found in 3 (4.47%) metabolic damage donors, 1 (3.22%) by alcohol, and 2 (6.45%) by dual damage.

**Conclusions:** 5 out of 10 apparently healthy individuals have fatty liver disease. The most frequent was due to metabolic damage, while fatty liver disease due to alcohol and dual damage were equally prevalent. Undiagnosed advanced fibrosis was found in a small percentage. These individuals are a sample of the Mexican population that could represent the behavior of the population of our country.

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## P-38 CRYPTOGENIC CHRONIC HEPATITIS: LOOKING FOR AN ETIOLOGICAL DIAGNOSIS

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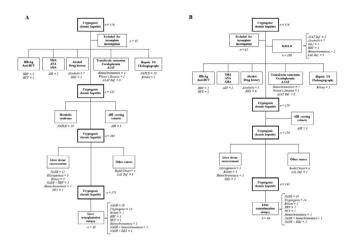
**Introduction and Objectives:** Cryptogenic chronic hepatitis is an increasing cause of liver transplantation and affects 5-15% of patients with chronic liver diseases. This study aimed to investigate possible underlying causes of presumed cryptogenic liver disease referred to specialized liver centers by general practitioners in Brazil and to propose a new diagnostic algorithm including metabolic-dysfunctionassociated fatty liver disease (MAFLD) definition and lysosomal acid lipase deficiency (LAL-D) investigation.

**Materials and Methods:** A retrospective multicentric Brazilian cohort of patients with presumed chronic cryptogenic hepatitis was reanalyzed with respect to their clinical, laboratory and histological data using Czajaś algorithm (2011).

**Results:** 326 patients [mean age 60 (46-68) years, 42.9% males] were initially included, 35.7% with cirrhosis. Forty-five individuals were excluded due to an incomplete etiological investigation. Using Czaja's algorithm, diagnosis of nonalcoholic fatty liver disease could be established in 60 patients (21.3%), alpha-1-antitrypsin deficiency in 9 (3.2%), alcoholic liver disease in 7 (2.7%), autoimmune hepatitis in 5 (1.78%), hemochromatosis in 5 (1.78%), biliary-related hepatitis in 4 (1.4%), viral hepatitis in 4 (1.4%), Budd Chiari in 4 (1.4%), glycogenosis in 3 (1%), drug-induced liver injury in 2 (0.7%), and Wilson disease in 1 (0.35%). LAL-D was demonstrated in 3 individuals (1%). One hundred seventy-five patients remained with cryptogenic hepatitis (53.6%) (FIGURE A). During follow-up, 40 of those patients were submitted to liver transplantation and 19 (47.5%) were retrospectively diagnosed with non-alcoholic steatohepatitis after histopathological

examination of the explanted liver. By including MAFLD in the first step of the new algorithm, 100 patients would have been diagnosed (34.9%), reducing the number of individuals without a diagnosis by 18.3% (FIGURE B).

**Conclusions:** One-third of patients with initially presumed cryptogenic liver disease were diagnosed with MAFLD. Despite being a rare disease, LAL-D investigation should be considered for individuals with chronic liver disease of unknown etiology. An updated diagnostic algorithm is proposed for those individuals.



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## P- 39 CLINICAL SIGNIFICANCE OF GRADE 1 HEPATIC ENCEPHALOPATHY IN PATIENTS HOSPITALIZED FOR COMPLICATIONS OF CIRRHOSIS

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**Introduction and Objectives:** Recent guidelines recommended grouping grade 1 and minimal HE under the term "covert HE." However, minimal HE is not usually investigated in hospitalized patients and there are very little data about the impact of grade 1 HE in patients admitted for complications of cirrhosis. This study aimed to investigate factors associated with the presence of grade 1 HE and its prognostic impact in patients hospitalized for complications of cirrhosis

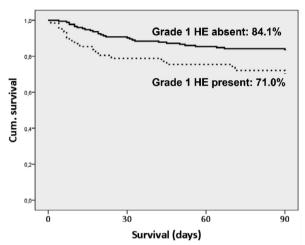
**Materials and Methods:** prospective cohort study that included 238 patients either without HE or with grade 1 HE on the first day of hospitalization. All examiners were fourth-year fellows with at least one year of experience in clinical hepatology and trained by the senior investigators specifically for the use of West-Haven criteria. Minimal hepatic was not evaluated.

**Results:** The mean age was  $54.2 \pm 11.6$  years, mean MELD was  $16.4 \pm 6.7$ . Grade 1 HE was observed in 62 patients (26.1%) and was associated with ascites, Child-Pugh C, ACLF, higher total bilirubin, INR, MELD, and CLIF-SOFA. Progression to grades 2/3/4 HE (overt HE) up to day 3 of hospitalization occurred in 7.1% of the patients and was independently associated with bacterial infection (OR = 4.934, IC 95% 1.415-17.199, P=0.012) and grade 1 HE (OR = 3.937, IC 95% 1.261-12.298, P=0.018). The progression rate to overt HE was four times higher among subjects with grade 1 HE as compared to those

without HE (16.1% vs. 4.0%, P = 0.003). The 90-day Kaplan-Meier survival probability was significantly lower among patients with grade 1 (71.0% vs. 84.1%, P = 0.018) (figure 1).

**Conclusions:** When compared to individuals without HE at admission, grade 1 HE was associated with parameters of more advanced liver disease and more severe acute decompensation. Patients with grade 1 HE exhibited worse evolution of mental state and higher mortality, reinforcing the practical importance of more subtle clinical findings.

Figure 1



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## P-40 IS THERE A DISTINCT PHENOTYPE OF NON-ALCOHOLIC FATTY LIVER DISEASE IN LEAN AND OVERWEIGHT PATIENTS?

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**Introduction and Objectives:** Non-alcoholic fatty liver disease (NAFLD) is not an exclusive disease of obese patients. Lean and overweight patients also deal with this disease. This study aimed to analyze if there is any different NAFLD phenotype between lean and overweight patients.

Materials and Methods: This is a cross-sectional study of descriptive characteristics of lean (BMI ≤ 24.9kg/m2) and overweight (BMI 25-29.9kg/m2) patients from a NAFLD outpatient care facility at a Tertiary reference hospital in Sao Paulo, Brazil. The analysis included: gender, age, BMI, Insulin Resistance (IR), Type 2 Diabetes Mellitus (T2DM), Systemic Arterial Hypertension (SAH), Dyslipidemia (DLP), ALT, AST, GGT, ferritin, liver stiffness, CAP, Fibrosis stages and NAS score. Mann-Whitney U test, Welch two-sample t-test and Fischer's exact test were used.

**Results:** A total of 68 (54 overweight; 14 lean) NAFLD patients were analyzed. Female majority in each group (86% lean; 67% overweight). Similar mean age: in lean 63.79yo (Cl95% 59.23-68.34yo) and in overweight 63.80yo (Cl95%60.91-66.68yo). The mean BMI in lean was 22.77 kg/m2 (Cl95% 22.08-23.47 kg/m2) and in overweight was 27.19 kg/m2 (Cl95% 26.85-27.54 kg/m2). The majority of the groups had T2DM, DLP and SAH. IR occurred in 26% and 14% of overweight and

lean, respectively. In the lean group, 13% didn't have IR or T2DM. ALT, AST, GGT, ferritin, liver stiffness and CAP between groups had no significant statistical difference (p > 0.05). Advanced fibrosis ( $\geq$  F3) in 7 (50%) lean and 30 (68%) overweight patients (p= 0.182). NASH (NAS  $\geq$  4) in 9 (64%) of the lean and 44 (81%) of the overweight (p= 0.222).

**Conclusions:** In this small population study, preliminary results infer that lean and overweight NAFLD patients have similar characteristics. A large-scale study could confirm this data. Perhaps we should consider lean and overweight as one non-obese NAFLD group and eventually compare them with obese counterparts in future studies.

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## P-41 SARCOPENIA AS A PREDICTOR OF RISK OF MINIMAL HEPATIC ENCEPHALOPATHY IN PATIENTS WITH LIVER CIRRHOSIS

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**Introduction and Objectives:** Sarcopenia, defined as loss of muscle mass and strength and minimal hepatic encephalopathy (MHE), alters 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.

**Material 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 criteria 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 Short Physical Performance Battery (SPPB), performing linear logistic regression analysis to identify predictors of MHE.

**Results:** Of the 96 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.

**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.

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P-42 OBESITY AND ANTI-HBC IGG POSITIVITY INCREASE THE RISK OF HEPATOCELLULAR CARCINOMA IN A COHORT OF CHRONIC HEPATITIS C PATIENTS IN A TERTIARY OUTPATIENT CLINIC IN SÃO PAULO, BRAZIL

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