Entamoeba histolytica/dispar/moshkovskii complex in Salvador, Bahia, Brazil

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Epidemiological studies on species-specific Entamoeba infections are scarce due to the morphological similarity of pathogenic Entamoeba histolytica and nonpathogenic E. dispar and E. moshkovskii. The discrimination of these species is frequently based on coproantigen (E. histolytica-Gal/GalNAc lectin specific) detection by immunoassays. However, specific E. histolytica-lectin is not expressed in cysts, which are eliminated by asymptomatic individuals leading to false-negative results and an underestimation of amebiasis prevalence. This study aimed to assess the frequency of the species from E. histolytica/dispar/moshkovskii complex by molecular and immunological techniques in individuals treated at a public health system in Salvador-Bahia, Brazil. A cross-sectional study involving 55,218 individuals was carried out. The diagnosis was based on microscopy revealing E. histolytica/dispar/moshkovskii complex. The species differentiation was performed by E. histolytica-specific antigen, serological evaluation and by molecular technique. The overall prevalence of E. histolytica/dispar/moshkovskii complex determined by microscopy was approximately 0.49% (273/55,218). E. histolytica-specific antigen detection and molecular characterization returned 100% negativity for E. histolytica. However, serological evaluation returned an 8.9% positivity (8/90). In the analyzed sample, it was not possible to prove the presence of E. histolytica and E. moshkovskii, although the circulation of E. histolytica was confirmed by circulating IgG anti-E. histolytica.