

VIDEO-ELECTROENCEPHALOGRAPHY PROLONGED MONITORING IN THE DIAGNOSIS OF MEDICALLY REFRACTORY TEMPORAL LOBE EPILEPSY: APPLIANCE OF FUZZY HIERARCHY COPPE/COSENZA MODEL (ABSTRACT)*. **THESIS. RIO DE JANEIRO, 2004.**

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Introduction. The video-electroencephalography (video-EEG) prolonged monitoring is an important diagnostic instrument in epilepsy, and provides valuable information to classify the type(s) of crisis and epileptic syndromes and to localize the epileptogenic zone (EpZ). The fuzzy logic gives an efficient and intelligent analysis method, able to make inferences over ambiguous systems, defining approximate values in a diffuse space of possibilities, and has been increasingly used in several areas.

Objective. To correlate clinical and electroencephalographic data obtained with video-EEG prolonged monitoring of patients with clinical and interictal electroencephalography criteria of medically refractory temporal lobe epilepsy (TLE) and to make inferences of diagnosis precision with the application of the Fuzzy Hierarchy COPPE/Cosenza Model (FHCCM); to investigate the frequency in which the clinical, syndromic and topographic diagnosis can be modified in these patients; and to evaluate the usefulness and applicability of fuzzy logic on the analysis of this type of study.

Method. Transversal, prospective study, that included 22 adult patients of Epilepsy Clinic of Hospital Universitário Clementino Fraga Filho, Universidade Federal do Rio de Janeiro (HUCFF/UFRJ), with clinical and interictal electroencephalography criteria of medically refractory TLE, submitted to vi-

deo-EEG prolonged monitoring, that varied from 48 hours to ten days. The grade of diagnosis precision between the monitoring and ambulatory diagnosis was inferred by fuzzy logic. This study considered that the diagnosis of medically refractory temporal lobe epilepsy is an ambiguous system, best evaluated by fuzzy logic.

Results. The clinical diagnosis of epilepsy was modified in 2 (9%) patients, the syndromic in 6 (27.2%) and the topographic in 16 (72.7%) patients. The fuzzy indicators of ambulatory diagnostic precision were: 0.91 to clinical diagnosis; 0.74 to syndromic diagnosis and 0.36 to topographic diagnosis, considering 1 the maximal precision diagnostic value (attributed to the video-EEG prolonged monitoring results).

Conclusion. The video-EEG prolonged monitoring allowed to establish the clinical, syndromic and topographic correct diagnosis in these studied patients, with significant change in relation to the prior diagnosis; the fuzzy logic, by permitting the analysis of ambiguous systems, best defined a mathematical value of the correspondence between ambulatory diagnosis of TLE and the video-EEG prolonged monitoring.

KEY WORDS: temporal lobe epilepsy diagnosis, electroencephalography, video-EEG prolonged monitoring, fuzzy logics.

*Monitorização prolongada por vídeo-eletroencefalografia no diagnóstico de epilepsia do lobo temporal de difícil controle: aplicação do Modelo COPPE/Cosenza de Hierarquia Fuzzy (Resumo). Tese de Doutorado. Universidade Federal do Rio de Janeiro (Área Clínica Médica/Neurologia). Orientadores: Soniza Vieira Alves Leon e Carlos Alberto Nunes Cosenza.

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EARLY POSTURAL CONTROL IN PRETERM AND AT TERM INFANTS (ABSTRACT)*. **THESIS. CAMPINAS, 2004.**

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The aim of the study was to evaluate the development of early postural control in healthy infants born preterm and at term, during the six first months of age.

A longitudinal study was performed with a group of infants born with gestational age below 32 weeks (29w3d; \pm 1w4d) (mean; SD); a group of infants with gestational age between 32 and 36 weeks (33w5d; \pm 1s2d); and a group of infants born with gestational age between 38 and 41 weeks (39w3d; \pm 1w). The Chailey Levels of Ability assess-

ment was used to evaluate the supine, prone, sitting and standing positions, observing the positions and movements of the body segments and their relationship with the weight bearing. Evaluations took place at 15 days, and in the 1st, 2nd, 3rd, 4th, 5th and 6th month of age; the gestational age of the preterm infant was corrected for 40 weeks. The presence of some interdelivery, neonatal and behavioral factors and diseases was statistically significant among the groups.

The transversal statistical study, involving 38 infants, distributed into three groups, showed a significant difference, using the Kruskal-Wallis test for the standing position, between the group of preterm infants with gestational age between 32 and 36 weeks and the group of at term infants, in the 4th and 5th month of age. The longitudinal statistical study, considering 24 infants that never missed an evaluation and the preterm infants grouped showed significant difference, using the Analysis of Variance, in the following situations: prone position with the group of preterm infants, between evaluations carried out at 15 days and 1st month, 2nd and 3rd month, 3rd and 4th month, 4th and 5th month and 5th and 6th month, and group of at term infants, in the evaluations carried out between 15 days and the 1st month, the 1st and 2nd month, the 2nd and 3rd month, the 3rd and 4th month, 4th and the 5th month and 5th and 6th month; sitting position, indi-

cating that the preterm group showed, in average, inferior results to those for the at term group; standing position, between the two groups at the 4th and 5th month, and within the group of preterm infants, in the evaluations carried out between the 3rd and 4th month and the 5th and 6th month and the at term group in the evaluations between the 3rd and 4th month.

Results from this study demonstrate that early postural control during the first six months of age developed sequentially in preterm and at term infants, however, slower in the former. The Chailey Levels of Ability assessment showed that there was a relationship between the lying (supine and prone) and the sitting positions, and between the sitting and the standing positions.

KEY WORDS: early postural control, preterm infants, Chailey levels of ability.

*Controle postural precoce em crianças nascidas pré-termo e a termo (Resumo). Tese de Doutorado, Universidade Estadual de Campinas, UNICAMP (Área: Ciências Biomédicas). Orientadora: Maria Valeriana Leme de Moura-Ribeiro.

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EXPRESSION OF THE CHEMOKINES CXCL10 AND CCL2 IN SERUM AND CEREBROSPINAL FLUID OF PATIENTS WITH MULTIPLE SCLEROSIS TREATED WITH INTRAVENOUS METHYLPREDNISOLONE (ABSTRACT)*. **DISSERTATION. SÃO PAULO, 2004.**

MARCOS MOREIRA**

Studies of chemokines in cerebrospinal fluid (CSF) of patients with active multiple sclerosis have indicated that specific chemokines may develop an important role in the pathogenesis of the disease. Chemokines and its receptors have been associated with the migration of lymphocytes, monocytes, eosinophils, basophils and neutrophils under physiological and pathological conditions and have been considered important targets for investigation.

We have investigated the expression of two biologically important chemokines (CCL2 and CXCL10) in CSF and serum of 14 patients with relapsing multiple sclerosis (MS) and 14 controls with non-inflammatory CSF and 14 healthy individual's serum controls. We have also investigated the expression of these chemokines and the clinical alterations measured through Expanded Disability Status Scale (EDSS), Neurologic Rating Scale (NRS) and Ambula-

tory Index (AI) for MS before and after the treatment with intravenous methylprednisolone (IVMP) for five days.

In the admission, CCL2 concentrations were lower in MS patients than in controls; however, CXCL10 concentrations have demonstrated being higher in MS patients than in controls. The treatment has significantly changed the CCL2 and CXCL10 levels in CSF before and after the treatment. There was a statistically significant scores improvement of all the scales applied (EDSS, NRS and AI) soon after the end of the treatment.

Our results indicate that higher CXCL10 concentrations in the CSF and lower CCL2 concentrations are associated with relapses in multiple sclerosis.

KEY WORDS: multiple sclerosis, glucocorticoids, cerebrospinal fluid, chemokines, CXCL10; CCL2; methylprednisolone

* Expressão das quimiocinas CCL2 e CXCL10 no soro e líquido cefalorraquiano de pacientes com esclerose múltipla tratados com metilprednisolona intravenosa (Resumo). Dissertação de Mestrado, Faculdade de Ciências Médicas da Santa Casa de São Paulo (Área: Clínica Médica). Orientador: Charles Peter Tilbery.

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