

实验报道

过碘酸钠氧化可溶性虫卵抗原ELISA诊断血吸虫病的研究

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摘要

目的改进可溶性虫卵抗原-酶联免疫吸附试验(SEA-ELISA), 进一步提高其诊断血吸虫病的敏感性、特异性及疗效考核价值。方法应用过碘酸钠(sodium Perodate, SP)处理SEA, 氧化其糖基化表位, 建立SP-SEA-ELISA, 检测血吸虫病患者的血清中的特异性抗体, 并与常规SEA-ELISA进行比较。结果分别用两种方法检测患者血清, 其中慢性血吸虫病64例、华支睾吸虫病34例、卫氏并殖吸虫病33例、囊尾蚴病36例, 检测健康人血清119例。SP-SEA-ELISA特异性为99.2%, 高于SEA-ELISA, 敏感性为98.4%, 与SEA-ELISA比较无明显降低。用SP-SEA-ELISA及SEA-ELISA检测治疗后12个月的慢性血吸虫病患者的血清, 阴性率为89.0%, 明显优于SEA-ELISA(42.1%)。结论过碘酸钠处理SEA, 可提高免疫诊断特异性, 降低交叉反应, 有一定的疗效考核价值。

关键词 [日本血吸虫](#) [过碘酸钠](#) [可溶性虫卵抗原](#) [ELISA](#)

分类号

Study on Diagnosis of Schistosomiasis by ELISA Using Periodate-treated Soluble Egg Antigen

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Abstract

Objective To improve SEA-ELISA, an immunodiagnostic assay for schistosomiasis.

Methods Soluble egg antigen

SEA of *Schistosoma japonicum* was treated with sodium periodate (SP) in order to oxidate its glycosylated epitopes. ELISA using the treated SEA was then performed to detect specific antibodies to SEA in the sera of schistosomiasis patients. Results Serum samples were tested by ELISA using SEA treated with sodium periodate (SP-SEA-ELISA), including 64 sera from cases with chronic schistosomiasis japonica, 119 sera from normal individuals in non-endemic area, 34 sera from patients with clonorchiasis, 33 sera of paragonimiasis cases and 36 sera from patients with cysticercosis. The results showed that its sensitivity (98.4%) was similar to that of the routine SEA-ELISA (100.0%) ($P > 0.05$) and the specificity is higher than that of the SEA-ELISA ($P < 0.05$). SP-SEA-ELISA showed a higher negative rate (89.0%) for sera of schistosomiasis patients 12 months post-treatment than that of the SEA-ELISA (42.1%). Conclusion Use of SP-SEA can increase the specificity of ELISA, reduce cross-reactivity with serum samples from cases infected with other parasites and improve its value in evaluating therapeutic efficacy.

Key words [schistosomiasis](#) [sodium periodate](#) [soluble egg antigen \(SEA\)](#) [ELISA](#)

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