

Abstract

Background: Fishing communities on the shores of Lake Victoria are at high risk of schistosome infections, and at the same time, also considered at high risk of HIV infection due to factors associated with lifestyle or poor access to health services. In the absence of targeted interventions, the burden of schistosome-HIV co-infections continues to be high among such populations.

Methods: Fishing communities living along the shores of Lake Victoria were recruited into immunological cohort studies investigating the host-parasite interactions in HIV-Schistosome co-infections. We assessed the prevalence and incidence of both schistosome and HIV infections among fishing communities in western Kenya, and compared retention rates and ease of follow-up in two completed immunological cohort studies.

Results: At least 25 busy fishing sites were identified and six beaches were selected to participate in the studies. Up to 314 adults consented to participate in the immunological study on the role of human B cells in resistance to reinfection with *S. mansoni* (Cohort 1). Only 214 were able to provide baseline blood samples, while 97 and 34 were followed for the first and second times, respectively. Of the 191 tested for HIV, 62 (32.5%) were HIV-positive. After one year HIV seroprevalence had risen to 36.1% among 108 participants who were screened. In the second cohort, 1040 potential participants were approached to participate. Up to 138 (13.3%) did not return after VCT. A total of 622 persons who were HIV positive were enrolled. Overall 35.8% of those eligible for the study had HIV/schistosomiasis co-infection. The prevalence of other soil transmitted helminthes was: hookworms at 3%, *Ascaris lumbricoides* at <1% and *Trichuris trichiura* at about 1.5%.

Conclusions: HIV remains an important factor to consider when planning for neglected tropical diseases (NTD) community based medical interventions in the region, and HIV interventions should also take into consideration the endemicity of prevalent NTDs in such settings. On the other hand, fishing communities could benefit from NTD/HIV co-infection study cohorts even though retention among these highly migrant communities is still a major issue to consider, while contributing to research development.