

论著

western blot 法诊断囊虫病的应用研究

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摘要

目的: 探讨四种猪囊尾蚴 (Cysticercus cellulosae) 特异性抗原 cC1、cC2、cP1、cH1 (分子量分别为 28 kDa、18 kDa、14 kDa、34 kDa) 混合应用诊断人囊虫病的价值。方法: 以猪囊尾蚴 cDNA 表达文库中筛选出的 β-半乳糖苷酶-猪囊虫特异性抗原 cDNA 编码的融合蛋白 (fusion proteins, FP) 为抗原, 作简化的 Western blot (improved Western blot, IWB) 分析, 检测 107 例囊虫病、40 例华支睾吸虫病、24 例包虫病和 34 例健康人血清对融合蛋白的反应。同时应用粗制抗原 (crude antigen, CA) 进行 ELISA、IHA 对比检测。结果: 在简化 Western blot 检测中, FP 被 107 例囊虫病患者血清中 94 例 (87.9%) 血清所识别, 与华支睾吸虫病、包虫病及健康人血清无交叉反应, 特异性为 100%。以粗制抗原作 ELISA、IHA 检测囊虫病人血清中的 IgG 抗体阳性率分别为 84.1% 和 74.8%, 与华支睾吸虫病患者血清存在交叉反应, 假阳性率分别为 2.5%、12.5%; 与包虫病患者血清存在交叉反应, 假阳性率分别为 8.3%、16.7%; 与健康人血清也存在交叉反应, 假阳性率分别为 8.8%、11.8%。结论: β-半乳糖苷酶 2 猪囊尾蚴 FP 诊断囊虫病具有较高敏感性和高度的特异性。

关键词 [囊尾蚴病](#) [免疫诊断](#) [融合蛋白](#) [简化Western blot](#)

分类号

APPLICATION OF IMPROVED WESTERN BLOT METHOD IN DIAGNOSIS OF CYSTICERCOSIS

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Abstract

AIM: To evaluate the diagnostic value of four specific antigens from cDNA of Cysticercus cellulosae . cC1,cC2,and cP1 and cH1 (28 kDa, 18 kDa, 14 kDa and 34 kDa), mixing in equal proportions for the diagnosis of cysticercosis. METHODS: Taking the FP (fusion proteins) as antigen to make IWB (improved Western blot) analysis basing on the detection of antibody responses against FP,and making ELISA / IHA crude antigen(CA) analysis.They were evaluated comparatively while using 107 infected sera of cysticercosis cases, 40 infected sera of clonorchiasis cases, 24 infected sera of echinococcosis cases and 34 sera of healthy persons. The FP are encoded by cDNAs of β-galactosidase-specific antigens of Cysticercus cellulosae isolated from the cDNA library. RESULTS: 94 (87.9%) sera from 107 cysticercosis cases recognized FP in IWB and could not cross-react with the sera of echinococcosis cases, clonorchiasis cases and healthy persons, the specific rates were 100%, whereas ELISA, IHA using CA were 84.1%and 74.8%, respectively and could cross-react with the sera of echinococcosis cases, the false positive rates were 2.5% and 12.5% respectively; CA 2ELISA/IHA could cross-react with the sera of clonorchiasis patients, the false positive rates were 8.3% and 16.7%, respectively; and they could also cross-react with the sera of healthy persons, the false positive rates were 8.8% and 11.8%, respectively. CONCLUSION: The recombinant FP used in the immunodiagnosis of cysticercosis is specific and sensitive.

Key words [Cysticercosis](#) [immunodiagnosis](#) [fusion protein](#) [improved Western blot](#)

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