Methods Blood samples collected from consenting 133 males and 305 female participants in Ilbadan were tested for HBsAg, HBeAg, HBcIGM, HBcTotal and HBsAb by ELISA technique. Samples positive for HBsAg were further analysed for HIV DNA by amplifying and sequencing the S gene. Isolates were genotyped and subtyped based on amino acid residues at position 122, 127, 134, 160 of the S gene.

Results Of the 438 subjects tested 31 (7.1%) were positive for HBsAg, 2 (6.5%) of which were HBeAg positive. Ninety-nine (22.8%) had detectable HBsAb, 3 (0.7%) were positive for HBcIGM and 195 (44.5%) were HBcTotal positive. HIV DNA was amplified and sequenced in 27 out of 31 and 4 could not be amplified due to low titres. After sequencing, 9 (33.3%) were not exploitable due to the presence of multiple peaks. Of the 18 exploitable isolates, only 15 showed significant similarity to HBV S-gene. Eleven of the 15 isolates were subtyped as ayw4 while others could not due to substitution at s122p. Phylogram showed that the 11 isolates were genotype E. Two of the 4 isolates with R122Q/P substitutions also belonged to genotype E while the other 2 which were >11% divergent from the reference genotype E sequence clustered with an isolate previously described as an Immune Escape Mutant.

Conclusion This study identified high endemicity of HBV infection, presence of markers of infection even in non-detectable HBsAg levels and circulation of genotype E ayw4 and vaccine mutants in south-western Nigeria. It therefore emphasises the risk of development of an indigenous infected population that may not be protected by the current vaccine.

Community Index Case Approach and HIV Testing and Counseling (HTC) for Sexual Partners of HIV-Positive Patients Lost to Follow-Up: The Experience of World Vision Mozambique

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Background HIV-positive patients lost to follow-up (HP-LTFU) represent a challenge for HIV/AIDS control efforts as they are associated with higher risk of HIV transmission to their sexual partners, low viral load suppression and higher risk of morbidity and mortality than adherent patients. The SCIP-Ogumahja programme implemented by World Vision Mozambique, has been utilising the index case approach together with systematic home-based HIV testing and counseling (hHTC) since August 2016 in 7 districts of the Zambesia province. This abstract outlines an evaluation of the contribution of this approach to HIV/AIDS care and treatment (HACT) of sexual partners of HP-LTFU in alignment with the first and second targets of the 90–90–90 UNAIDS strategy.

Methods The study involved HP-LTFU returned to HACT between October 2016 and September 2017. These patients reported to have sexual partners who had not been tested for HIV and provided informed, written consent for joint hHTC. Of 4264 sexual partners found and tested, 52% was female, 64% was in the 15–34 age groups, and 88% had never been tested for HIV. About 28% (1.205/4.264) was HIV-positive, 56% of the sexual partners who tested HIV-positive, was female and 98% of these was successfully referred to HACT.

Conclusion The index case approach together with hHTC has contributed to the early diagnosis of 28% of new HIV infections among sexual partners of HP-LTFU and 98% of them ensured timely linkage to the HACT. Therefore, broader promotion and adoption of this approach would make a significant contribution to achievement of the first and second targets of the 90–90–90 UNAIDS strategy.
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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10.1136/bmjgh-2019-EDC.68

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 Plasmodium 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 Lumexin Screening Assay technique.

Results Parasitaemia associated negatively with haemoglobin 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 ($p=0.028$). 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, Plasmodium 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 seems 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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10.1136/bmjgh-2019-EDC.70

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 activist allocation, telephone calls to contact 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 to vectors. Our study aimed to investigate the protective association between the sickle cell trait AS and the susceptibility to malaria infection of both the human host and the insect vector.

Methods The study was conducted from June to November 2017 among asymptomatic children living in Cameroon. The samples were collected on microscopy slides, Whatman FTA and grade 17 paper for the selection of gametocyte carriers by microscopy, the molecular diagnosis of Plasmodium species, and sickle cell trait (PCR- RFLP), respectively. Infectivity of the mosquito was measured by experimental infections on gametocyte-containing blood from naturally infected carrier. Genetic diversity was measured using microsatellite markers.

Results A total of 1557 children were recruited; the prevalence of Plasmodium infection among this group was 58% and the AS sickle cell trait 20%. No significant difference in the prevalence of P. falciparum infection was observed according to the sickle cell trait carriage and this irrespective of the parasite stage ($p>0.05$). The level of infectivity of the mosquito was higher when feedings were performed on blood from HbAS genotypes compared to HbAA genotype blood, and the difference was even more significant when the blood pellet was resuspended with non-immune AB plasma ($p<0.0001$). No significant difference was observed in the infection complexity between HbAS and HbAA genotypes ($p>0.05$).

Conclusion Plasmodium infection is not influenced by HbAS genotype regardless of parasite stage; the risk of anophelines infection is higher with blood from gametocyte carriers with sickle cell trait (HbAS). The sickle cell trait does not affect the multiplicity of infection.