Application of Real-Time Polymerase Chain Reaction in Detection of Entamoeba histolytica in Pus Aspirates of Liver Abscess Patients

Type:

Article

Abstract:

Entamoeba histolytica is the second major cause of liver abscess disease in humans, particularly in developing countries. Recently, DNA molecular-based methods have been employed to enhance the detection of E. histolytica in either pus or stool specimens. In this study, the results of real-time polymerase chain reaction (PCR) to detect E. histolytica DNA in pus from liver abscess cases were compared with those of indirect hemagglutination assay on the corresponding serum samples. Bacterial cultures were also performed on the pus samples for the diagnosis of pyogenic liver abscess. The real-time PCR detected E. histolytica DNA in 23 of 30 (76.7%) pus samples, when compared with 14 of 30 (46.7%) serum samples in which anti-Entamoeba antibodies were detected by indirect hemagglutination assay and 4 of 30 (13.3%) pus samples that showed bacterial infection by culture. The use of real-time PCR is a promising detection method for diagnosis and epidemiology assessment of amoebic liver abscess.

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