

EVALUATION OF TAENIA SAGINATA METACESTODES ANTIGENIC FRACTIONS FOR THE DIAGNOSIS OF HUMAN NEUROCYSTICERCOSIS (ABSTRACT)*. THESIS. UBERLÂNDIA, 2008.

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The application of *Taenia saginata* metacestodes as heterologous antigen is an important alternative for neurocysticercosis (NC) serodiagnosis. The cross-reaction with *Echinococcus granulosus* infection occurs with homologous and heterologous antigens, and could be avoided using different methods of purification.

This study analyzed antigen fractions obtained from crude saline extract of *T. saginata* metacestodes purified by affinity chromatography with the lectin jacalin, concanavalin A and N-acetylglucosamin for the detection of IgG antibodies by ELISA and immunoblotting, was also analyzed the application of *T. saginata* metacestodes as an alternative antigen for use in ELISA and immunoblotting tests in cerebrospinal fluid (CSF) samples. Serum samples were obtained from 142 individuals: 40 were diagnosed with NC, 62 presented other parasitic diseases, including taeniasis and 40 were apparently healthy individuals. The CSF samples were obtained from 35 patients with definitive neurocysticercosis and 35 patients with other neurological disorders.

Among the antigenic fractions, the concanavalin A un-

bound fraction demonstrated higher sensitivity and specificity by ELISA (90% and 93.1%, respectively). By immunoblotting, the concanavalin unbound fraction showed 100% of sensitivity and specificity, where only serum samples from patients with NC recognized the band of 64-68 kDa, so this antigen fraction may be used as specific antigen for diagnosis of NC. The sensitivity and specificity of ELISA using antigen obtained from *T. saginata* applied to CSF samples results of 100% and 94.3%, respectively. The 47-52, 64-68 and 70 kDa antigens were only recognized by CSF samples from patients with NC.

The identification of specific band of 64-68 kDa, in patients with NC using unbound concanavalin A fraction demonstrates high sensitivity and specificity in the immunodiagnosis, and indicated that *T. saginata* metacestodes can be used as alternative antigen for NC diagnosis using CSF samples.

Key words: neurocysticercosis, *Taenia saginata*, concanavalin A, jacalin, N-acetylglucosamin, ELISA, cerebrospinal fluid, serum, immunoblotting.

*Avaliação de frações antigênicas da *Taenia saginata* para o diagnóstico da neurocisticercose humana. (Resumo). Tese de Doutorado, Universidade Federal de Uberlândia (Área: Laboratório de Parasitologia, Departamento de Imunologia, Microbiologia e Parasitologia, Instituto de Ciências Biomédicas). Orientadora: Julia Maria Costa Cruz.

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