

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 prospective 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 $= 43.2 \pm 12.1$ 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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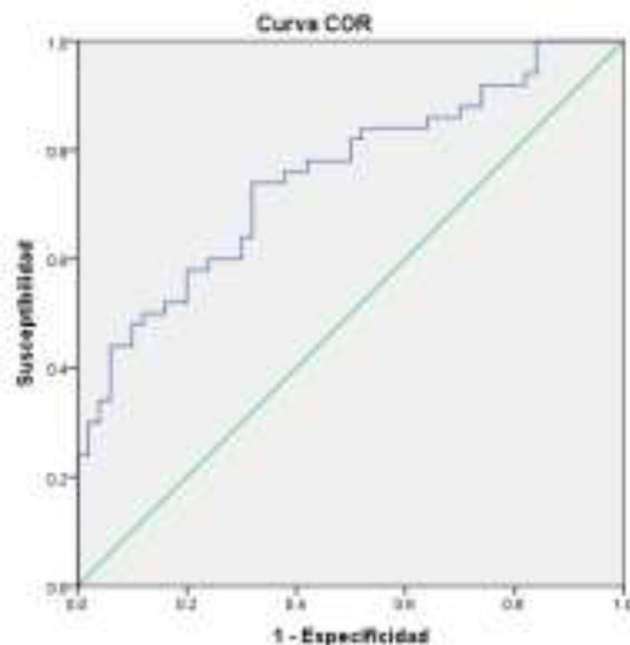


Figure.1

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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.

Results: Eighty-nine patients with hepatic cirrhosis participated, 54 women (60.7%) with 53 ± 7.9 years of age and 8.3 ± 3.4 years of schooling. 57 patients (64.0%) and 64 FCP-positive (71.9%) were PHEs-positive. MHE (PHEs and CFF positive) was detected in 53 patients (59.6%). 29 MHE patients and 10 patients with cirrhosis agreed to do the perceptual tests. P100 latency of the visual potential was quantified lower in patients with MHD 113 ± 9 milliseconds than in cirrhotic 94 ± 14 milliseconds.

Conclusions: Patients with MHE showed slowness in early perceptual processes that preceded cognitive processes.

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Sarcopenia as a predictor of risk of minimal hepatic encephalopathy in patients with liver cirrhosis

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Introduction and Objective: Sarcopenia, defined as loss of muscle mass and strength, and minimal hepatic encephalopathy (MHE), alter the quality of life and prognosis of patients with cirrhosis. Ammonia plays a key role in the pathogenesis of MHE and has been associated with decreased muscle mass and strength. However, the relationship between sarcopenia and MHE is not well defined. The objective of this study was to determine their relationship and identify predictors of MHE.

Materials and Methods: Prospective study, including 96 patients with compensated cirrhosis diagnosed by transitional elastography. The presence of MHE and sarcopenia was determined by a critical flicker frequency test and standard from the European Working Group EWG SOP2. Muscle mass and strength were determined by electrical bioimpedance and a handgrip dynamometer. Functional capacity was evaluated by a Short Physical Performance Battery (SPPB), performing linear logistic regression analysis to identify predictors of MHE. The trial was approved by the research ethics committee, and informed consent was obtained.

Results: Of the ninety-six patients with cirrhosis, 61 (64%) and 35 (36.5%) were diagnosed with MHE and sarcopenia, respectively. In the multivariate analysis, the SPPB rating (R 0.521, 95% CI 0.85-2.54, $p < 0.001$) and grip strength (R 0.314, 95% CI 0.024-0-50, $p = 0.032$) showed the highest predictive value for MHE. (Table 1 and Figure 1).

Conclusions: Decreased handgrip strength and SPPB score were significant predictors of MHE. Early nutritional intervention and physical rehabilitation could reduce the risk of developing EHM in patients with cirrhosis.

Funding: Donation by the volunteer ladies of the Hospital General de México "Dr. Eduardo Liceaga."

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	Men (n=47)	Women (n=49)	p score
Age years (x, DE)	49.6 ± 10.3	54.6 ± 12.3	0.032 V *
Years of education (x, DE)	8.28 ± 3.2	8 ± 4.1	0.748 V
Elastography (kPa) (x, DE)	39.0 ± 23.1	21 ± 13.9	<0.001 V ***
Child-Pugh-Turcotte pts (x, DE)	7.43 ± 2.0	6.5 ± 1.9	0.316 V
MELD-Na pts (x, DE)	16.35 ± 6.1	13.9 ± 4.7	0.048 V *
ETIOLOGY (n,%)			
Alcoholic hepatopathy	29 (61.7)	8 (16.3)	<0.001 C
Hepatitis C virus	10 (21.3)	17 (34.7)	0.144 C
MAFLD/NASH	5 (10.6)	11 (22.4)	0.121 C
COMORBILIDADES (n,%)			
DM type 2	15 (31.9)	19 (38.6)	0.482 C
Hypertensión	4 (14.8)	7 (23.3)	0.416 C
COMPOSICIÓN CORPORAL (x, DE)			
IMC kg/m ²	27.1 ± 5.2	24.8 ± 4.0	0.013 V **
Height cm	166 ± 7.2	153.3 ± 7.5	<0.001 V ***
Weight kg	75.1 ± 17.8	58 ± 10.0	<0.001 V ***
SARCOPENIA AND FUNCTIONAL CAPACITY EVALUATION (x, DE)			
SPPB score (pts)	10.38 ± 2.0	8.8 ± 3.0	0.006 V **
Walk test 4 m (seg)	5.3 ± 7.0	5.3 ± 5.2	0.943 V
Chair stand (seg)	12.6 ± 4.9	14.5 ± 4.3	0.040 V *
muscle mass (kg)	26.9 ± 11.3	16.7 ± 8.7	<0.001 V ***
Handgrip strength (kg)	28.8 ± 7.0	17.1 ± 4.6	<0.001 V ***
Flicker (Hz) (x, DE)	36.1 ± 5.9	38.1 ± 6.1	0.113 V

x Mean sDE, & median (IQ), V T Student independent samples, C Chi square
 * Statistically significant difference in grade $p < 0.05$
 ** Statistically significant difference in grade $p < 0.01$
 *** Statistically significant difference in grade $p < 0.001$

Table 1. Demographic distribution by frequencies, difference in means and proportions of subjects with liver cirrhosis by gender (n=96).

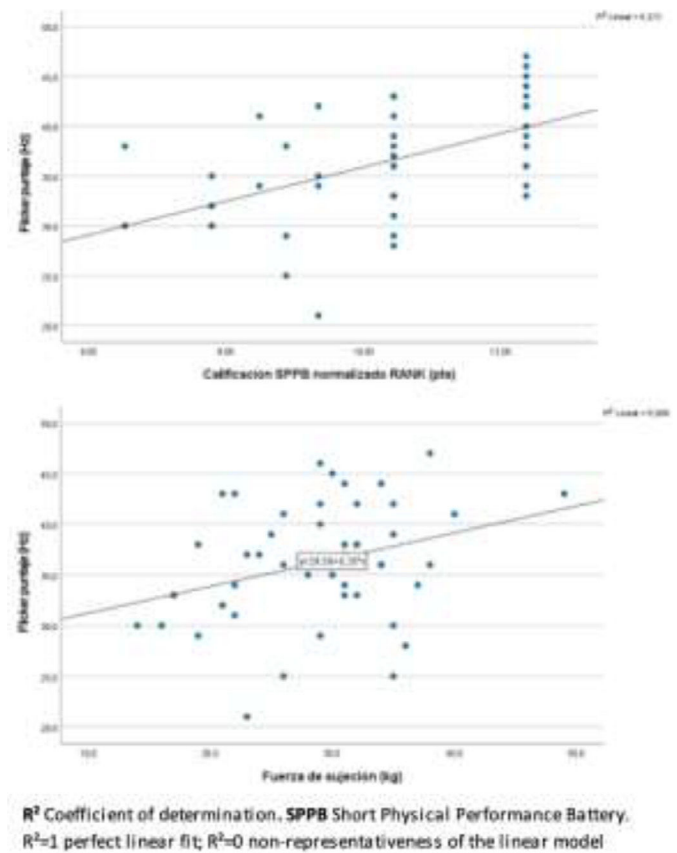


Figure 1. Simple dispersion diagram. Logistic regression analysis. SPPB and handgrip score associated with Flicker score. <https://doi.org/10.1016/j.aohep.2022.100787>

Prevalence of liver fibrosis determined by non-invasive methods in patients with metabolic disorders at the Centro Medico Nacional 20 de noviembre

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