The use of a molecular technique improved sensibility and specificity on *Entamoeba histolytica*/*E. dispar* diagnosis in a community based study carried out in Niterói, RJ – Brazil

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Epidemiological studies on prevalence of intestinal parasites are mostly performed through coproparasitological techniques. Although most of them are suitable and specific for the search of evolutive forms of parasites, its sensitivity may be affected by parasitic load. The complex *E. histolytica*/*E. dispar* due to its biological characteristics such as irregular cysts elimination can be responsible for false negative results in the coproscopy. Additionally, as they have similar morphology its differentiation at species level through microscopy is impaired. Because of the exposed reasons, the need of more sensitive and specific assay for the detection of *E.histolytica*/*E. dispar* species specifically is welcome. Thus, 104 fecal samples from inhabitants of two low income communities of Niterói-RJ were evaluated through Hofmann, Pons e Janer (1934) spontaneous sedimentation method for the diagnosis of intestinal parasites. Afterwards, DNA extraction was carried out with 220 mg of previously stored frozen samples with QIAamp DNA Stool Mini Kit from Qiagen, following manufacturer´s instructions. The 5 µL of the extracted DNA obtained was amplified through Nested-PCR according to Paglia e Visca (2004) protocol for *E.histolytica*/*E. dispar* detection. DNA from *E. histolytica*/*E. dispar* culture was employed as positive control and a sample without any fragment of DNA was the negative one. From the 104 fecal samples, only 1 (0,9%) was diagnosed as *E. histolytica*/*E. dispar* through microscopy. Nevertheless, using the Nested-PCR 12 (11,5%) were positive for *E. dispar*, including the one positive through microscopic analysis. DNA amplification for *E. histolytica* was found in 7 (6,7%) and both species were detected in 2 samples (1,9%).Interestingly, in one of the studied communities, *E. histolytica* as well as *E. dispar* were found at the same proportions in fecal samples (7:7) but in the second community, only *E. dispar* was detected. Our results highlighted the need for more specific and sensitive diagnosis techniques in order to improve diagnosis to the guidance of specific treatment as well as epidemiological control.