Efficacy of ELISA in diagnosis of schistosomiasis and monitoring of morbidity

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Doctoral (PhD) Thesis, 2006

Abstract

This study aims to evaluate the sensitivity of two ELISA techniques versus ultrasonography in diagnosis of chronic hepatosplenic schistosomiasis and assessment of different degrees of morbidity. 100 patients enrolled in this study were divided into 5 main groups: Group I with simple intestinal schistosomiasis, group II with periportal fibrosis with or without organomegaly, group III with hepatosplenomegaly with portal hypertension and group IV with advanced morbidity and end stage liver disease. Group V, 40 individuals as control group. All patients were subjected to examination, ultrasonographic evaluation and serological assessment using two techniques of ELISA conventional versus Dot-ELISA with two types of antigens crude adult worm and soluble egg antigens assessing both IgG and IgM antibodies. Ultrasonographic evaluation proved to have the main role with the advance of the degree of morbidity and there was no relation between different stages of the disease and the degree of antibody positivity. IgM antibodies were more prevalent in the earlier stages of the disease while IgG antibodies were more consistent in different stages of the disease. Based on the conditions of antigen preparations used conventional ELISA was more sensitive compared to dot ELISA with the adult worm antigen was more sensitive than the soluble egg antigen.

Keywords

Elisa, ultrasonography, hepatosplenic, Schistosomiasis, morbidity,