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Abstracts Asociación Mexicana del Hígado (AMH)

Short-term efficacy and safety of l-ornithine l-aspartate therapy in patients with cirrhosis and minimal hepatic encephalopathy: a real-life cohort study

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Introduction and Objectives: MHE is related to a higher risk of accidents and deterioration in the quality of life; it can be detected with PHES and CFP. There is currently insufficient evidence that treatment with oral LOLA improves performance in PHES and CFP in patients with MHE. This study aimed to verify the response and safety of LOLA treatment in a real-life cohort of patients with MHE.

Materials and Methods: Cirrhotic patients in the Hepatology clinic diagnosed with MHE received LOLA 6 grams three times a day for three days and were reassessed with PHES and CFP. The results were analyzed by descriptive statistics, the comparison between parameters by paired t-Student or Wilcoxon test as appropriate, a value of $p<0.01$ was considered significant. The trial was approved by the research ethics committee, and informed consent was obtained.

Results: ninety-eight patients with cirrhosis were evaluated; 38.8% had baseline MHE, 68.4% were women, the mean age of 53.3 years, and the median education was nine years. According to Child-Pugh: 68.4% A, 23.7% B, and 7.9% C. 34 patients were analyzed, the PHES score improved significantly post-treatment (baseline -6.44±1.7 vs -2.79±1.9; $p<0.0001$), CFP improved (baseline 37± 1.8 vs 39.8±2.2; $p<0.0001$). According to PHES 88.2% and CFP 85.3%, patients showed remission. The incidence rate ratio for persisting with MHE was 4 and 5 per 34 person-times, and the prevented fraction of 0.88 and 0.85 according to PHES and CFP, respectively. No adverse effect was reported.

Conclusions: LOLA is effective in improving cognitive performance and reversing very early alterations in PHES and CFP in patients with cirrhosis and MHE.

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Declaration of interest: The authors declare no potential conflicts of interest.

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Short-term response of p300 evoked potential in patients with minimal hepatic encephalopathy treated with l-ornithine, l-aspartate

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Introduction and Objectives: The clinical alterations of Minimal Hepatic Encephalopathy (MHE) include subtle changes in cognitive processes detectable only with tests such as the Psychometric hepatic encephalopathy score (PHES) and critical blink rate (FCP) or P300 cognitive evoked potentials. After treatment with L-Ornithine, L-Aspartate (LOLA) 18 grams/30 days, a decrease or normalization in the PHES score, an increase in FCP, and a reduction in the latency of the P300 potential have been observed. In the short term, it is unknown if there are changes in these three indicators of the cognitive status of patients with MHE. This study aimed to detect changes in the potential cognitive P300 of patients treated with LOLA 18g/3 days.

Materials and Methods: Cirrhotic patients who attended the Liver Clinic of the Gastroenterology Service of the General Hospital of Mexico "Eduardo Liceaga" were included. The PHES test and FCP were applied, and the electroencephalogram (EEG) was recorded while visual stimuli were presented in a cognitive task to obtain the potential P300. The criteria for MHE were a PHES test score of less than -4 standard deviations (sd) and an FCP score of less than 39.0 Hz. EHM patients were given LOLA 6g/3 times a day for three days. Subsequently, the PHES, FCP, and P300 tests were repeated. The trial was approved by the research ethics committee, and informed consent was obtained.

Results: Eighty-nine patients with liver cirrhosis participated, 54 women (60.7%) with 53±7.9 years of age and 8.3±3.4 years of schooling. Fifty-seven patients (64.0%) were positive for PHES and 64 were positive for FCP (71.9%). EHM (positive for PHES and FCP) was detected in 53 patients (59.6%). Thirty-six patients (68%) accepted treatment with LOLA or completed the three tests, of which 16 repeated the three tests. The median PHES before treatment was -5.0 ds(-1,-6) and after treatment with LOLA -3.0 ds(-2,-4). The difference was significant in the Wilcoxon test for paired samples $p<0.0001$.

The initial mean of the FCP was 37.03±1.8 Hz and the final was 39.8± 2.1 Hz. The difference was significant for the student's t-test for related samples p<0.0001. The P300 potential had an initial amplitude of 2.42±2.79 and a final one of 2.21±2.19, not being significant, in contrast to the initial latency of 410.06±63 milliseconds (ms) and the final one of 404.88±63.6 ms, being significant after treatment. with LOLA p=0.015

Conclusions: Short-term (3 days) changes in MHE due to LOLA treatment were seen in PHES test scores, FCP test scores, and P300 evoked potentials. The P300 potentials reflect the state of the EEG when performing cognitive tasks of attention. The improvement in this indicator is already known at 30 days of treatment and with the present study, it was determined that immediately at the start of treatment with LOLA there is an improvement in their cognitive status.

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The Stroop test validation in the detection of minimal hepatic encephalopathy in Mexican patients with cirrhosis, preliminary results

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Introduction and Objectives: Minimal hepatic encephalopathy (MHE) is an important cause of morbi-mortality in patients with cirrhosis; its timely identification has an impact on prognosis; the Stroop Test is a diagnostic tool that can be useful and practical in these patients. Validating this test and calculating the cut-off point for the diagnosis of MHE in our population is important. This study aimed to validate the Stroop Test application and estimate the cut-off point for the diagnosis of MHE in our population.

Materials and Methods: Observational, cross-sectional and prolective study to validate and calculate the cut-off point of the Stroop Test; patients with cirrhosis with and without manifest hepatic encephalopathy will be included, who will undergo the Stroop Test, psychometric score of hepatic encephalopathy (PHES) and the critical flicker frequency test (CFF): ROC curves will be calculated to measure sensitivity, specificity and its cut-off point, healthy subjects will also be included for comparison. The trial was approved by the research ethics committee, and informed consent was obtained.

Results: One hundred subjects participated: 50 controls, 33 females (66%) age =43.2±12.1 years; and 50 patients with hepatic cirrhosis: 27 females (54%) age 53.2±8.2 years, of which 54%, 42% and 2% were in Child-Pugh A, B and C, respectively. AUROC was calculated for patients with cirrhosis with and without MHE, AUROC= 0.751 (CI=0.656-.846); cut-off point=183.5 sensitivity (SE)=60% specificity (SP)=74% (Figure 1).

Conclusions: For our study sample, we found that the Stroop Test is a good diagnostic tool, taking into account a cut-off point of 183.5 sec. as opposed to 274.9 sec. that the apple application gives us, which is validated in a different population (grade and quality of education).

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Declaration of interest: The authors declare no potential conflicts of interest.

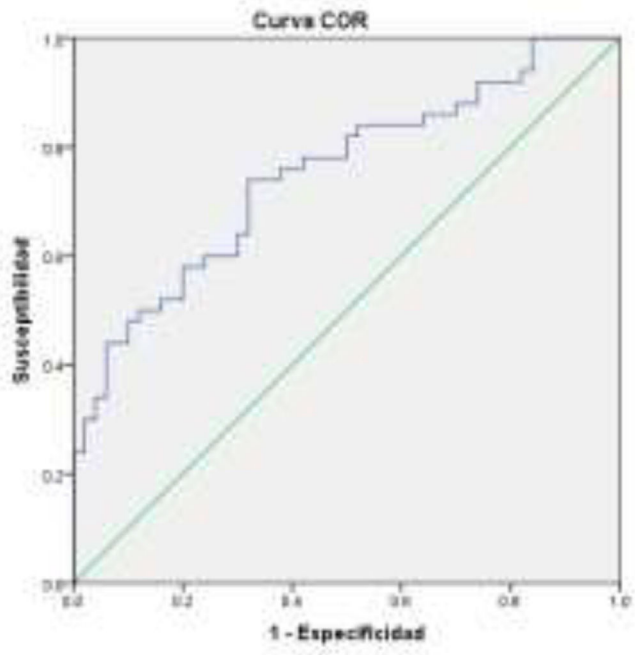

Figure.1

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Changes in early visual perception in patients with minimal hepatic encephalopathy

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Introduction and Objective: Minimal Hepatic Encephalopathy (MHE) is characterized by very subtle cognitive changes that are diagnosed with the Psychometric hepatic encephalopathy score (PHES) and critical flickering frequency (CFF). Patients with MHE are slower in attention tests evaluated with visual cognitive evocative potentials, which are late indicators. However, it is unknown whether there is also slowness in automatic responses of early visual perception, such as those of stationary visual potential P100. This study aimed to detect early visible changes in patients with minimal hepatic encephalopathy.

Materials and Methods: Cirrhotic patients who went to the Liver Clinic of the Gastroenterology Service of the General Hospital of Mexico "Eduardo Liceaga" were included. The PHES, CFF test was applied and the electroencephalogram (EEG) was recorded while repeated visual stimuli were presented to obtain the stationary visual potential P100. The trial was approved by the research ethics committee, and informed consent was obtained.