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 the relationship between plasma levels of some regulatory cytokines and P. falciparum infection in Cameroonian women during pregnancy.

Methods Peripheral blood was collected from 131 women during pregnancy and 27 non-pregnant women living in the Mbalmayo area between May and December 2014. Parasitaemia was determined by microscopy and haemoglobin level using a haematological counter. Plasma levels of IL-27 and IL-6 cytokines were measured using the Magnetic Luminex Screening Assay technique.

Results Parasitaemia associated negatively with haemoglobin level ($r_c=-0.43; p<0.001$). 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 ($p=0.028$). On 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 a protective effect against pregnancy-associated malaria while IL-6 seem to be a potential biomarker of the disease.

REDUCING LOSS TO FOLLOW-UP OF CHILDREN EXPOSED TO HIV IN THE PROVINCES OF MANICA AND SOFALA, CENTER OF MOZAMBIQUE

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Background Early childhood diagnosis of HIV is a challenge in many developing countries, including Mozambique. Approximately 50% of exposed children and HIV-positive are lost to follow-up, i.e. during Postpartum Consultation (CPP), at-risk child consultation (CCR) or ART consultation in the country. The objective was to carry out an intervention to reduce the loss to follow-up of children exposed to and positive for HIV in Manica and Sofala provinces.

Methods Intervention study in HIV-positive women and their children in CPP and CCR in six health facilities in 2016. Stepped-wedge design with 3 cohorts for 3 months of two health facilities randomly selected. Interventions included activation of telephone calls to the mothers, guide the mothers with exposed child from CPP to CCR, active outreach to missed mothers, and initiation of ART in the CCR for 3 months. Data were collected from the health facilities and study books. Analysis was binomial logistic regression model with mixed effects.

Results Of the aggregated data, PCR + was 7.7%, and proportion of HIV-positive women in CPP 17.4%. In the control group only 24% of the mothers had more than 2 visits with
Background The competencies of the various national medicines regulatory agencies (NMRAs) in Africa vary which leads to generally porous regulatory systems for clinical trial oversight. Consequently, many trials have been conducted under unacceptable conditions compromising participants’ safety and data credibility and resulted in questionable outcomes that are used for making scientific judgement in addressing issues of public health in Africa.

To improve the safety and quality of health technologies in Africa, the New Partnership for African Development (NEPAD) agency launched a programme to designate Regional Centres of Regulatory Excellence (RCOREs) with the specific objective of bridging existing gaps between African NMRAs through strengthening regulatory capacity of African Union member states. The Food and Drugs Authority (FDA), Ghana, was designated as RCORE for Clinical Trials oversight in May 2014.

Methods To achieve the RCORE objectives, the FDA collaborated with the School of Public Health (SPH), University of Ghana to develop a training manual and piloted a training programme with funds from the International AIDS Vaccine Initiative (IAVI) through NEPAD.

The programme, consisting of 4 compulsory modules, was organised from 6–30 November 2017 for 10 participants from Zambia, Sierra Leone, Liberia, Rwanda and Ghana. Interactive training methods in the form of theoretical and practical sessions were employed.

Results The pilot RCORE training was successful with expected training objectives achieved. Participants gained hands-on experience through activities like observing Good Clinical Practice inspection and a Technical Advisory Committee Meeting. Participants were given template tools to assist in developing regulatory guidelines and forms in their respective countries.

A follow-up questionnaire was circulated to participants to assess the impact of the training on their work. Feedback indicates that regulation of clinical trials has improved in their respective institutions.

Conclusion This pilot fellowship training was successful, leading to the improvement of clinical trial regulation in the participating countries.