

Characterization of *Entamoeba histolytica* Antigens in Circulating Immune Complexes in Sera of Patients with Amoebiasis

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Characterization of entamoeba histolytica antigens in circulating immune complexes in sera of patients with amoebiasis.

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Abstract

Isolated circulating immune complexes (CICs) from sera of patients with amoebiasis were characterized to determine *Entamoeba histolytica* antigens that participate in the disease process. In total, 116 serum samples were collected before starting anti-amoebic therapy, and their CICs were isolated by differential polyethylene glycol precipitation. The presence of amoeba-specific antigens in CICs was detected by antigen capture enzyme-linked immunosorbent assay (ELISA) and by immunoblot assay. Antigen capture ELISA showed significantly higher optical density ($p < 0.001$) in all patients with amoebiasis than in the normal healthy controls and patients of non-amoebic hepatic disorder. Immunoblot assay detected amoeba-specific CICs in all 18 patients (100%) with confirmed amoebic liver abscess, 28 (80%) of 35 patients with clinically-suspected amoebic liver abscess, and 18 (78.26%) of 23 patients with amoebic colitis. No patients with non-amoebic hepatic disorders and healthy control subjects had any detectable level of amoebic antigens in CICs. Immunoblot assay revealed *E. histolytica* antigens of relative molecular masses of 35, 56, 70, and 90 kDa present in CICs of 64 of 76 patients with amoebiasis. The 35-kDa polypeptide was observed in 52 patients (81.25%). The results of the study suggest that the 35-kDa polypeptide antigen can be a diagnostic marker in active amoebiasis.

Reference

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