

THESES

NEUROCYSTICERCOSIS: RELATIONSHIP BETWEEN TAENIA ANTIGEN DETECTION IN THE CEREBROSPINAL FLUID AND MAGNETIC RESONANCE IMAGING (ABSTRACT)*. **THESIS. SÃO PAULO, 2006.**

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Neurocysticercosis (NC) is the most common parasitic infection of the nervous system, remaining a serious public health in our country. NC diagnosis is supported by clinical and epidemiological data, specific serological reactions in the blood and cerebrospinal fluid (CSF) and neuroimaging findings. Detection of anti-*Taenia* antigens using ELISA techniques is a recent methodology that provides information about clinical activity of the disease.

The objective of the study was to determine relationship between *Taenia* antigen detection in the CSF and magnetic resonance imaging (MRI) in patients with definite diagnosis of NC according to current diagnostic criteria.

Sixty-three patients were submitted to a CSF examination, including global leukocyte count with cytomorphological profile, biochemical tests, IgG class antibodies research for syphilis, toxoplasmosis and cysticercosis (complement fixation test, indirect immunofluorescence, passive hemagglutination and enzyme-linked immunosorbent assay), and *Taenia* antigen research. Antigens were detected in CSF samples by ELISA assay obtained from rabbit sera antibodies immunized with *Taenia crassiceps* cysticercal vesicular fluid. A blood sample was simultaneously collected in order to perform IgG class antibodies research for cysticercosis (complement fixation test, indirect immunofluorescence, passive hemagglutination and enzyme-linked immunosorbent assay) and protein content with its fractions; blood-CSF barrier function was evaluated by assessing the CSF/serum albumin quotient. A MRI was performed in every patient; the lesions were evaluated in relation to its total number, location and evolutive phases.

The most common clinical manifestation found was epileptic seizure (95.2%), specially partial seizures. This abnormally high prevalence of this form of the disease is probably due to a selection bias caused by the diag-

nostic criteria adopted that privileges the epileptic form of NC. Fifteen patients (23.8%) have received antiparasitic therapy, and 58 were treated with anti-inflammatory medication (dexamethasone or dexchlorpheniramine).

Taenia antigens were detected in 36 patients (57.1%). The ELISA test for cysticercosis in the CSF was positive in 46 patients (73.%), but in six negative cases *Taenia* antigens detection was positive, pointing to a diagnostic usefulness of the method. In this series of patients we could conclude that *Taenia* antigen detection represents a fine marker of disease activity in the epileptic form of NC.

A total number of 836 lesions were analyzed by MRI imaging, 98,7% of them placed within the cerebral parenchyma, more frequently (89.6%) near the convexity. In fifteen patients (23.8%) a single lesion was detected.

We observed a significant relationship between total number of lesions detected by MRI and the intensity of *Taenia* antigen detection, showing that the methods are congruent with proportional relationship and do not depend on cysts location. When considering patients with two or more degenerating cysts, the regression test shows a positive, but not linear, relationship with *Taenia* antigen detection. There is no significant relationship between the number of calcified cysts and *Taenia* antigen detection.

Results demonstrate that *Taenia* antigen detection is congruent with neuroimaging findings. Some CSF characteristics, like number of cells, gamma globulin concentration and ELISA assay were also concordant with *Taenia* antigen detection, indicating that inflammatory reaction in NC comprises cellular and humoral immunological factors.

KEY WORDS: neurocysticercosis/diagnosis, *Taenia*/immunology, cerebrospinal fluid, magnetic resonance imaging.

*Neurocisticercose: relação entre dosagem de antígenos de *Taenia* no líquido cefalorraquidiano e imagem através de ressonância magnética (Resumo). Tese de Doutorado, Universidade de São Paulo (Área: Neurologia). Orientador: Luís dos Ramos Machado.

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TRANSESOPHAGEAL ECHOCARDIOGRAPHY IN PATIENTS WITH ISCHEMIC STROKE (ABSTRACT)*. **THESIS. SÃO PAULO, 2005.**

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The clinical protocol "Transesophageal echocardiography and treatment with aspirin in patients with ischemic

stroke" is going on, and, as an initial part of it, we present the article "Transesophageal echocardiography dis-