HIGH FREQUENCY OF *Giardia lamblia* ASSEMBLAGE A SUGGESTS ANTHROPOZOONOTIC PARTICIPATION IN TRANSMISSION CYCLES IN THE EXTREME NORTH OF BRAZIL

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Giardia lamblia is a globally distributed intestinal protozoan that spreads through water or direct contact among hosts. Children under five years old are the most affected by the infection due to age-related factors such as oral exploration phase, beginning of autonomous locomotion, direct contact with the ground, developing hygiene practices, and an under-stimulated immune system. The species *G. lamblia* is phylogenetically divided into assemblages A to H. Assemblages A and B are expected in human infections but also have a high zoonotic potential. In this context, the objective was to determine the frequency of *G. lamblia* and the circulating assemblages in children from Boa Vista, RR. The study was conducted with preschoolers attending a school in the Caranã neighborhood in Boa Vista/Roraima (a state in the extreme north of Brazil(. Stool samples were collected and subjected to parasitological examination using the Ritchie and Kato-Katz methods. Molecular diagnosis of *Giardia* was also performed, and all samples had their DNA extracted using the QIAamp Fast DNA Stool Mini Kit and were subjected to amplification of a fragment of the B-giardina gene by polymerase chain reaction (PCR). Real-time PCR with High Resolution Melting (qPCR-HRM) was used to differentiate the assemblages of *G. lamblia*. Of the 168 samples collected, 76 were positive in the parasitological diagnosis and 56 in the molecular diagnosis. Genotyping identified 36 isolates of assemblage A, four of assemblage B, and 16 could not be differentiated. The positivity of *Giardia* infection was considered high compared to other waterborne protozoa. This suggests the possibility of direct transmission involving other hosts, which is corroborated by the high frequency of assemblage A. Knowing that *G. lamblia* can cause nutritional deficits and delays in physical and cognitive development, the implementation of control strategies is urgent to reduce giardiasis cases.

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