Epidemiology

PO - (8449) - SCHISTOSOMA HAEMATOBIUM INFECTION INCREASES THE NUMBER OF MALARIA EPISODES IN CHILDREN LIVING IN RURAL AREAS AROUND LAMBARÉNÉ, GABON

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Background: In sub-Saharan Africa, Plasmodium spp. infection prevalence very often overlaps with helminth infections, particularly with schistosomiasis reported to be the second parasitic infection beyond malaria in terms of prevalence. Interaction between both infections have been reported earlier. Schistosomiasis is typically a chronic disease, whereas malaria occurs as episodes, particularly in children. In this study, we assessed the effect of Schistosoma haematobium infection on clinical malaria among children.

Method: A longitudinal study was conducted from June 2016 to February 2018. Volunteers without any known chronic condition were included. Thick blood smear (TBS) was performed on a monthly basis at participants’ homes. For any medical concern including malaria-like symptoms and visible hematuria, participants were invited to come to CERMEL for diagnosis, and treatment. Light microscopy was performed to detect malaria parasites and Schistosoma eggs, using TBS and urine filtration technique, respectively. Over the study course, participants found to be infected were treated accordingly. Schistosomiasis status was determined at the end of the follow-up.

Results: Among the 351 volunteers included in the study; for 260 schistosomiasis status was available. Mean age was 12.3 year (SD 4.6) with a 0.96 women-to-man sex-ratio. Of those, 112/260 (43.1%) [37.0%-49.3%] participants were positive for S. haematobium, and a total of 132 (51%) children developed 230 malaria attacks. Those with schistosomiasis had a 1.5:1 [1.1-2.0] risk to develop malaria compared to their uninfected counterparts. The mean number of malaria episodes per child over the study course was higher among children with schistosomiasis compared to those without (2.03 vs 1.57, p-value=0.015).

Conclusion: S. haematobium infection was associated with increases susceptibility to develop malaria by increasing the risk to develop a malaria episode and consequently, a higher malaria incidence.