PA-305 FC GAMMA RECEPTOR GENE POLYMORPHISMS AND RESERVOIR SIZE IN HIV PATIENTS IN GHANA

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Background Fc gamma receptors (FcγR) are cell surface glycoproteins that bind to the Fc portions of immunoglobulin IgG antibodies to elicit diverse effector functions. Polymorphisms in different FcγR genes have been associated with HIV infection and vaccine trial outcomes. Some studies have suggested that FcγRIIa may be a marker of latent reservoir size, however, this remains controversial. Hence whether FcγRIIa and other Fc receptors have functional consequences on the size or reactivation capacity of the reservoir needs to be investigated.

Methods In this pilot study, single-nucleotide polymorphisms (SNPs) in FcγRIIIa, FcγRIIa, and FcγRIIb genes were determined by Sanger sequencing in 50 HIV-infected ART-suppressed individuals. HIV reservoir size was determined by quantifying total HIV DNA (vDNA) and cell-associated unspliced (US) HIV RNA by qPCR. Association analysis was performed using three coding SNPs, one per gene (FcγRIIIa-rs396991, FcγRIIa-rs1801274, and FcγRIIb-rs1050501).

Results The median reservoir size as estimated by vDNA copy number was 116 (range, 1 - 5798) copies/million cells and US RNA was detectable in 15 out of the 50 samples. Our analysis found the median reservoir size was almost 3 times larger in males compared to females who are suppressed ($p=0.038$).

Conclusion Reservoir size was observed to be larger in younger patients compared to those older, however, not statistically significant. However, there was no significant associations between the FcγR SNPs and HIV vDNA or US RNA. Studies in larger cohorts are necessary to explore associations between FcγR polymorphisms and HIV reservoir.

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PA-306 ADOPT: THE IMPLEMENTATION RESEARCH PROGRAM INTRODUCING THE POTENTIAL NEW PAEDIATRIC TREATMENT OPTION INTO SCHISTOSOMIASIS CONTROL PROGRAMS IN ENDEMIC COUNTRIES

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Background Current programs to control schistosomiasis mainly target school-aged children and rely on mass drug administration centered on primary schools. Alternative drug distribution platforms need to be identified to ensure equitable access to the potential new treatment option for pre-school aged children, once registered.

Methods The Paediatric Praziquantel Consortium has developed an operational research program with the aim to identify and describe robust yet flexible drug distribution platforms and delivery modalities that can easily be adapted to different settings. Called ADOPT program, the approach includes a rigorous acceptability and perception assessment as basis for small-scale pilot studies to evaluate and compare potential delivery platforms and access strategies in terms of feasibility, costs and coverage. Insights and lessons learnt from this phase will inform and guide the roll-out of the most promising approaches.

Results Working with partners in three countries, social science studies were already conducted to establish a baseline of acceptability and perception of paediatric schistosomiasis and its potential new treatment, and to inform the social mobilization strategy. Following the systematic assessment of a range of potential distribution platforms, a restricted number per country has been prioritized. Standard protocols for the pilot studies are currently under development and will be submitted to ethics review committees to start the pilots soon after obtaining a positive opinion from regulatory authorities. Practical aspects including the determination of the correct drug dose in settings without access to scales, drug administration to small children, and training needs are also explored.

Conclusion High geographic and population coverage will only be achieved if the social mobilization is effective, the drug distribution platform has universal reach, and staff are adequately trained. A toolbox with a selection of tested protocols and guidance documents for their adaptation will facilitate rapid expansion both inside study countries and by other interested partners.

PA-307 EFFECT OF ALBENDAZOLE 400 AND 800 MG ON HYPERMICROFILAREMIC LOIASIS AND EOSINOPHILIA: PRELIMINARY RESULTS OF A PHASE IIB, RANDOMIZED, SINGLE-BLIND CLINICAL TRIAL IN NORTHERN GABON

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Background Albendazole (ALB) is used safely for the reduction of Loa (L.) loa microfilaremia. However, there is no official recommendation. ALB could be used routinely in onchocerciasis outbreaks in case of coendemicity with loiasis, in order to make hypermicrofilaremia carriers eligible for mass treatment with ivermectin. The purpose of this study is to compare the efficacy and safety of two ALB treatment regimens in the management of hypermicrofilaremic loiasis.

Methods The study was conducted in the Woleu-Ntem region of northern Gabon. Clinical, haematological and parasitological data were collected. Patients were divided into 3 groups: 2 groups of hypermicrofilaremia (≥8000 mf/mL) treated with 400 mg and 800 mg for 30 days and a control group consisting of patients with low microfilaremia (<8000 mf/mL) treated with ALB 400 mg for 30 days. Microfilaremia and adverse events were investigated and monitored weekly until day 30.

Results In total, 72 patients were included and followed for 30 days on daily ALB administration. The control group had 38 patients. In the two experimental groups, 16 received ALB 400 mg and 18, ALB 800 mg. L. loa microfilaremia and eosinophilia were measured at day (D) 0, 2, 7, 14, and D30. Clinical data were monitored daily before each ALB dose