PA-425 EDUCATIONAL EXPERIENCES, NEEDS, AND IMPACT AMONG CHILDREN AND ADOLESCENTS LIVING WITH HIV IN THE KILIMANJARO REGION IN TANZANIA

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Background Early HIV testing and treatment is crucial to the survival and long-term well-being of children and adolescents living with HIV. In Sub-Saharan Africa, the risk of HIV transmission and infection among children and adolescents, especially young girls is high. Tanzania adopted the test and treat, where all children and adolescents who tested positive for HIV are initiated into care, though adherence to medication and viral suppression is challenging. Strategies to overcome adherence challenges include education provisions at the clinics. In this study, we assessed the educational content provided, the needs of children and adolescents, and its impact on viral load suppression (VLS).

Methods A cross-sectional study was conducted among 286 children and adolescents living with HIV on ART in Kilimanjaro, Tanzania. Socio-demographic characteristics, clinic educational contents, and viral load results were collected using semi-structured questionnaires. Numerical and categorical variables were summarized using descriptive statistics. We compared the educational contents and adherence with VLS using chi-square tests to find the difference between groups.

Results Among 286 participants recruited: 142 (33.3%) were children and 143 (33.4%) were adolescents. Their median age was 9 (7–12) and 18(16–18), and there were 145 males and 141 females. Among 101 who received education content at the clinics, 68(67%) received education on the importance of taking medication and improving adherence. Of those who received adherence education 48(71%) had VLS while 22 (69%) of those who never received adherence education were suppressed(P=0.852). Other 141 children and adolescents reported needing educational seminars at the clinics on adherence, safe sex practices, reproductive health education, and entrepreneurship.

Conclusion Continuous education provision at clinics is vital to improve health and adherence among children and adolescents. Further strategies to incorporate health education in clinics should be implemented even with little evidence of improving VLS from this study.

PA-426 GENETIC PROFILING OF MOLECULAR MARKERS OF ANTIMALARIAL RESISTANCE IN AREAS TARGETED FOR SCHOOL-BASED MALARIA CHEMOPREVENTION STRATEGIES IN NORTH-EASTERN, TANZANIA

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Background Recently, WHO has recommended expansion of the malaria preventive chemotherapies to include intermittent preventive treatment of school children (IPTsc). However, there is concern due to the emergence and spread of partial artemisinin resistance based on PfKelch13 mutations in Eastern Africa. This study was conducted to determine the baseline prevalence of molecular markers of artemisinin-based combination therapies (ACTs) and Sulfadoxine-Pyrimethamine (SP) resistance prior to implementation of IPTsc intervention in a highly malaria endemic area.

Methods Pre-intervention assessment of the prevalence of molecular markers of artemisinin, partner drugs, SP resistance and Histidine Rich Protein 2/3 (HRP 2/3) genes deletion was conducted in Handeni and Kilindi districts from July 2020-December 2021. The districts implemented programmatic IPTsc trial using Dihydroartemisinin-Piperaquine. Dried Blood Spot were collected from children (5–15 years). DNA was extracted from malaria positive samples using commercial kits. NGS sequencing was used for the analysis of molecular markers.

Results Out of the SNPs detected at low frequency in the Pfkelch13 gene (A578S, K568T, N489Y), none have been validated as molecular markers of artemisinin partial resistance, majority 95.5% (340/356) was the wildtype. The majority of Pfcrt haplotype (n=356) was CVMNKTHFIMCGI (75.5%), other occurred at low frequency, CVIETTHFIMCGI (11.8%), CVIETTHFIMCGT (7%), SVMNTTHFIMCGI (0.8%), SVMNTTHFIMCGT(2.2%). Pfmdr1 haplotypes (n=355) NYSND (71.5%) and NFSND (20.6%) were predominant; others were at low frequency. Quintuple Pfdhfr-Pfdhps haplotypes (n=134) was at high frequency (70.1%). Parasites with HRP2 and 3 gene deletion was detected in 4.5% (15/335) and 20.9% (70/335), respectively.

Conclusion The lack of validated artemisinin resistance markers is reassuring and confirms targeted areas are suitable for malaria chemoprevention implementation. The baseline assessment is essential in implementing drug resistance monitoring during scaling up of the IPTsc intervention.

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PA-431 SCHISTOSOME'S INFECTION AMONG PREGNANT WOMEN IN THE RURAL HIGHLANDS OF MADAGASCAR: A CALL FOR PUBLIC HEALTH INTERVENTIONS IN NEGLECTED VULNERABLE POPULATIONS

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Background Schistosomiasis is a waterborne disease with high morbidity in Sub-Saharan Africa countries, including Madagascar. Mass drug administration is the main public health control strategy for the disease. Even though recently