PA-138 PREVALENCE OF GASTROINTESTINAL PARASITES IN SOUTHERN MOZAMBIQUE USING A NOVEL MULTIPARALLEL QUANTITATIVE REAL-TIME PCR

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Background Intestinal parasitic infections are distributed worldwide presenting high prevalence in low-income countries. Gastrointestinal parasites in children are associated to inhibition of normal growth, low intellectual development, vitamin deficiency by malabsorption, chronic diarrhoea and dysentery. Available data point to global prevalence in Mozambique (2005–2007) of 65.8% for soil-transmitted helminthiasis. Diagnosis of gastrointestinal parasites relies on stool microscopy which has a lower sensitivity and specificity than molecular biology methods. Consequently, researchers have developed a novel multi-parallel quantitative real-time PCR to detect protozoa and helminths in stool. This technique was used in the current study to determine the prevalence of gastrointestinal parasites in the Manhiça district.

Methods Stool samples (10 g) for the detection of gastrointestinal parasites were collected from 175 children, aged 2 to 10 years, recruited at the Manhiça District Hospital. Clinical and laboratory data were obtained for all participants. Helminths and protozoa were detected through microscopy, the gold standard method, and through multi-parallel quantitative real-time PCR.

Results High prevalence was found for *Giardia lamblia* (61%). Other prevalent parasites were *Ascaris lumbricoides* (10.2%), *Strongyloides stercoralis* (8.6%), *Cryptosporidium* (4%) and *Necator americanus* (2.8%). *Ancylostoma duodenale* and *Entamoeba histolytica* were not detected in any samples studied. More than 60% of children with *A. lumbricoides* presented high egg burden that was correlated with increased *Giardia* burden co-infection (p=0.01).

Conclusions The preliminary results point to a high prevalence of *G. lamblia*. In our sample, a high *Giardia* burden was associated with higher *A. lumbricoides* egg count. Further analysis will allow us to correlate findings with clinical data and to evaluate the effect of the presence of gastrointestinal parasites on the immunological response to malaria.