NEUROLOGICAL MANIFESTATIONS OF DENGUE INFECTION: CLINICAL CHARACTERISTICS AND CEREBROSPINAL FLUID ANALYSIS (ABSTRACT)*. **DISSERTATION. NITEROI, 2005.**

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Introduction. Neurological manifestation is considered a rare complication of dengue infection. Encephalitis, myelitis, Guillain Barré syndrome (GBS), cranial nerve palsies have been recognized as clinical consequences of dengue infection.

Objective. To determine and correlate the neurological and cerebrospinal fluid (CSF) characteristics of patients with dengue infection and to evaluate the use of two dengue enzyme-linked immunosorbent assays (ELISA) kits in the CSF.

Method. We report 17 IgM seropositive patients for dengue who presented different neurological manifestations in the course of the acute infection. With these manifestations, patients were divided in four groups: headache, encephalitis, myelitis and GBS. Total and differential cytology count, protein and glucose levels and ELISA for IgM and IgG dengue antibodies were examined in the CSF samples from all 17 patients. In six of them (myelitis and GBS patients), the albumin and IgG concentrations were determined in serum and CSF. CSF and serum from Brazilian and German patients with other neurological diseases were used as controls for IgG and IgM dengue tests.

Result. We had seven patients with encephalitis, two with myelitis, four with GBS and four with headache associated with acute dengue infection. The CSF was normal in the cases of headache and in 42.8 % of the encephalitis cases. GBS showed a CSF-blood barrier dysfunction and the typical protein-cytology dissociation. Patients with myelitis showed specific antibodies intrathecal synthesis. IgM dengue antibodies in CSF were obtained in 47% of the 17 cases but with a high specificity of 97 % for Brazilian controls and 100% for German controls. Otherwise, IgG dengue tests revealed a low specificity when Brazilians controls were used, detecting previous contact with the virus in our population.

Conclusion: In endemic regions, dengue infection should be always investigated as the etiological agent in cases of encephalitis, GBS and myelitis. A normal CSF analysis does not exclude the diagnosis of encephalitis and headache caused by dengue infection. On the other hand, intrathecal synthesis of antibodies may suggest the virus presence in the central nervous system (CNS). Our findings, based on the detection of IgM dengue in CSF were an important tool to confirm dengue infection in the CNS but its absence does not exclude the diagnosis. Further, the high positivity to IgG dengue ELISA in the CSF of our Brazilin controls reflects previous contact with the virus in our population.

KEY WORDS: dengue infection, cerebrospinal fluid, neurological manifestations, viral encephalitis, myelitis, Guillain Barré syndrome.

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IMMUNOHISTOCHEMICAL STUDY OF THE MOLECULAR ALTERATIONS IN THE ASTROCYTIC TUMORS: TUMORIGENIC PATHWAYS AND RESISTANCE MARKERS (ABSTRACT)*. **DISSERTATION. FORTALEZA, 2005.**

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The present study aimed to evaluate the expression of genes involved in the tumorigenic process and in the chemoresistance mechanisms of the astrocytic tumors.

A clinical and epidemiological analysis, histopathological evaluation and immunohistochemical study of the proteins Ki-67, c-Myc, GFAP, p53, $p21^{WAF1/CIP1}$, $p27^{KIP1}$, Bcl-2, Bax, EGFR, erbB-2, $p21^{Ras}$, MGMT, GSTπ, TS and TopoIIα using streptoavidin-biotin-peroxidase method were performed in 55 different graduations of astrocytomas (WHO) (13 grade I, 14 grade II, 7 grade III, 21 grade IV) and 05 samples of non-tumoral tissue (control group).

The distribution by age, sex and tumoral localization of astrocytomas patients in Fortaleza reproduced, in a general way, the worldwide trends.

The histopathological findings evaluated with semiquantitative criteria confirmed the classification parameters for astrocytomas established by WHO.

The stain for Ki-67 antigen increased as according to astrocytic tumors progression; its detection in more than 8.0% of the tumoral cells distinguished Astrocytomas Grade IV, labeled index between 1.5 and 8.0% differentiated Astrocytomas Grade III and values below 1.5% discriminated low-grade tumors (I and II).

The TopoIIα and c-Myc (nuclear) expression demon-