, AN AREA OF HIGH MALARIA TRANSMISSION IN UGANDA.

BY

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ABSTRACT

Anemia is one the most common clinical presentations of severe malaria in children. Chemokines are considered to play important roles in mechanisms of malaria anemia pathology. This study was aimed at establishing the prevalence of malaria anemia in children aged 1 to 9 years (12 to 108 months) attending Apac district hospital, an area of high malaria transmission. It was also aimed at evaluating the profiles of RANTES and MCP-1 in these children presenting with different clinical categories.

The study was conducted amongst children who sought treatment at Apac Hospital during the months of March and April 2010. It was a cross-sectional survey consisting of 366 children aged 21 to 108 months. Malaria anemia was defined as Hb < 11g/dl with confirmed parasitemia. RANTES and MCP-1 profiles were determined by ELISA technique. Data was entered in Case Report Forms/computer and analyzed using SPSS version 17.0 and STATA 9.0.

The prevalence of malaria anemia was 35% in children aged 1 to 9 years (12 to 108 months). Significantly suppressed levels of RANTES were observed in children who had malaria anemia and increased levels were observed in children who had normal Hb without malaria (P=<0.001). On the other hand, MCP-1 levels were increased in children who had malaria anemia but decreased in children who had normal Hb without malaria (P=0.001).

Our data indicates that in children attending Apac hospital, malaria anemia is a common public health problem. It further suggests that low levels of RANTES and high levels of MCP-1 might be an indicator of malaria anemia disease in children.