No Association Between *Salmonella* Intestinal Carriage and *Schistosoma* m*ansoni* Infection in Healthy Individuals, Democratic Republic of the Congo

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Background: In Sub-Saharan Africa, *Schistosoma* infection is mentioned as a risk factor for *Salmonella* carriage. We assessed the co-presence of intestinal *Salmonella* and *Schistosoma* in a rural site in the Democratic Republic of the Congo (DRC, Kifua II village, Kongo Central Province), endemic for *Schistosoma* infection and invasive salmonellosis.

Methods: From November 2015 to March 2016 (during the rainy season), healthy inhabitants aged ≥ 1 year were asked to give two consecutive stool samples after informed consent. Samples were assessed for *Salmonella* (culture with Selenite broth and *Salmonella-Shigella* agar) and *Schistosoma* eggs (microscopy, Kato Katz).

Results: Overall, 2.007 stool samples were collected from 1.108 participants (representing 88,6% of the population n = 1,250); median age (interquartile range (IQR)) was 15 (7-35) years. Half of participants (n = 567; 51,2%) were *Schistosoma mansoni* positive. *Schistosoma* egg load was light in 51% (n = 291), moderate in 31% (n = 173) and heavy in 18% (n = 103) of *Schistosoma*-infected participants. A total of 40 (3,6%) participants were found carriers of non-typhoidal *Salmonella;* none of the samples grew *Salmonella* Typhi. Mean age ± standard deviation of *Salmonella* carriers was 25 ± 19 years and did not differ from the non-*Salmonella* infected participants (22 ± 19 years, p = 00,32); male-to-female rates were 1:1,5 and 1:1,1 respectively (p = 0,37). *Salmonella* was isolated in similar proportions among *Schistosoma*-infected and non-infected participants (4.4% (25/567) and 2,8% (15/541) respectively, p = 0,14). Egg loads among *Salmonella-Schistosoma* co-infected participants were mostly light (n = 12; 48%) and heavy (n = 9; 36%). Follow-up of 17 *Salmonella* carriers revealed a single participant with repeat culture for *Salmonella*, 4 weeks after the initial sampling.

Conclusions: The present study, conducted in a rural area in DRC showed (i) *Salmonella* intestinal carriage rates of 3,6% which were (ii) not associated with *Schistosoma mansoni* intestinal infection.