

Comparative study of intestinal parasitic infections among schoolchildren of four municipalities in the south/southwestern region of Minas Gerais, Brazil

Rita Maria da Silva¹; Cybele Gargioni²; Raquel Lopes M. Souza³; Rosângela Vieira Siqueira⁴, Amanda Aparecida Felizardo⁴, Herminia Yohko Kanamura^{3,5}

1. Instituto Adolfo Lutz, Regional de Rio Claro, Rio Claro, SP, 2. Instituto Adolfo Lutz Central, São Paulo, SP, 3. Instituto de Ciências Biomédicas, Universidade Federal de Alfenas (UNIFAL-MG), MG, 4. Faculdade de Ciências Farmacêuticas, Universidade Federal de Alfenas (UNIFAL-MG), 5. Bolsista CAPES - Professor Visitante Nacional Sênior.

The project was developed for the implementation of a surveillance and control program for schistosomiasis and intestinal parasitic infections of municipalities located in the SRS-Alfenas coverage area, at the south-southwest region of the Minas Gerais State, Brazil. This study presents the frequency data of intestinal parasitic infections in a child population, enrolled in the 4th or 5th grade of elementary education, in four municipalities under the jurisdiction of SRS-Alfenas: Arceburgo, Guaranésia, Cabo Verde and Alfenas. A total of 769 children were invited to participate of the project, respectively 140, 216, 240 and 173 schoolchildren from the above mentioned municipalities. The participation rate, with the supply of fecal material for parasitological examination, after signing the Informed Consent Term, showed great variations depending on the school and the municipality involved. The lowest rate was observed in the municipality of Arceburgo (34.3%, 48/140), and the highest in Cabo Verde (62.1%, 149/240). Fecal samples were processed by the Lutz (spontaneous sedimentation) and modified Ritchie (formol-ether concentration) methods. Positivity rates were, respectively, 12.5% (6/48), 19.2% (19/99), 20.1% (30/149) and 17.5% (11/63). Among the 66 positive stool specimens, out of 359 examined (positivity rate of 18.4%), four samples presented three or more commensal or parasitic species, 12, two species and 50, only one. The species of protozoa detected were: *Entamoeba coli* (in 30 samples), *Giardia lamblia* (in 19), *Endolimax nana* (in 14), *Blastocystis hominis* (in 13), and *Iodamoeba butschili* (in 2). As to helminth infections, the number of cases diagnosed was small: one child with *Ascaris lumbricoides* in Cabo Verde, one with *Trichuris trichiura* in Alfenas, three with *Enterobius vermicularis*, one in Cabo Verde, one in Alfenas and one in Guaranésia; in the last municipality, two cases were also diagnosed with *Strongyloides stercoralis*, one case with *Ancylostomatidae* and one case with *Schistosoma mansoni*. It is noteworthy that the epidemiological investigation identified this case as imported, the child being from a schistosomiasis endemic region of Pernambuco state. The results suggest differences in the degree of risk for the acquisition of intestinal parasites in the four studied municipalities, and also according to the location of the school within each municipality. The results obtained in this study indicate the need for a better evaluation of the basic conditions of sanitation as factors related to the transmission of intestinal parasites in some of the studied localities and the importance of the implementation of environmental and health education programs in the school communities.