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Abstracts of the 2024 Annual Meeting of the ALEH (Asociación Latinoamericana para el Estudio del Hígado)

O-1 SIMULTANEOUS LIVER-KIDNEY TRANSPLANTATION OUTCOMES IN LATIN AMERICA

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Conflict of interest: No

Introduction and Objectives: Simultaneous liver-kidney transplantation (SLKT) is increasingly performed worldwide. We aimed to evaluate the characteristics and outcomes of SLKT patients in Latin America.

Patients / Materials and Methods: We conducted a multicenter, international retrospective cohort study of adult patients who underwent SLKT. Overall survival and survival with functional grafts (both liver and kidney) were estimated using the Kaplan-Meier method.

Results and Discussion: 293 patients who underwent SLKT between 2003 and 2024 from Argentina, Brazil, Colombia, Chile, Mexico, Peru, and Uruguay were included. Patients had a median age of 56 (IQR: 47–61), and 63% were male. Primary indications for liver transplantation were decompensated cirrhosis (69%) and polycystic disease (19%). The most common etiologies of cirrhosis were viral (36%), alcohol-related (35%), and metabolic-associated steatotic liver disease (27%). Ninety-three percent of kidney indications were due to chronic kidney disease, primarily polycystic kidney disease (26%), diabetic nephropathy (25%), and hypertensive nephropathy (11%). Among patients transplanted for acute kidney injury, 75% had hepatorenal syndrome. Overall, 55% were on pre-transplant renal replacement therapy (RRT). Thirty-eight percent accessed transplantation with MELD exceptions. The median MELD-Na score was 24 (19-30), 25 (21-32) in those without supplementary MELD, and 20 (17-25) in those with supplementary MELD. Fourteen percent had a prior isolated transplant (kidney 50% and liver 50%. Twenty-five percent required RRT, and 18% underwent abdominal re-operation within the first post-transplant week. During long follow-up, 13% experienced major cardiovascular events, and 7% experienced oncological

complications. Other recipient and donor characteristics are presented in the table. One-year overall survival was 77% (95% CI 72-82); at 5 years, it was 67% (95% CI 60-72); and at 10 years, it was 59% (95% CI 51-66). Survival with functional grafts at 1 year was 77% (95% CI 72-82); at 5 years, it was 65% (95% CI 58-70); and at 10 years, it was 54% (95% CI 46-62).

Conclusions: For the first time, data from the region demonstrate that long-term patient survival following SLKT meets international standards.

Recipient and Donor Characteristics (n=293)	
Variable	Result (n=293)
PRE-TRANSPLANT RECIPIENT CHARACTERISTICS	
Arterial hypertension, n (%)	153 (54)
Diabetes, n (%)	99 (35)
Dyslipidemia, n (%)	49 (17)
BMI, median (IQR)	24 (22 - 28)
Pre-transplant mechanical ventilation, n (%)	37 (13)
INDUCTION IMMUNOSUPPRESSION, n (%)	
Methylprednisolone	40 (14)
Methylprednisolone, Thymoglobulin	36 (12)
Methylprednisolone, Basiliximab,	158 (54)
Methylprednisolone, Basiliximab, Thymoglobulin	7 (2)
Other	52 (18)
REJECTION, n (%)	
Biopsy-proven acute/cellular liver rejection*	21 (8)
Biopsy-proven acute/cellular kidney rejection*	28 (11)
DONOR CHARACTERISTICS	
Male gender, n (%)	180 (63)
Age, median (IQR)	34 (24 - 47)
BMI, median (IQR)	25 (23 - 27)
Sodium, median (IQR)	151 (145 - 159)
Creatinine, median (IQR)	0.95 (0.71 - 1.20)

*At least one episode during follow-up.

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O2- CHARACTERIZATION OF STEATOTIC LIVER DISEASE AND THE ROLE OF GENETIC BACKGROUND IN LATIN AMERICA

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Conflict of interest: Yes, FONDECYT #1241450

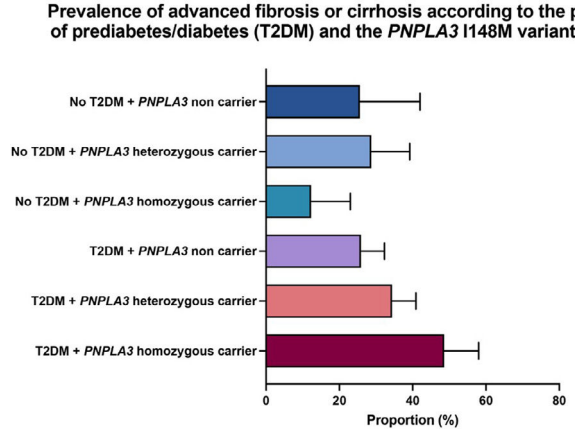
Introduction and Objectives: Although Latinos living in the United States are at higher risk of steatotic liver disease (SLD), information from Latin American countries is extremely scarce. We aimed to characterize SLD in Latin America and explore the role of the common genetic variants in this region.

Patients / Materials and Methods: Cross-sectional multicenter study including individuals with SLD who undergo liver biopsy or transient elastography (TE) between 2003−2024. TE thresholds were established as follows: significant fibrosis (F2) ≥8.2 kPa, advanced fibrosis (F3) ≥9.7 kPa, and cirrhosis (F4) ≥13.6 kPa. Analyses included logistic binary regression.

Results and Discussion: We included 2,159 patients (93.7% metabolic dysfunction-associated SLD and 6.3% alcohol-associated liver

disease) from 13 centers in 5 countries (Argentina, Brazil, Chile, Mexico, and Peru). Mean age was 54.3±14.3 years old, 58.8% were female, and 60.2% had a liver biopsy. Around 18% had significant fibrosis, 18.7% advanced fibrosis, and 16.2% had cirrhosis. Additionally, 21.8% were homozygous carriers of the rs738409 risk polymorphism (*PNPLA3* I148M variant), 42.5% were heterozygotes, and 35.7% were non-carriers. In an adjusted multivariable model, only age (odds ratio [OR]:1.03; 95%CI:1.01−1.04; p=0.030), body mass index (BMI) (OR:1.04; 95%CI:1.01−1.08, p=0.008), prediabetes/diabetes (OR:2.41; 95%CI:1.48−3.91, p<0.0001), and *PNPLA3* risk allele carriers (heterozygotes: OR:2.86, 95%CI:1.78−4.61; p<0.0001, and homozygous: OR:25.37, 95%CI:4.30−149.54; p<0.001) were associated with a higher risk of advanced fibrosis. Similar results were observed in multivariable models to assess the risk of cirrhosis. Prevalence of advanced fibrosis or cirrhosis was higher in those with prediabetes/diabetes and homozygous carriers of the *PNPLA3* I148M variant than those without both risk factors (48.6% vs. 27.9%, p<0.0001) (Figure).

Conclusions: Age, BMI, prediabetes, diabetes, and carriers of the *PNPLA3* risk allele carriers were the leading risk factors for advanced fibrosis in SLD. *PNPLA3* I148M variant carriers are frequent in SLD patients in Latin America, and genotyping could be established to stratify the risk of liver fibrosis routinely in clinical practice. (Supported Fondecyt #1241450)



Figure

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O3- RECOMPENSATION IN PATIENTS WITH CIRRHOSIS PRIOR TO FIRST LINE SYSTEMIC THERAPY IS ASSOCIATED WITH SIMILAR SURVIVAL OUTCOMES COMPARED TO COMPENSATED CIRRHOSIS

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Conflict of interest: No

Introduction and Objectives: The term *"recompensation"* of cirrhosis was proposed in the latest BAVENO VII, underlying dynamic events and prognosis in cirrhosis. However, there is uncertainty regarding its prognosis in patients with advanced hepatocellular carcinoma (HCC) treated with first line systemic therapies (1L). We aimed to compare post-1L survival between compensated (CC), decompensated (DC), and recompensated (RC) cirrhosis.

Patients / Materials and Methods: A multicenter prospective Latin-American cohort study including advanced HCC patients with cirrhosis who received any 1L was conducted from 2018 to 2024. Three groups were defined: CC (had never presented decompensation); DC (presenting any decompensated event associated with portal hypertension at time of 1L), and RC group (prior history of any decompensation event at HCC diagnosis who were compensated at time of 1L). Survival since date of 1L was compared using Cox proportional hazard analysis.

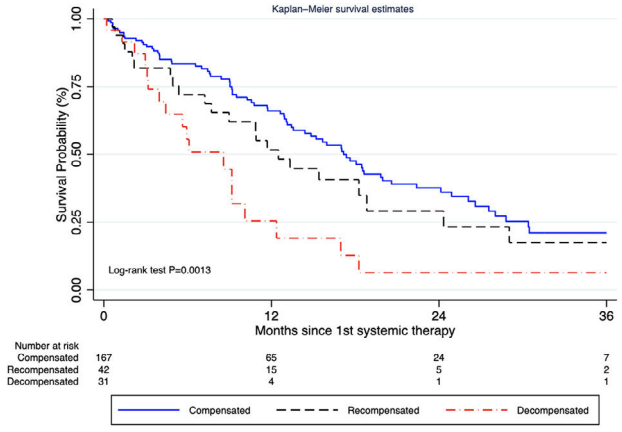
Results and Discussion: Overall, 306 patients received 1L, including sorafenib 60.5%, atezolizumab + bevacizumab 29.7%, lenvatinib 9.1%, and nivo/pembrolizumab 0.6%. Of these, 83.3% presented cirrhosis. Median 1L treatment duration was 5.1 months with a median overall survival since 1L of 16.0 months (range 12.9-18.3). Significant differences were observed between CC (n=167), DC (n=31) and RC (n=42) groups (Table). In the RC group, median time from decompensation to recompensation was 12.0 months (range 1.9-25.9); being ascites the most frequent event (78.6%). DC group presented decreased post-1L survival [median 8.6 months vs 17.2 months in CC [adjusted HR 1.9 (95% CI 1.05-3.5); P=0.03], while no significant survival difference was observed between RC and CC [median survival 12.5 months; aHR 1.3 (95% CI 0.81-2.1); P=0.28] (Figure). Lower access to second line therapy was observed in DC group.

Conclusions: Patients with cirrhosis and advanced HCC who achieve recompensation may benefit from systemic therapies. This demands an observation period of follow up before precluding 1L in decompensated cirrhosis.

VARIABLE	*Compensated n=167 (69.6%)*	*Recompensated n=42 (17.5%)*	*Decompensated n=31 (12.9%)*	*P values*
Age, years (± SD)	66 ± 8.2	66 ± 9.4	64 ± 10	0.54
Gender, Male, n (%)	134 (80.2)	30 (71.4)	22 (71.0)	0.26
Obesity, n (%)	39 (26.9)	7 (17.5)	5 (17.9)	0.39
Comorbidities, n (%)	94 (56.3)	30 (71.4)	17 (54.8)	0.18
Etiology of liver disease, n (%)				
Viral/non-viral	76 (45.5)/91 (54.5)	12 (28.6)/30 (71.4)	8 (25.8)/23 (74.2)	0.03
Hepatitis C	67 (40.1)	12 (28.6)	6 (19.3)	0.05
MASLD	45 (26.9)	18 (42.9)	9 (29.0)	0.13
Alcoholic liver disease	20 (12.0)	4 (9.5)	6 (19.3)	0.08
Pre-1L treatment characteristics				
Child Pugh A/B, n (%)	143 (85.6)/24 (14.4)	38 (92.7)/3 (7.3)	6 (20.0)/24 (80.0)	<.0001
Mild Ascites, n (%)	-	-	28 (90.3)	<.0001
HE grades I-II, n (%)	-	-	7 (22.6)	<.0001
ECOG 0-1, n (%)	163 (97.6)	38 (92.7)	20 (64.5)	<.0001
Median total Bilirubin, mg/dl (IQR)	1.0 (0.8-1.55)	1.0 (1.0-1.3)	1.6 (1.0-2.2)	0.003
Median Albumin, g/dl (IQR)	3.6 (3.5-4.0)	3.6 (3.5-3.6)	3.3 (3.0-3.6)	<.0001
Median INR, (IQR)	1.0 (1.0-1.2)	1.0 (1.0-1.1)	1.2 (1.1-1.4)	<.0001
Median serum AFP, ng/ml (IQR)	134.0 (11.7-1235)	607.0 (29-5843)	227.5 (16.4-1585)	0.34
AFP ≥400 ng/ml, n (%)	46 (27.5)	10 (24.4)	10 (32.3)	0.77
Macrovascular tumor invasion, n (%)	60 (35.9)	4 (9.8)	11 (35.5)	0.002
Metastatic disease, n (%)	60 (35.9)	12 (29.3)	12 (38.7)	0.67
BCLC, n (%)				
A	2 (1.2)	1 (3.3)	-	0.044
B	45 (27.9)	13 (43.3)	62 (12.9)	
C	114 (70.8)	16 (53.3)	27 (87.1)	

Abbreviations: HCC: hepatocellular carcinoma, AFP: alpha-fetoprotein; IQR: interquartile range. HE: hepatic encephalopathy.

Comparison between patients with cirrhosis presenting compensated, recompensated and descompensated cirrhosis



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OP-1 LONG-TERM EFFICACY AND SAFETY OF OPEN-LABEL SELADELPAR TREATMENT IN PATIENTS WITH PRIMARY BILIARY CHOLANGITIS: INTERIM 2-YEAR RESULTS FROM THE ASSURE STUDY

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Conflict of interest: Yes, Full disclosures sent separately.

Introduction and Objectives: Seladelpar reduces biochemical markers of cholestasis and pruritus in patients with primary biliary cholangitis. ASSURE (NCT03301506) is an ongoing, open-label, long-term Phase 3 trial of seladelpar in patients rolling over from Phase 3

RESPONSE (NCT04620733) or legacy studies (NCT03602560, NCT02955602, NCT03301506, and NCT04950764). We report interim 2-year efficacy and safety results.

Patients / Materials and Methods: Patients with insufficient response/intolerance to ursodeoxycholic acid could enroll in ASSURE. Key endpoints were composite biochemical response (alkaline phosphatase [ALP] <1.67 × upper limit of normal [ULN], ALP decrease ≥15%, and total bilirubin ≤ULN) and ALP normalization. Pruritus was measured using numerical rating scale (NRS; 0–10). For patients enrolling from RESPONSE, baseline was entry to RESPONSE and analyzed as continuous seladelpar or crossover from placebo; legacy patients were analyzed separately with baseline defined as entry to ASSURE.

Results and Discussion: As of 01/2024, 158 RESPONSE and 179 legacy patients received seladelpar 10 mg daily for up to 155 weeks. In RESPONSE, 61.7% of patients met the endpoint at 12 months (M) vs 20% for placebo. In ASSURE, 61.8% (6M) and 72.4% (12M) met the composite endpoint; 75% (6M) and 93.8% (12M) of placebo crossover patients met the endpoint. In RESPONSE, ALP normalized in 25% of seladelpar and 0 placebo patients at 12M. With continued treatment, 33.3% (6M) and 17.2% (12M) had ALP normalization; 26.9% (6M) and 50% (12M) of crossover patients had ALP normalization. In ASSURE, 6-month change from baseline in pruritus NRS was similar to RESPONSE: −3.8 and −3.7 in continuous and crossover patients, respectively. At 12M and 24M, 73.2% and 69.7% of legacy patients met the endpoint in ASSURE; 42.1% and 42.4% achieved ALP normalization, and reduction in pruritus NRS was −3.8 and −3.1, respectively. There were no treatment-related serious adverse events.

Conclusions: Seladelpar treatment led to improvements in biochemical markers and pruritus, and was well tolerated with long-term use.

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OP-2 WILSON DISEASE (WD) DIAGNOSIS WITH NEXT-GENERATION SEQUENCING (NGS) IN CLINICAL PRACTICE: A PILOT STUDY

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Conflict of interest: Yes, Ultragenyx has provided 25 kits for copper panel genotyping by NGS at Mendelics laboratory

Introduction and Objectives: Wilson disease (WD) is an autosomal recessive disorder caused by a defect in the ATP7B protein, leading to copper overload. ATP7B genotyping has been performed by Sanger method, but NGS techniques have recently become available. Our aim was to analyze the impact of Sanger direct sequencing and NGS in the diagnosis of WD.

Patients / Materials and Methods: A series of 287 WD patients included 160 individuals who provided DNA after informed consent. All patients met ≥4 points of the European WD scoring system. DNA for Sanger sequencing was extracted from peripheral leukocytes and for NGS from oral cells using a buccal swab. ATP7B mutations were identified in 135 patients by Sanger sequencing only, in 17 by NGS and in 8 by both methods. Sanger sequencing was performed as previously published (Deguti et al, 2004). In targeted NGS using a "copper panel" (Laboratório Mendelics), libraries were prepared with Illumina DNA with enrichment, target regions were captured using specific probes (Twist Biosciences v.3) for all exons/intronic regions, and variants and indels were identified using GATL v4 program and CNVs using ExomeDepth.

Results and Discussion: Of the 320 alleles analyzed, the most frequent mutations were p.A1135fs (26.7%), L708P (15.8%), p.H1069Q (5.3%) and p.M645R (3.1%).The remaining 49.1% of alleles had 38 distinct disease-causing mutations, each with a frequency of <3.0%. Sanger sequencing detected a mutation in 264/286 alleles (92.3%), while the NGS method detected a mutation in 50/50 (100%). The table shows the results of the 8 patients genotyped with both methods.

Conclusions: The Sanger direct sequencing methods were laborious and detected mutations in 92.3% of *ATP7B* alleles, while NGS techniques yielded 100%, impacting the WD score by up to 4 points. This can be crucial in difficult and potentially severe cases.

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OP-3 ASSESSING TREATMENT ELIGIBILITY EXPANSION UNDER THE 2024 WHO GUIDELINES FOR CHRONIC HEPATITIS B

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Conflict of interest: No

Introduction and Objectives: The 2024 WHO guidelines for chronic hepatitis B (CHB) aim to expand and simplify treatment eligibility, but these criteria have not been assessed. We aimed to estimate treatment eligibility and uptake according to country-specific

guidelines and evaluate potential treatment expansion based on the WHO guidelines.

Patients / Materials and Methods: This cross-sectional study included consecutive treatment-naïve CHB patients from Argentina, Brazil, Chile, and Uruguay who were referred for the first time to hepatology evaluation between January 2010 and June 2024. Treatment candidacy was evaluated according to both country-specific and WHO guidelines. We then estimated the difference in treatment candidacy between these two approaches.

Results and Discussion: A total of 719 patients with CHB had complete data available to evaluate treatment candidacy according to both guidelines. Of these patients, 67% were male with a median age of 52 years (IQR 38-62), and 8.1% presented with liver decompensation. Among patients, 64% were HBeAg-negative, median HBV DNA level was 43,000 IU/ml (IQR 633-110,000,000 IU/ml), median ALT was 41 U/L (IQR 23-99 U/L), and 47% had an APRI >0.5. According to country-specific guidelines, 57% (95% CI: 53-60) met criteria for treatment. Antiviral treatment was initiated in 84% of eligible patients, primarily with entecavir (63%) and tenofovir (32%). Compared to country-specific guidelines, the proportion of patients meeting treatment criteria under the WHO guidelines increased to 67% (95% CI: 63.8-70.6), resulting in a 10% (95% CI: 8-13) increase in treatment candidacy (table). Treatment expansion was higher in women (15%; 95% CI: 10-20) than in men (8%; 95% CI: 5-11).

Conclusions: According to WHO guidelines, a considerable proportion of CHB patients who do not meet country-specific criteria are eligible for antiviral therapy. Notably, treatment expansion is higher in women. Implementing WHO criteria can enhance treatment rates and advance efforts toward CHB elimination.

		Treatment candidacy by 2024 WHO guidelines		
		NO	YES	total
Treatment candidacy by country-specific guidelines	NO	235 (33%)	75 (10%)	310 (43%)
	YES	0 (0%)	409 (57%)	409 (57%)
	total	235 (33%)	484 (67%)	719 (100)

The absolute number and percentage of individuals for whom the criteria according to the local guidelines were concordant or discordant with the WHO treatment criteria are presented (n=719)

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OP- 4 EPIDEMIOLOGY OF PRIMARY BILIARY CHOLANGITIS IN LATIN AMERICA: PRELIMINARY RESULTS FROM ALLATIN COHORT

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Conflict of interest: No

Introduction and Objectives: Primary biliary cholangitis (PBC) may present differently depending on various factors such as ethnicity and genetic background. Latin America has a highly admixed population with a unique genetic diversity compared to other regions of the world. However, there is limited information available on the presentation and epidemiology of PBC in this region. This study aims to address the epidemiology of PBC in Latin America.

Patients / Materials and Methods: Ongoing retrospective, international, multicentric cohort study sponsored by ALEH that enrolls PBC patients from different countries in Latin America.

Results and Discussion: Data were accrued on 231 patients [Brazil (52%), Argentina (27.4%), Chile (10.8%), Costa Rica (4.5%), Cuba (3.6%), and Mexico (0.9%)], 92.1% female (mean age at diagnosis 50.5 years), 25.6% with cirrhosis at baseline. Overlap with autoimmune hepatitis was reported in 16.0% of cases. Most patients were symptomatic (67.9%) at diagnosis, with fatigue (41.9%) and pruritus (40.5%) being the main symptoms. Antimitochondrial antibodies (AMA) were positive in 70.8% and antinuclear antibodies (ANA) in 60.6%. Hashimoto thyroiditis (23.7%) and Sjogren syndrome (9.1%) were the most common extrahepatic autoimmune diseases associated with PBC. Mean baseline alkaline phosphatase, alanine aminotransferase, aspartate aminotransferase, and bilirubin levels were 445.9 (± 407), 89.8 (± 137.2), 37.6 (± 8.9) U/L, and 1.6 (± 3.1) mg/dL, respectively. Almost all patients (99.1%) were treated with ursodeoxycholic acid (UDCA). 67.4% achieved adequate response to UDCA according to the Toronto criteria and 32% normalized alkaline phosphatase at 12 months. Only 19.9% received second-line therapy, all with fibrates (89.1% bezafibrate, 8.7% ciprofibrate, 4.3% fenofibrate). Of the patients, 9% died, with 33% of deaths being liver-related, while 6% underwent liver transplantation. Hepatocellular carcinoma was diagnosed in 1.7% of patients.

Conclusions: In this unprecedented study, the epidemiology of PBC in Latin America appears similar to that in other parts of the world. However, lower rates of AMA positivity were observed, and most patients were still diagnosed with symptomatic disease. Second-line therapy options were limited to the availability of fibrates only.

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OP-5 ACUTE-ON-CHRONIC LIVER FAILURE (ACLF) CRITERIA IN ALCOHOL-ASSOCIATED HEPATITIS: IMPLICATIONS FOR LIVER TRANSPLANTATION

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Conflict of interest: No

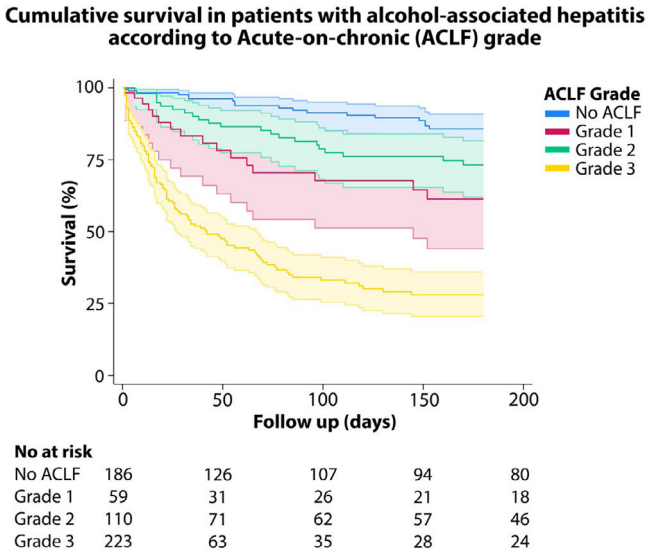
Introduction and Objectives: *Background:* Severe alcohol-associated hepatitis (AH) is considered a common precipitant of acute-on-chronic liver failure (ACLF). This study aims to characterize the association between AH and ACLF, focusing on mortality across different ACLF grades.

Patients / Materials and Methods: Multicenter prospective cohort study. We included patients admitted with severe AH between 2015–2022. The main outcome was mortality by ACLF grade during admission. The analysis included survival analysis using Cox regression. We adjusted multivariable models based on the main predictors of mortality observed in prior studies.

Results and Discussion: We prospectively included 646 patients from 24 centers and 8 countries. Age 49.9±11.7 years, 85.1% of men and 64.4% had a previous diagnosis of cirrhosis. Median MELD at admission was 25 [20-31] points, 46.5% of patients were treated with corticosteroids, and only 2.2% underwent liver transplantation (LT). Around 67.4% of patients fulfilled ACLF criteria: 10.1% grade 1, 19.2% grade 2, and 38.1% grade 3. The most frequent organ dysfunctions were 76.2% liver, 40.8% brain, 43.2% coagulation, 29.6% renal, 29.4% circulatory, and 18.9% lung failure. Survival at 180 days was 77.8% (95%CI: 72.1-82.6%) in those without ACLF grade 3 and 28.0% (95%CI: 20.5–36.0%) in those with ACLF grade 3 (p<0.001). In the multivariable model adjusted by age, body mass index, and MELD score, individuals with ACLF grade 3 had lower survival than those without ACLF (HR 2.67, 95%CI: 1.50–4.76; p=0.001). However, those with ACLF grade 1 (HR 1.50, 95%CI: 0.76–2.96; p=0.243) and grade 2 (HR 0.70, 95%CI: 0.31–1.56; p=0.380) were not associated with a higher mortality than those without ACLF.

Conclusions: Among patients with AH, only ACLF grade 3 is a major determinant of morbimortality. Thus, patients who fulfill ACLF

grade 3 should promptly be referred for early LT. The redefinition of ACLF in AH is essential for better quantifying the severity and determining therapeutic goals.



Figure

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OP-6 EVALUATION OF THE HEPATOPROTECTIVE ACTIVITY OF Flourensia cernua AND ITS IMPACT ON THE AEROBIC INTESTINAL MICROBIOTA IN A VALPROIC ACID-INDUCED DAMAGE MODEL IN WISTAR RATS

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Conflict of interest: No

Introduction and Objectives: Liver disease is a health problem that accounts for more than 2 million deaths per year worldwide. Valproic acid (VPA) has been used as a hepatotoxic agent in animal models to reproduce liver damage and test future therapeutic strategies. *Flourensia cernua* (Fc) is a plant that contains compounds with antioxidant activity, which may have a potential hepatoprotective effect.

The aim was to evaluate the hepatoprotective activity of *Flourensia cernua* and its impact on aerobic intestinal microbiota in a valproic acid-induced damage model in Wistar rats.

Patients / Materials and Methods: Seven groups were used (n=6): 1) Sham, 2) VPA, 500 mg/kg of VPA/d/7d i.p., 3) Fc extract at 200 mg/kg/d/3d p.o., 4) Fc extract at 400 mg/kg/d/3d p.o., 5) VPA + Fc 200 mg/kg/d/3d p.o., 6) VPA + Fc 400 mg/kg/d/3d p.o., 7) VPA + Silibinin 200 mg/kg/d/3d p.o.; subsequently, the animals were sacrificed, and samples of faeces, blood, and liver tissue were taken for aerobic intestinal microbiota(AIM), biochemical markers, oxidative stress, and histological analysis, respectively. Data was analyzed using Prism software (v. 10.0.0; GraphPad). $P<0.05$ was statistically significant.

Results and Discussion: VPA significantly increased ALT, AST and decreased total proteins vs. Sham. There was no alteration of transaminases at both tested doses of Fc extract. Only the VPA + Fc 400 mg/kg group showed a significant reduction in ALT, AST, SOD, and MDA vs. VPA, similar to silibinin. The histological analysis did not show significant changes in the study groups. MALDI-TOF primarily identified *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, *Escherichia coli*, and *Ochrobactrum intermedium* as AIM in the different study groups.

Conclusions: The hydroalcoholic extract of *F. cernua* did not show toxicity at the evaluated doses, showed a hepatoprotective effect at 400 mg/kg, and did not modify AIM. VPA decreased AIM, and *F. cernua* showed a trend to partially restore the normal bacterial count, similar to silibinin.

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OP-7 Further exploration of differences between lean and non-lean metabolic dysfunction-associated steatotic liver disease (MASLD) in Latino subjects: PNPLA3 frequency and lipidomic profiles

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Conflict of interest: Yes, Fondecyt # 1241450

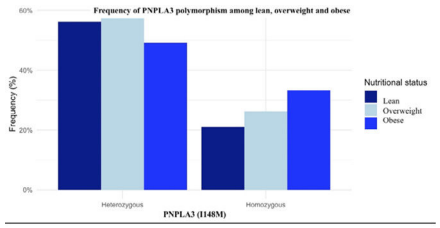
Introduction and Objectives: *Background:* There is limited information on features of lean MASLD patients in Latino subjects. We aimed to analyze the features of MASLD in Chilean patients with normal body mass index (BMI), the frequency of the rs738409 risk polymorphism (PNPLA3 I148M variant) and metabolomic profiles in Chilean individuals with MASLD.

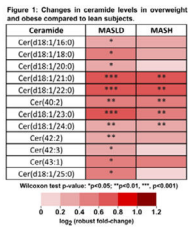
Patients / Materials and Methods: A cross-sectional study involving 181 randomly-selected participants diagnosed with MASLD from the prospective Maule Cohort (BMC Public Health. 2016;16:122). Participants were categorized into lean, overweight, and obese groups

based on their BMI. The presence of the rs738409 polymorphism was examined using Sanger sequencing. Metabolomics was assessed using UHPLC-MS in a separate group of biopsy-proven MASLD patients. Statistical analyses of clinical data and genotypes encompassed Fisher's exact test, Chi-square test, Kruskal-Wallis test.

Results and Discussion: 31.49% (57) were classified as thin, 36.3% (61) as overweight and 39.8% (67) as obese. Higher ALT levels (p=0.004) and body fat percentage in obese subjects were the only significant differences found among the groups. The allelic frequency of rs738409 was similar among groups 77.1%, 83.6% and 82.5% in lean, overweight, and obese subjects, respectively (n.s.). Circulating metabolome showed increased levels of ceramides in overweight and obese patients compared to lean subjects (p<0.001 for five different species). The increment is higher if all the MASLD patients were considered (Figure). Serum bile acids, particularly chenodeoxycholic acid (p<0.001) and glycochenodeoxycholic acid (p=0.024), were also increased. Lipidomic analysis also showed an increase of polyunsaturated diglyceride and triglyceride species in overweight and obese compared to lean subjects. Among them, most of the species included linoleic acid or alpha-linoleic acid in their esterified chains.

Conclusions: PNPLA3 risk allele was equally frequent in lean and non-lean Chilean MASLD patients. Metabolomic differences were found with non-lean subjects exhibiting higher levels of ceramides and bile acid species compared with lean patients. (Supported by Fondecyt # 1241450)





Frequency: percentage of individuals per category.
Heterozygous: CG mutation for PNPLA3 (rs738409).
Homozygous: CC or GG mutation PNPLA3 (rs738409).

PNPLA3 I148M frequency and metabolomic profiles in Chilean patients with MASLD

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OP-8 SECOND LINE THERAPY IN PATIENTS WITH PRIMARY BILIARY CHOLANGITIS AND INADECUATE RESPONSE: ARE WE CHOOSING THE RIGHT TARGET POPULATION FOR CLINICALS TRIALS?

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Conflict of interest: No

Introduction and Objectives: Identification of primary biliary cholangitis (PBC) patients who could benefit from second line therapy is uncertain. Most trials rely on 12 month UDCA response assessed by POISE criteria.

Evaluate eligible patients and identify epidemiological-clinical and histological findings that may adversely influence response.

Patients / Materials and Methods: Among 614 patients with established diagnosis of PBC (Jan/16 and Dec/23) 279 were unable to normalize alkaline phosphatase (ALP) and BT after 12 months of UDCA. 107/279 (38.3 %) fulfilled elegibility criteria for second line trials (ALP >1.67, bilirubin <2 and non significant portal hypertension) were analyzed. Fibrosis, bile duct loss, cholangitic and hepatitis activity were obtained in 92/107 patients (Scheuer and Nakanuma scores). All samples were stained with cytokeratin 7. Elastography was done in all patients.

Results and Discussion: Characteristics of patients who fulfilled POISE criteria are described in Table 1. Mean MELD was higher in cirrhotic (9.0vs7.1, p<.001) and correlated with liver events (9.6vs7.0, p<.001). 43/92 patients had moderate-severe ductopenia in histological samples, and it was significantly more frequent in <45 years (66%vs32%, p.008). Moderate-severe portal inflammation with interface hepatitis and lobular spilling was observed in 52/92 samples (56.5%), irrespective of age and correlated with fibrosis. ALP was significantly higher in patients with ductopenia (437.9±207.8vs319.2±162.0, p.01). Elastography correlated with cirrhosis and liver events (10.4vs22.9, p<0.001) but not with inflammation or ductopenia.

Conclusions: A significant proportion of patients unresponsive to UDCA were not eligible for second line trials. Poise criteria eligibility was associated with the presence of ductopenia and advanced fibrosis, particularly in young patients. The presence of moderate to severe portal inflammation is suggestive of ongoing disease activity. Elastography and MELD score correlate with cirrhosis and development of liver events. These findings suggest that we are selecting for second line trials a significant proportion of patients with adverse findings for response. Adverse histological findings might suggest early second line intervention.

Baseline characteristics	Patients (n=92)
Age, mean (years)	55.9 (± 11.8)
Female, num (%)	93 (22.4)
< 45 years, num (%)	22 (22.4%)
Associated autoimmune disease, num (%)	16 (17.3)
Pruritus, num (%)	51 (55.1)
ALP, mean (UI/L)	366.7 (± 192.5)
GGT, mean (UI/L)	366.6 (± 326.2)
ALT, mean (UI/L)	64.7 (± 43.6)
TB, mean (mg/dL)	1.7 (± 4.6)
Elastography >9.6 kPa, num (%)	42 (50%)
MELD score, mean	7.4 (± 1.8)
Cirrhotic, num (%)	17 (16)
Moderate to severe portal inflammation with interface hepatitis and lobular spilling, num (%)	52 (56.5)
AMA, num (%)	80 (86)
Sp100, num (%)	9 (9.7)
GP210, num (%)	8 (8.6)
Under UDCA treatment, num (%)	89 (96.7)

Abbreviations: ALP: alkaline phosfatase, gGT: gamma-glutamyltransferase, ALT: alanine-transferase, TB: total bilirrubine, AMA: antimitochondrial antibody, UDCA ursodeoxycholic acid.

Characteristics of non responders patients

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OP-9 Assessing the Burden and Budget Impacts of HCV Elimination Strategies in Uruguay Using Decision-Analytic Modeling

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Conflict of interest: Yes, Coalition For Global Hepatitis Elimination support the project

Introduction and Objectives: Background: WHO aims for HCV elimination by 2030, targeting a 80% reduction in incidence and a 65% reduction in mortality, with 90% diagnosed and 80% treatment coverage compared to 2015. Uruguay, with a population of 3.4 million, has low HCV prevalence and universal treatment access, but testing and treatment rates are low. Objective: To assess the feasibility of HCV elimination and compare the burden and budget impacts of various testing strategies in Uruguay.

Patients / Materials and Methods: Methods: Disease burden and budget impact projections were generated using a decision-analytic model, The Hep C Elimination Tool, developed by Massachusetts General Hospital with support from the Coalition for Global Hepatitis Elimination and calibrated with Uruguayan parameters.

Results and Discussion: With 100% follow-up for confirmatory testing and treatment initiation, 42 strategies meet three elimination goals by 2030.

The strategy with the greatest death reductionuses a 30% annual screening rate and 80% treatment rate, requiring 3,220,000 people to be tested (800,000/annual from 2024-2026) and 20,000 treated (5,000/annual from 2024-2026) by 2030. This achieves 91% diagnosis and treatment coverage, with reductions in incidence of 89%, prevalence of 91%, decompensated cirrhosis of 74%, HCC of 46% and mortality of 56%, costing $121.63 million from 2022-2050.

The most gradual strategy uses a 15% annual screening rate and 70% treatment rate, requiring 3,190,000 people to be tested (400,000/annual from 2023-2029) and 19,035 treated (2,500/annual from 2024-2029) by 2030. This achieves 90% diagnosis and 85% treatment coverage, with reductions in incidence of 82%, prevalence of 85%, decompensated cirrhosis of 66%, HCC of 34% and mortality of 30%, costing $132.92 million from 2022-2050.

Conclusions: Uruguay can achieve WHO HCV elimination incidence goal and diagnosis and treatment targets by 2030. Mathematical modeling can inform policymakers about the impact of different interventions on HCV burden, supporting informed and cost-effective decision-making.

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OP- 10 - NON-STEROIDAL ANTI-INFLAMMATORY DRUGS: A COMPARATIVE ANALYSIS BETWEEN THE SPANISH AND LATINDILI NETWORKS

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Conflict of interest: No

Introduction and Objectives: Background: Non-steroidal anti-inflammatory drugs (NSAIDs) represent a frequent cause of drug-induced liver injury (DILI). Aim: To compare demographics, clinical characteristics and outcomes of NSAIDs-induced liver injury between the LATINDILI and the Spanish DILI Registries.

Patients / Materials and Methods: We analyzed 49 out of 468 LATINDILI cases (10,5%) and 82 out of 1254 Spanish DILI Registry cases (14%) induced by NSAIDs.

Results and Discussion: In Spanish DILI cases, ibuprofen (33%), diclofenac (18%) and nimesulide (11%), were the most frequent culprit drugs, while diclofenac (33%), nimesulide (29%), ibuprofen (18%) and etoricoxib (10%) were the most common offending agents in LATINDILI cases. Surprisingly, etoricoxib was far more frequent in LATINDILI (10%) than in the Spanish DILI Registry (1.2%). Females predominated in Latin American cases (73%) compared to Spanish cases (47%) (p=0.011). Also, there was a trend towards a higher hospitalization rate in Spanish cases (63%) compared to LATINDILI cases (43%). (p=0.057). Notably, Hy's law showed to have drug-specific predictive value, with ibuprofen, nimesulide and etoricoxib associated with fatal outcomes, whereas DILI due to other AINEs did not have a worse outcome. We separately analyzed cases due to the most frequent culprits in each registry (ibuprofen and diclofenac). Notably, one patient died and one patient underwent liver transplantation linked to ibuprofen in the Spanish DILI Registry, while no death nor liver transplants were recorded in the LATINDILI due to ibuprofen. Likewise, no fatal outcome related to diclofenac were observed in these registries

Conclusions: Differences in the incidence of DILI due to NSAIDs may reflect different prescribing patterns and public health policies in distinct countries. Ibuprofen can cause serious liver damage, and different doses in the OTC market and genetic factors may explain the differences in frequencies between registries. Hy's law prognostic performance varies between NSAIDs and is highest for nimesulide and ibuprofen. Etoricoxib DILI needs further investigation.

Table. Comparison of clinical presentation of DILI episode according to the most frequent individual AINEs registered in the Latin American DILI (LATINDILI) Network and the Spanish DILI Registry (at least 5 cases registered).

Culprit agents	n (%)	Age (y)	Pattern of DILI, n (%)			Female sex n (%)	Eosinophilia n (%)	Lymphopenia n (%)	Hy's law n (%)	True Hy's law (death/liver transplant) n (%)	nR-based Hy's law n (%)	True nR-based Hy´s law (death/liver transplant) n (%)
			Hep	Chol	Mix							
Spanish DILI Registry												
Ibuprofen	27 (33)	50±18	13 (48)	3 (11)	11 (41)	13 (48)	5 (20)	5 (22)	5 (20)	1 (20)	6 (24)	2 (33)
Diclofenac	15 (18)	60±20	14 (93)	1 (6.7)	0 (0)	6 (40)	1 (7.7)	2 (14)	7 (54)	0 (0)	7 (54)	0 (0)
Nimesulide	9 (11)	58±14	7 (78)	2 (22)	0 (0)	8 (89)	3 (33)	2 (25)	7 (78)	1 (14)	7 (78)	1 (14)
LATINDILI Network												
Diclofenac	16 (33)	55±11	11 (69)	5 (31)	0 (0)	10 (63)	2 (13)	3 (19)	6 (38)	0 (0)	6 (38)	0 (0)
Nimesulide	14 (29)	57±16	8 (57)	0 (0)	6 (43)	12 (86)	2 (14)	1 (7.1)	6 (50)	3 (50)	7 (58)	3 (43)
Ibuprofen	9 (18)	44±14	8 (89)	1 (11)	0 (0)	6 (67)	1 (13)	1 (13)	4 (50)	0 (0)	4 (50)	0 (0)
Etoricoxib	5 (10)	45±19	5 (100)	0 (0)	0 (0)	4 (80)	0 (0)	1 (20)	4 (80)	1 (25)	4 (80)	1 (25)

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OP- 11 Detection Strategy for Patients with Viral Hepatitis Using Laboratory Records of Blood Samples for HBsAg and HCV Antibodies: PANRELINK

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Conflict of interest: No

Introduction and Objectives: Patients diagnosed with viral hepatitis often fail to follow up, a problem exacerbated by the pandemic. The "relink" strategy aims to reconnect these patients to ensure they receive the necessary follow-up and treatment.

The objective of our work was to generate a PANRELINK program based on the analysis of blood samples tested for HBsAg and anti-HCV antibodies from the reference laboratory database at Hospital El Cruce and to implement a relink strategy for patients with positive results.

Patients / Materials and Methods: We analyzed the results of blood samples tested for HBsAg and HCV antibodies by chemiluminescence, conducted at the reference laboratory from 2012 to 2022. Samples were stratified by origin (primary care centers [CAP] vs. medium and high complexity hospitals [MHC]). Statistical analyses chi-squared and t-tests.

Results and Discussion: A total of 108,261 blood samples were tested for HBsAg, with a test positivity rate (TPR) of 0.28% (306/108,261). For HCV, 106,917 samples were tested, with a TPR of 1.09% (1,162/106,917). When stratified by sample origin, TPR for HBsAg was 0.11% (101/86,609) in CAP and 0.96% (205/21,652) in MHC ($p<0.001$). For HCV, TPR was 0.43% (384/88,625) in CAP and 4.34% (778/17,130) in MHC ($p<0.001$). Among HBsAg-positive patients, 11% (34/306) were already in treatment at the time of relink, 16% (49/306) had died, 11% (33/306) were acute cases, and 52% (163/306) were potential candidates for relink. Among HCV-positive patients, 21% (242/1,162) had been treated, 25% (289/1,162) had died, 6% (67/1,162) were in treatment at the time of relink, 2% (26/1,162) were false positives, and 46% (538/1,162) were potential candidates for relink. In HCV-positive patients, a relink program was implemented. The phone contact rate with patients for reconnection was 16% (86/538) on the first call. The low contact rate was due to phone number changes. The attendance rate was 70% (60/86).

Conclusions: The study reveals that a significant proportion of patients with viral hepatitis do not receive adequate follow-up, highlighting the need for effective reconnection strategies. The PANRELINK strategy was effective in identifying patients from laboratory records. This PANRELINK modality can serve as a replicable high-volume model in other health contexts, improving long-term health outcomes and reducing the disease burden. Addressing communication barriers, such as phone number changes, is crucial to improve contact and attendance rates in future reconnection initiatives.

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O-12 DECIPHERING WILSON'S DISEASE IN COSTA RICA: AN INNOVATIVE GENETIC APPROACH

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Conflict of interest: No

Introduction and Objectives: In a recent article from the American Journal of Human Genetics, the genetic behavior of variants associated with Wilson's Disease (WD) is analyzed, alongside the worldwide discovery of the responsible gene. The variant c.3809A>G (p.Asn1270Ser) is highlighted, with a prevalence of 61% in Costa Rica, differing from that observed in Europe and the United States, and originally described in Sicily. The Genetics Center of the National Children's Hospital has been instrumental in identifying a specific genetic pattern among Costa Ricans with WD. Additionally, a novel worldwide variant in heterozygosity has been discovered in Nicaraguan patients, solidifying Costa Rica as a country with a high incidence of WD and significant contributions to the genetic study of the disease, which has documented over 1161 pathogenic variants. Objective: To analyze and describe the genetic spectrum of these variants in Costa Rica over the past two years, aiming to establish a comprehensive genetic map in a population with a high incidence of WD.

Patients / Materials and Methods: Molecular Sequencing (Sanger NGS) for molecular confirmation, as well as MLPA techniques and Copy Number Variations (CNVs) analysis.

Results and Discussion: During the period (2022-2023), 86 patients with WD variants were identified, including 19 homozygotes, 11 compound heterozygotes, and 56 carriers. There was a significant gender distribution, with a female predominance among homozygotes (58%) and male predominance among compound heterozygotes (64%). The ages of the patients varied widely, with an average age of 20 years for homozygotes and 21 years for compound heterozygotes. Multiple genetic variants were identified in genes such as ATP7B, including p.N1270S and others.

Conclusions: The importance of genetic research in understanding complex hereditary diseases like WD is underscored. The high prevalence of the c.3809A>G variant in Costa Rica highlights regional genetic diversity and the need to adapt diagnostic and treatment strategies to the specific genetic characteristics of each population.

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OP-13 CHOLANGIOCARCINOMA IN LATIN AMERICA: A MULTICENTER OBSERVATIONAL STUDY ALERTS ON ETHNICAL DISPARITIES IN TUMOR PRESENTATION AND OUTCOME

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Conflict of interest: No

Introduction and Objectives: Cholangiocarcinoma (CCA) represents a global health challenge, with rising incidence and mortality

rates. This study aimed to elucidate the clinical course and practices of CCA in Latin America.

Patients / Materials and Methods: This observational cohort study investigated individuals diagnosed with CCA between 2010-2023 in five referral centers across Latin America. Demographic, biochemical, and clinical data were analyzed.

Results and Discussion: A total of 309 patients were enrolled, demonstrating a balanced distribution of CCA subtypes (intrahepatic, perihilar, and distal), with Hispanics and Caucasians as the predominant ethnic groups, followed by Africans. Major risk factors identified included age, diabetes, obesity, MASLD, bile duct stones, and cholecystitis. Disparities in overweight/obesity prevalence were noted among CCA subtypes and ethnicities, with higher rates in extrahepatic CCAs and among Hispanics and Caucasians. At diagnosis, 72% of patients had ECOG-PS scores of 0-1, with disease presentations ranging from localized (47%) to locally advanced (19%) and metastatic (34%). Patients who did not receive any anti-cancer therapy exhibited a median survival of 2.3 months. Survival rates significantly improved across treatment modalities, with surgery yielding the longest (34 months), followed by chemotherapy (8 months). Notably, Africans presented with worse ECOG-PS scores and more advanced disease, while Hispanics were less frequently treated with chemotherapy, contributing to lower survival rates.

Conclusions: The high prevalence of late-stage CCA diagnosis in Latin America, particularly among Africans, alongside a substantial proportion of Hispanic patients not receiving chemotherapy, underscores a dismal prognosis for patients. These findings highlight structural challenges in cancer screening and healthcare access among diverse ethnic backgrounds and lower socioeconomic statuses in the region. Urgent measures are warranted, including identifying preventable risk factors, increasing awareness among high-risk populations, and establishing equitable health coverage to address these disparities.

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OP- 14 ENHANCED MUSCLE MASS MITIGATES MASLD IN MYOSTATIN KNOCKOUT MICE WITHOUT IMPACTING EXERCISE PERFORMANCE

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Conflict of interest: No

Introduction and Objectives: Metabolic Dysfunction-Associated Steatotic Liver Disease (MASLD) is linked to sarcopenia and exacerbated by obesity. Individuals with higher relative skeletal muscle mass are protected against MASLD or more likely to see its resolution, regardless of demographic and health-related factors. This study examines the effects of muscle mass enhancement, independent of exercise, on MASLD progression using myostatin knockout (Mstn-KO) mice, which are genetically modified to exhibit increased muscle mass due to myostatin deficiency.

Patients / Materials and Methods: 11-week-old Mstn-KO mice and their wild-type counterparts were fed a Western diet (WD) for 24 weeks to induce MASLD. Parameters assessed included liver steatosis through histological analysis, muscle mass via MRI and histological cross-sectional area, exercise performance through treadmill tests, and muscle strength measured by electrophysiology.

Results and Discussion: Mstn-KO mice showed significantly reduced liver steatosis (-20%) and increased muscle mass (+30%) compared to wild-type controls. Additionally, liver pro-inflammatory cytokines such as IL-1β and TNF-α were decreased in Mstn-KO mice, along with lower expression of lipogenesis-related genes, indicating a protective effect against MASLD progression. Histological assessments showed less hepatic lipid accumulation and inflammation in Mstn-KO mice, correlating with decreased myosteatosis and an enhanced cross-sectional area of muscle fibers. Muscle mass was measured by bioimpedance analysis, and paravertebral muscle area was evaluated using MRI. Electrophysiological measures indicated increased tetanic strength in Mstn-KO mice. Despite these physiological improvements, treadmill test results did not show significant differences in exercise performance between Mstn-KO and wild-type groups, suggesting that muscle mass improvement did not translate into enhanced exercise capacity. These results indicate that Mstn-KO mice are protected against muscle atrophy and MASLD progression.

Conclusions: Our findings suggest that increased muscle mass, independent of exercise performance, can significantly ameliorate MASLD histology. Mstn-KO mice serve as a valuable model for exploring muscle-liver crosstalk in liver diseases, indicating potential treatment pathways that do not rely on exercise enhancement.

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OP- 15 OUTCOME OF PREGNANCIES IN A SERIES OF WILSON DISEASE PATIENTS

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Conflict of interest: No

Introduction and Objectives: Wilson disease (WD) is an inherited disease that mainly affects the liver and brain due to copper overload. Pregnancy in WD is a challenging situation. Our aim was to analyze the clinical aspects and outcomes of pregnancies in WD.

Patients / Materials and Methods: In a series of 289 WD cases (1963-2024), we reviewed the medical records of 123 women, 26 of whom became pregnant at least once (1-5). A total of 52 pregnancies were recorded, but 3 were excluded because data on the conceptus were missing. Pregnancy outcomes were correlated with disease severity and anti-copper medication. Hepatic and/or neuropsychiatric manifestations were categorized as 1) asymptomatic/mild or 2) moderate/severe. Pregnancy outcomes were considered 1) successful

if the preterm/term infant survived the neonatal period or 2) unsuccessful if there was a miscarriage/fetal demise/perinatal death. Drug regimen during pregnancy were 1) penicillamine (DPA), 2) zinc (Zn) or 3) DPA/Zn if the patient had switched therapy for any reason. Statistical analysis was carried out using Fisher's test, with significance level at $p<0.05$.

Results and Discussion: Of the 49 pregnancies analyzed, 2 (4.1%) ended in maternal death and 17/49 (34.7%) in miscarriage/fetal or neonatal death. The Table below presents the results. The analysis of medication and pregnancy outcomes combined deteriorating and stable cases. There was a correlation between successful births and asymptomatic patients who had given birth before the onset of WD ($p<0.001$). In stable patients, successful births were slightly above significance ($p=0.062$). There was no significant difference among the outcomes in relation to the medication taken.

Conclusions: Pregnancy in symptomatic WD is potentially harmful to mother and conceptus. Successful births were significantly associated with pregnancies before the onset of WD symptoms, but were also possible with stable disease under treatment. Anti-copper drug regimen was not associated with pregnancy outcome.

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OP-16 FREQUENCY OF ATP7B GENE MUTATIONS IN A BRAZILIAN COHORT OF PATIENTS WITH WILSON'S DISEASE

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Conflict of interest: No

Introduction and Objectives: Wilson's disease (WD) is a rare genetic disease presenting more than 900 mutations in the ATP7B gene. The knowledge of the regional distribution of these mutations can improve the diagnosis of WD. We aimed to evaluate the frequency of ATP7B mutations in a WD Brazilian cohort and the association with disease phenotypes.

Patients / Materials and Methods: We performed molecular analysis by NGS of the 21 exons of ATP7B (Mendelics Genomic Analysis Laboratory) in patients with diagnosis of WD and in first-degree relatives undergoing WD investigation, followed in a single hepatology center. Demographic data and predominant type of WD presentation were assessed.

Results and Discussion: 28 patients were included (60% female; mean age 25 $\pm$ 13 years): 25 had an established diagnosis of WD and 3 were heterozygous relatives without disease. The phenotypes of WD were as follows: 15/25 (60%) with exclusively hepatic manifestation, 8/25 (32%) combination of hepatic and neurological, 1/25 (4.0%) isolated neurological manifestations and 1/25 (4.0%) were pre-symptomatic. We identified 17 ATP7B gene distinct mutations. The pathogenic variants c.3402delC, c.2123T>C and c.3818C>T presented the highest allele frequency, respectively, 25.5%, 15.7% and 15.7%. The majority (80.0%) presented the mutation in compound heterozygosity, 12.0% in homozygosity and 8.0% in simple heterozygosity. The c.2145C>T, c.1552T>C and c.3188C>T variants were considered of undetermined significance; c.2072G>T and c.3071_3072delTG variants were considered probably pathogenic. Regarding the disease phenotype, patients with mutations c.3402delC CG>C and c.2123T>C presented equal distribution of isolated hepatic or hepatic plus neurological phenotype, while c.3818C>T mutation was associated with predominantly hepatic phenotype. Presence of exon 2 deletion was associated with severe neurological manifestations.

Conclusions: The mutations c.3402delC, c.2123T>C and c.3818C>T were the most prevalent. The c.2145C>T and c.3188C>T variants, considered of undetermined significance, were found in confirmed cases of WD. An important heterogeneity of the ATP7B genotype associated with variation in phenotypic presentation was observed.

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P- 1 DEVELOPMENT OF LENTIVIRAL VECTORS FOR INHIBITION OF HEPATITIS B VIRUS, VIA SMALL INTERFERING RNA

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Conflict of interest: No

Introduction and Objectives: INTRODUCTION: Chronic hepatitis B represents a significant global health challenge. Current treatments often fail due to the persistence of HBV DNA as covalently closed circular DNA or integrated into the host genome, leading to viral reactivation. RNA interference (RNAi) emerges as a promising approach for treating chronic hepatitis through post-transcriptional gene silencing. OBJECTIVE: To design and evaluate the efficacy of RNAi lentiviral vectors targeting key HBV proteins (HBsAg, HBcAg, HBeAg) and pregenomic RNA (pgRNA) for silencing.

Patients / Materials and Methods: Silencing vectors were designed to target overlapping open reading frames, allowing simultaneous silencing of multiple viral proteins and pgRNA with a single RNAi construct. Three vector candidates (siHBV-1 to 3) underwent rigorous in silico testing to minimize off-target effects, evaluating stability and secondary structures. Lentiviral vector production was assessed using flow cytometry to detect green fluorescent protein expression in cell culture. Huh7 cells were transfected with 1 μg of purified HBV genotype A circular monomers, followed by infection

with the first lentiviral candidate (siHBV-1), targeting S/Pol genes of HBV (108 TU/mL), three days later. Quantification of HBV proteins using chemiluminescence and HBV DNA using quantitative PCR (qPCR) was performed throughout the post-transfection period.

Results and Discussion: Effective silencing of HBsAg expression was observed in cells infected with siHBV-1, with undetectable levels from the third day post-infection compared to untreated controls ($p<0.002$). Furthermore, HBV DNA was undetectable by qPCR, indicating successful silencing of HBV genotype A in vitro. The production of lentiviral candidates siHBV-2 and siHBV-3 is currently under evaluation. Flow cytometry will be used to determine the transduction rates in Huh7 cells once the tests are completed. Future investigations will explore combinations of these three siHBV vectors to optimize HBV silencing.

Conclusions: Lentiviral vector-mediated RNAi offers a promising approach for sustained suppression of HBV replication and gene expression, potentially promoting HBV clearance in chronic carriers.

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P-2 RECAM VS. RUCAM: ADVANCING THE DIAGNOSIS OF IDIOSYNCRATIC DILI WITH A REVISED ELECTRONIC APPROACH.

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Conflict of interest: No

Introduction and Objectives: Background: RUCAM has been a cornerstone in the causality assessment of DILI for the last three decades. However, the emergence of the Revised Electronic Causality Assessment Method (RECAM) promises enhanced accuracy and efficiency. Aim: to compare both scales and assess RECAM's performance in a prospective DILI registry.

Patients / Materials and Methods: The analysis was conducted on well-vetted DILI cases from a prospective multicenter cohort from a single country, in which RUCAM initially assessed causality. After applying the RECAM, the results and significant causes of discrepancy were analyzed

Results and Discussion: among 180 DILI-suspicions induced by conventional agents, RUCAM excluded 3.8% of cases and classified 38.8% as highly probable, 41.6% as probable, and 15.5% as possible. RECAM upgraded 66 cases (36.7%), downgraded 42 (23.3%), and left 72 (40%) unchanged. RECAM upgraded seven cases excluded by RUCAM to probable (3) or possible (4) and excluded one case considered probable by RUCAM. The figure shows the flow of classifications from RUCAM to RECAM. Variability in results between the RECAM and RUCAM was mainly due to differences in the domains assessing latency, particularly prolonged onsets (>60 days after drug initiation or >30 days after cessation accounted for 42.5% of differences), and the lack of Virus E serology as a determining factor.

Conclusions: RECAM proved to be a straightforward tool for evaluating DILI causality in clinical practice, offering improved objectivity when used prospectively and with all critical information available (particularly hepatitis virus markers). However, it is crucial to remain vigilant and pay particular attention to drugs with a long latency period.

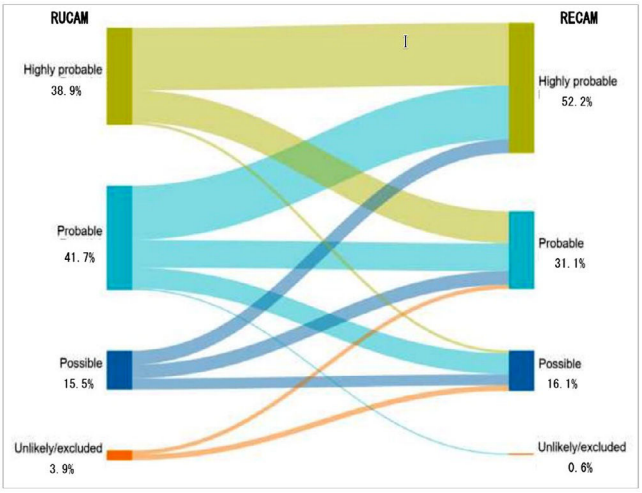

Figure: The flow of classifications from RUCAM to RECAM shows shifts into higher likelihood categories of DILI and how the revised method reclassifies cases initially categorized by the previous method.

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P-3 FACTORS ASSOCIATED WITH AN IMPROVEMENT IN SEQUENTIAL LIVER STIFFNESS MEASURES BY TRANSIENT ELASTOGRAPHY IN MASLD PATIENTS WITH PREDIABETES AND TYPE 2 DIABETES.

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Conflict of interest: No

Introduction and Objectives: There is increasing evidence that a ≥20% decrease in sequential liver stiffness measurements (ΔLSM) by transient elastography (TE) is associated with a lower risk of long-term liver-related outcomes and mortality in patients with MASLD. Objective: We aimed to evaluate factors associated with ≥20% decrease in ΔLSM in MASLD patients with prediabetes (Pre-DM) and type 2 diabetes (T2DM).

Patients / Materials and Methods: MASLD adults with PreDM or T2DM with two consecutive reliable LSMs by transient TE (Fibroscan Touch 502) were included. Clinical, biochemical and elastography data were collected at baseline and follow-up. PNPLA3 (rs738409 C>G) genotypes were determined. A multivariate logistic regression analysis was performed to evaluate the variables independently associated with ≥20% decrease in ΔLSM. All data were analyzed using the statistical package SPSS (vs.24.0,IBM), a p-value < 0.05 was regarded as significant.

Results and Discussion: 294 patients were included (70% female, 60 ± 10 y, 63% with BMI ≥ 30 kg/m2): 14% had PreDM and 86% T2DM. Genotyping of PNPLA3 was identified as CC in 46% and CG+GG in 54%. At the first TE, 10% had LSM > 15kPa [median 7.0 kPa (5.1-10.1)]. Overall, 31% experienced a ≥20% decrease in ΔLSM on a 38 (26-52) months interval.

On logistic multivariate regression, the variables independently associated with a ≥20% decrease in ΔLSM were the genotype CC of PNPLA3 (OR 1.71/ 95%CI 1.03-2.85; p=0.038) and final glycated hemoglobin ≤7% (OR 1.75/ 95%CI 1.04-2.94; p=0.034) . Statin use (OR 1.78/ 95%CI 0.99-3.18; p=0.05) had a borderline statistical significance.

Conclusions: A clinically significant improvement in LSM is associated with a better glycemic control and the presence of wild-type PNPLA3CC in MASLD patients with PreDM or T2DM. Future prospective studies are needed to determine whether genetic predisposition and factors of clinical importance may confer a reduction in the risk of liver-related outcomes in these high-risk populations.

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P-4 HYPOTHERMIC OXYGENATED PERFUSION USING AN ECMO DEVICE IN LIVER TRANSPLANTATION: AN ANALYSIS OF THE FIRST 100 CASES AT A CHILEAN PUBLIC HOSPITAL

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Conflict of interest: No

Introduction and Objectives: Hypothermic machine perfusion using ECMO devices has emerged as a promising technique to enhance the viability of marginal liver grafts. This study aims to present the clinical outcomes of a series of 100 liver grafts subjected to this advanced preservation methods.

Patients / Materials and Methods: A prospective analysis between October 2022 and May 2024 was conducted on 100 consecutive liver perfusion cases involving hypothermic perfusion with an ECMO device, followed by a subgroup comparison of regular and marginal grafts. Post-transplantation, key outcomes such as liver functionality, early complications, and overall survival were monitored in all patients. Statistical analyses included T-tests and Fisher's exact tests to evaluate differences in means and frequencies between groups.

Results and Discussion: Three grafts were discarded due to severe steatosis. The patient cohort had a mean MELD Na score of 29.0 ± 8.72. The one-year survival rate was 82.7%. The major complication was infectious, observed in 57.7% of cases. The mean ICU and hospital stay was 10.98 ± 14.29 and 28.24 ± 24.78 days, respectively. Eighty-one liver grafts were categorized as regular (83.5%) and 16 as marginal (16.4%). Vascular complications were significantly more frequent in marginal grafts compared to regular grafts. No statistically significant differences in other clinical outcomes were observed between the regular and marginal graft groups (Table 1).

Conclusions: The findings suggest that hypothermic perfusion using ECMO devices facilitates the safe utilization of marginal liver grafts. While the overall clinical outcomes are promising and comparable to international standards, the high incidence of infectious complications and extended ICU and hospital stays highlight significant areas for improvement. These challenges appear to be more related to the severity of the patient's conditions, as indicated by the elevated average MELD Na score, rather than the quality of the grafts. Therefore, hypothermic perfusion represents a viable strategy for expanding liver graft selection criteria in transplantation.

Table 1: Clinical outcomes

Recipient characteristics	All (n=97)	Regular (n=81)	ECD (n=16)	P value
Age (y)	54.38 ± 11.65	54.51 ± 11.52	53.75 ± 12.68	0.813
BAR	10.88 ± 4.75	10.76 ± 4.82	11.39 ± 4.53	0.617
MELD-Na	29.0 ± 8.72	28.90 ± 8.90	29. 50 ± 8.0	0.803
Recipient (Follow up 3m)				
Transaminase peak AST (UI/L)	1740 ± 3279	1503 ± 2754	2942 ± 5151	0.109
Transaminase 7-day AST (UI/L)	145.6 ± 581.3	162.7 ± 633.0	55.93 ± 41.62	0.517
INR 7-day	1.33 ± 0.70	1.35 ± 0.76	1.24 ± 0.14	0.591
Bili 7-day (mg/dL)	3.86 ± 4.38	4.22 ± 4.67	1.94 ± 1.24	0.064
ICU stay (d)	10.98 ± 14.29	10.62 ± 11.54	13.00 ± 25.30	0.568
Hospital stays (d)	28.24 ± 24.78	28.13 ± 25.71	28.79 ± 20.42	0.928
SPR	18 (18.56%)	13 (16.04%)	5 (31.25%)	0.168
EAD	25 (25.77%)	19 (23.45%)	6 (37.5%)	0.346
PNF	1 (1.03%)	1 (1.23%)	0	>0.999
Complications > CD IIIa	54 (55.67)	44 (54.32%)	10 (62.5%)	0.593
Relaparotomy	16 (16.49%)	13 (16.04%)	3 (18.75%)	0.724
Vascular complications	11 (11.3%)	6 (7.40%)	5 (31.25%)	**0.016**
Anastomotic strictures	10 (10.3%)	8 (9.87%)	2 (12.5%)	0.668
Non anastomotic strictures	0	0	0	-
Infections	56 (57.7%)	48 (59.25%)	8 (50%)	0.583
Neurological	26 (26.8%)	21 (25.92%)	5 (31.25%)	0.758
Hemorrhagic	11 (11.3%)	7 (8.64%)	4 (25%)	0.080
Others	39 (40.2%)	33 (40.74%)	6 (37.5%)	>0.999
Acute reject	7 (7.2%)	6 (7.40%)	1 (6.25%)	>0.999
Death	17 (17.52%)	15 (18.51%)	2 (12.5%)	0.729

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P-5 A LARGE REGISTER OF LIVER STIFFNESS AND STEATOSIS BY TRANSIENT ELASTOGRAPHY IN METABOLIC ASSOCIATED STEATOTIC LIVER DISEASE – THE FIRST STEP FOR AN ADEQUATE PATIENT ALLOCATION

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Conflict of interest: No

Introduction and Objectives: In Metabolically Associated Steatotic Liver Disease (MASLD), transient elastography (TE) is the best validated point-of-care tool to assess liver fibrosis. Outpatients without advanced fibrosis might be managed at low-complexity centers, aiming to increase the availability of experts to manage patients with advanced fibrosis. We sought to evaluate the prevalence of advanced fibrosis among MASLD outpatients from a university center compared to those from lower complexity settings.

Patients / Materials and Methods: This was a sectional study of MASLD outpatients at a university hospital (G1) and those followed up at lower complexity settings such as primary care or medium complexity clinics(G2). All patients performed TE with CAP by Fibroscan Touch 502 (Echosens, Fr) from Jan-2015 to Mar-2024. TE and CAP results were compared between the two groups and the groups' prevalence of individuals with TE<8 kPa and TE≥12 kPa.

Results and Discussion: 4058 exams were registered (70% women, mean age 60 ±12 yrs, BMI 32.7 ± 6.5). Outpatients from G1 were older (p< 0.001) and comprised 80% of included patients. Although G1 had higher CAP measures [298Db/m (258-336) vs

293 Db/m (249-334);p=0.034], both groups seemed similar regarding steatosis severity. Surprisingly, liver stiffness between G1 and G2 was similar [6,4 kPa (4.9-8.1) vs 6.3 kPa (4.9-9.1);p=0.49]. Advanced fibrosis (TE< 8.0 kPa) was discarded in 66.7% of G1 and 69,2% of G2 (p=0.18). Overall, 15% had advanced fibrosis with a trend to a higher prevalence in G1 (16.1% vs 13.5%; p=0.08).

Conclusions: Although outpatients from lower complexity settings were younger, advanced fibrosis prevalence was similar and not neglectable compared to high complexity center outpatients. Screening MASLD patients in lower-complexity settings increases the chance of identifying younger individuals with advanced liver disease who need expert's evaluation to prevent liver-related complications. Additionally, public policies might be implemented to reallocate patients with lower and severe diseases accordingly.

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P-6 CORRELATION BETWEEN CONNECTIVE TISSUE GROWTH FACTOR (CTGF) AND FIBROSIS DEGREE IN PATIENTS WITH PRIMARY BILIARY CHOLANGITIS (PBC)

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Conflict of interest: No

Introduction and Objectives: Connective Tissue Growth Factor (CTGF) is a multifunctional protein recognized as an important mediator in fibrogenic pathways in liver diseases. Primary Biliary Cholangitis (PBC) is a chronic autoimmune disease that affects the bile ducts. It is characterized by inflammation and progressive fibrosis of the bile ducts, which can lead to stenosis, cholestasis, and long-term liver damage.

The objective of this study is to establish the correlation between serum levels of Connective Tissue Growth Factor (CTGF), measured using Enzyme-Linked Immunosorbent Assay (ELISA), and the degree of hepatic fibrosis assessed by transient elastography in patients with cholestasis diagnosed with Primary Biliary Cholangitis (PBC).

Patients / Materials and Methods: Prospective, analytical, experimental study. Three groups were recruited: the first group comprised patients with cholestasis, the second group comprised patients with cirrhosis due to Hepatitis C Virus (HCV), and the third group comprised healthy subjects. Anthropometric and biochemical data were collected. A blood sample was collected to quantify serum levels of CTGF using ELISA. The degree of fibrosis was determined by transient elastography. *Statistical analysis:* Data are presented as Mean±SD or Median (IQR 25-75). They were analyzed by one-way ANOVA with Tukey's post-hoc test or Kruskal-Wallis with Dunn's post-hoc test. The following parameters were calculated: Sensitivity (S), Specificity (E), Positive Predictive Values (PPV), Negative Predictive Values (NPV), and the area under the ROC curve (AUROC). A p-value <0.05 was considered significant.

Results and Discussion: Thirty patients with cholestasis diagnosed with PBC were included, along with a group of subjects with cirrhosis due to Hepatitis C Virus (VHC-F4, n=6), and a control group without liver disease (C, n=17). It was observed that there is a positive correlation between CTGF levels and the degree of fibrosis in patients with cholestasis (PBC), but not in patients with cirrhosis due to HCV. Using a cutoff point of 630 pg/mL, a sensitivity (S) of 0.93, specificity (E) of 0.91, positive predictive value (PPV) of 0.93, negative predictive value (NPV) of 0.91, and an area under the ROC curve (AUROC) of 0.97 with a Youden index of 0.85 were obtained (Figure 1). With a serum CTGF value of 520 pg/mL in patients with PBC without fibrosis or with moderate fibrosis compared to controls and HCV-F4, a sensitivity (S) of 0.75, specificity (E) of 0.87, and AUROC of 0.88 for F0, and a sensitivity (S) of 0.91, specificity (E) of 0.87, and AUROC of 0.94 for F2 were identified (Figure 1). Regarding the degree of fibrosis, CTGF was significantly higher in F4 compared to F0 in patients with PBC. In the case of the VHC-F4 group, there were no differences compared to the group without liver disease, suggesting a specificity of CTGF for fibrosis due to cholestatic disease (Figure 2).

Conclusions: There is a direct correlation between serum levels of CTGF in patients with cholestasis and the degrees of fibrosis measured by transient elastography, as well as specific cutoff points for discrimination with and without fibrosis for PBC.

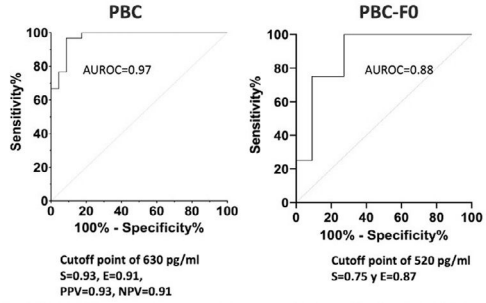
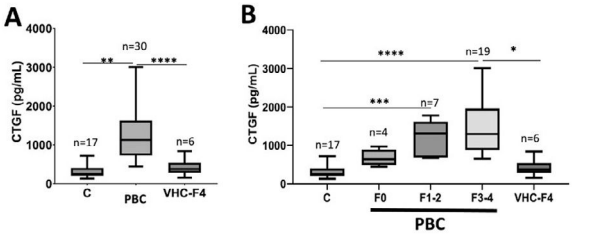


Figure 1. (A) ROC curve of serum CTGF levels in patients with PBC and advanced fibrosis. **(B)** ROC curve of serum CTGF levels in patients with PBC without fibrosis.



Median (RIC). Kruskal-Wallis con post-hoc de Dunn. *p<0.05, **p<0.01, ***p<0.005, ****p<0.001

Figure 2. (A) Box and whisker plot of the 3 study groups and the CTGF value. **(B)** Box and whisker plot of the study groups, the PBC group by fibrosis grades, and the CTGF value.

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P-7 EPIDEMIOLOGY OF AUTOIMMUNE HEPATITIS IN LATIN AMERICA: PRELIMINARY RESULTS FROM ALLATIN COHORT

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Conflict of interest: No

Introduction and Objectives: Autoimmune hepatitis (AIH) is a rare disease characterized by a destructive immune response to hepatocytes in the absence of an identified causative agent. The epidemiology of AIH in Latin America is largely unknown. This study aims to address the epidemiology of AIH in Latin America.

Patients / Materials and Methods: This ongoing retrospective, international, multicentric cohort study, sponsored by ALEH, enrolls AIH patients from different countries in Latin America.

Results and Discussion: Data were accrued on 200 patients [Brazil (36.3%), Argentina (22.3%), Chile (21.8%), Cuba (7.3%), Costa Rica (5.2%), Ecuador (5.2%), and Mexico (2.1%)], 85.9% female, with a mean age at AIH diagnosis of 43.8 years. The most common form of disease presentation was chronic asymptomatic elevation of liver enzymes (40.9%), while acute severe hepatitis and fulminant hepatitis were observed in 7.2% and 2.8% of cases, respectively. Cirrhosis was present in 39% of patients at diagnosis. AIH type 1 was diagnosed in 93.7%, type 2 in 1.6%, while 4.8% were seronegative. Overlap with primary biliary cholangitis and primary sclerosing cholangitis was reported in 5.7% and 2.9% of cases, respectively. Most patients were symptomatic (66.8%) at diagnosis, with jaundice (42.4%) and asthenia (28.3%) being the main symptoms. Hashimoto thyroiditis (11.4%) and lupus (4.9%) were the most common extrahepatic autoimmune diseases associated with AIH. Prednisone was prescribed to 86%, azathioprine to 81%, and mycophenolate to 8% of patients as first-line treatments. Complete biochemical response after the first 12 months of treatment was achieved by 66.9% of patients. Mycophenolate (60%) was the preferred option for second-line therapy, which was prescribed to 10.7% of the individuals. Of the patients, 10.5% died, while 1.5% underwent liver transplantation. Hepatocellular carcinoma was diagnosed in 1.1% of patients.

Conclusions: Our unprecedented data shed light on AIH epidemiology and management in Latin America.

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P-8 TRENDS IN ALCOHOL-ASSOCIATED CIRRHOSIS IN CHILE: A POPULATION STUDY BETWEEN 2001 TO 2020.

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Conflict of interest: No

Introduction and Objectives: Alcohol-associated cirrhosis (AAC) is the leading cause of death from cirrhosis in the world. In recent years, an increase in alcohol consumption and AAC has been observed, especially in women, young people, low socioeconomic levels, and certain ethnic groups. Objective: To perform a descriptive study of patients hospitalized for AAC and non-alcohol-associated cirrhosis (NAAC) in Chile between 2001 and 2020, stratified by socioeconomic and demographic variables of the patients.

Patients / Materials and Methods: Of 72,096 hospital discharges, 44,971 patients hospitalized for AAC and non-alcohol-associated cirrhosis (NAAC) in Chile between 2001 and 2020, were identified. A descriptive statistical study was carried out on the behavior of the AAC and NAAC at the national and regional levels by sex, age, and health insurance provider. Additionally, a study of patient survival rates was carried out using Kaplan-Meier.

Results and Discussion: The results are detailed in Table 1: presents the number of cases per 100,000 inhabitants in the corresponding group under study.

Conclusions: When calculating the number of discharges per 100,000 inhabitants in Chile over the years, the AAC has remained relatively constant, while the NAAC has shown a reduction of more than 50%, going from 12.8 to 6.2 hospital discharges. Furthermore, of the total discharges due to cirrhosis, nearly two-thirds correspond to AAC.

Regarding the differences between health insurance, a contrast is observed between the AAC and NAAC. AAC is more prevalent in patients with public health insurance, both for men and women. Although NAAC is higher in patients with private health insurance for both sexes, it does not present significant differences between forecast and sex compared to AAC.

Finally, an age trend is observed in discharges due to cirrhosis, both in AAC and NAAC, especially in the age groups of 50-59 and 60-69. Furthermore, it is precisely in these age groups that AAC tends to be more prevalent than NAAC.

Number of cases per 100,000 inhabitants									
	2001	2002	2003	2010	2011	2018	2019	2020	Average
AAC	13.2	13.2	13.7	12.7	12.7	12.1	11.4	13.0	13.1
NAAC	12.8	13.4	11.6	6.6	6.0	7.0	7.0	6.2	7.7
Difference between AAC & NAAC (%)	3.0%	-1.5%	15.3%	48.0%	52.8%	42.2%	38.6%	52.3%	41.2%
NAAC Women with Public Insurance	10.0	9.4	10.9	5.9	5.7	7.1	7.5	7.1	7.0
NAAC Women with Private Insurance	0.0	6.2	8.8	9.5	11.0	10.8	9.5	7.9	8.4
Difference between Women with Public & Private Insurance in NAAC (%)	100.0%	34.0%	19.3%	-61.0%	-93.0%	-52.1%	-26.7%	-11.3%	-20.0%
NAAC Men with Public Insurance	15.5	15.6	13.7	7.1	4.7	5.3	5.6	5.8	7.8
NAAC Men with Private Insurance	0.0	2.4	10.2	7.0	10.9	12.5	9.2	5.8	8.5
Difference between Men with Public & Private Insurance in NAAC (%)	100.0%	84.6%	25.5%	1.4%	-131.9%	-135.8%	-64.3%	0.0%	-9.0%
AAC Women with Public Insurance	6.5	6.0	6.8	5.8	6.0	5.7	5.7	5.9	6.3
AAC Women with Private Insurance	0.1	1.8	2.4	2.0	2.0	1.1	1.6	1.2	1.7
Difference between Women with Public & Private Insurance in AAC (%)	98.5%	70.0%	64.7%	66.5%	66.7%	80.7%	71.9%	79.7%	73.0%
AAC Men with Public Insurance	26.01	24.8	27.1	23.5	23.1	23.2	22.2	26.9	25.2
AAC Men with Private Insurance	0.0	4.7	8.0	9.3	9.3	7.1	5.4	5.9	6.5
Difference between Men with Public & Private Insurance in AAC (%)	100.0%	81.0%	70.5%	60.4%	59.7%	69.4%	75.7%	78.1%	74.2%
AAC 15-19 y	0.2	0.4	0.1	0.1	0.5	0.2	0.1	0.2	0.2
NAAC 15-19 y	0.3	0.3	0.2	0.4	0.4	1.3	1.4	0.6	0.7
Difference between 15-19 y AAC & NAAC (%)	-50.0%	25.0%	-100.0%	-300.0%	-20.0%	-550.0%	-1300.0%	-200.0%	-250.0%
AAC 20-29 y	1.0	1.0	1.5	0.8	1.5	0.7	0.9	0.8	1.1
NAAC 20-29 y	1.0	1.1	1.3	0.8	1.4	1.7	1.5	1.0	1.1
Difference between 20-29 y AAC & NAAC (%)	0.0%	-10.0%	13.3%	0.0%	6.7%	-142.9%	-66.7%	-25.0%	0.0%
AAC 50-59 y	44.1	42.3	37.7	31.3	31.4	32.5	29.0	35.4	35.7
NAAC 50-59 y	37.1	39.6	30.0	15.8	14.1	15.5	13.0	12.3	18.9
Difference between 50-59 y AAC & NAAC (%)	15.9%	6.4%	20.4%	49.5%	55.1%	52.3%	55.2%	65.3%	47.1%
AAC 60-69 y	56.8	53.0	56.1	46.9	48.2	36.9	35.4	38.3	47.6
NAAC 60-69 y	62.4	66.4	59.7	26.6	26.2	21.7	27.5	20.5	33.3
Difference between 60-69 y AAC & NAAC (%)	-9.9%	-25.3%	-6.4%	43.3%	45.6%	41.2%	22.3%	46.5%	30.0%

Table 1: Number of cases per 100,000 inhabitants in the corresponding group under sturdy

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P-9 SURVIVAL ANALYSIS OF A BRAZILIAN COHORT OF PATIENTS WITH WILSON DISEASE

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Conflict of interest: No

Introduction and Objectives: Wilson's disease (WD) is a rare autosomal recessive disease leading to impairment in copper excretion and subsequent accumulation primarily in the liver and brain. Long-term survival appears to be similar to that of the general population, depending on early diagnosis and treatment. However, studies evaluating WD survival are scarce. We aimed to evaluate the long-term survival of a cohort of WD patients followed at a single Hepatology Center in Brazil.

Patients / Materials and Methods: Demographic characteristics, age at diagnosis, type of manifestation (isolated hepatic, isolated neuropsychiatric or associated hepatic and neuropsychiatric) of WD patients, followed between 1999 and 2023, were evaluated. The average survival and its relationship with the predominant disease phenotype were determined.

Results and Discussion: 34 patients were evaluated, 53% female, mean age at diagnosis 21 ± 9 years (6 to 42), disease duration of 11 ± 7 years (1 to 25) until outcome. The majority (47%) had the isolated hepatic manifestation, 38% hepatic neuropsychiatric manifestations and 15% isolated neuropsychiatric disorder. The overall population mortality rate was 36%. The mean age at the time of death was 33 ± 12 years (11 to 55). The estimated average survival at 5 years was 85%, at 10 years 70% and at 20 years 40%, from diagnosis. There was a tendency towards lower survival in patients who presented neuropsychiatric manifestations, either alone or in association with liver disease, compared to patients with isolated liver manifestations (50% vs. 80%; p= 0.07). There was no difference in survival curves according to gender (p=0.82) or considering the age at onset of the disease above or below 20 years (p=0.54).

Conclusions: Despite being potentially treatable, WD still presents high mortality, affecting young patients, whose survival rate is greatly reduced. WD patients with neuropsychiatric symptoms had worse survival. These data highlight the need for earlier diagnosis and easier access to treatment.

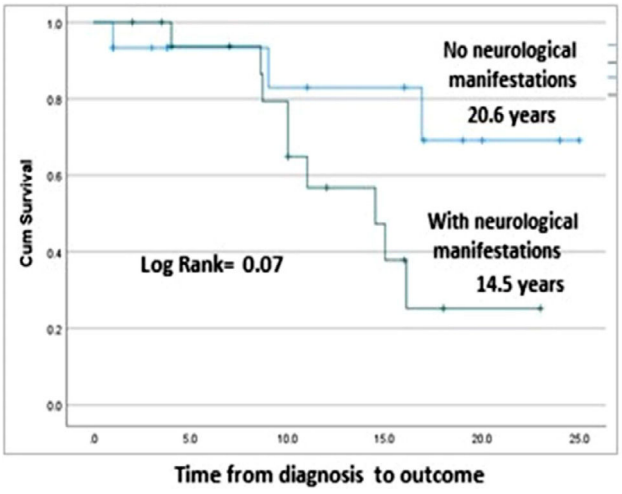

Figure 1. Survival curve according to clinical manifestation after WD diagnosis

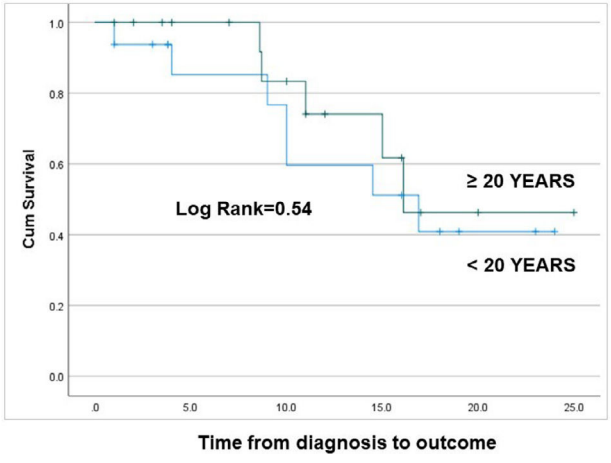

Figure 2. Survival curve considering the age at onset of the disease? or < 20 years

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P-10 SEROPREVALENCE OF CHRONIC HEPATITIS C INFECTION AND VIROLOGICAL CURE WITH A DAILY ADMINISTRATION SYSTEM OF NS3/4A PROTEASE INHIBITOR AND NS5A INHIBITOR IN IMPRISONED PATIENTS.

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Conflict of interest: No

Introduction and Objectives: Hepatitis C infection has a high prevalence in social rehabilitation centers and prissions; however, patient migration, lack of adherence monitoring and risk practices are determinants for abandoning treatment. *Objectives:* Determine the seroprevalence in patients deprived of their liberty in social rehabilitation centers for chronic hepatitis C infection, as well as evaluate the effectiveness of daily provision of antivirals in patients who are deprived of their liberty.

Patients / Materials and Methods: Information was collected through the national hepatitis C elimination program database in patients screened for HIV infection, syphilis and hepatitis C during the period 2021-2024 in Baja California Sur, Mexico. Mass screening tests were performed with serological antigen and PCR for hepatitis C. Those patients with a positive viral load were treated with direct-acting antivirals for 2 months and a viral load was performed to verify sustained viral response. During this period, medical teams supplied the drug in a controlled manner provided by the health services in prisons. To keep the rehabilitation centers free of hepatitis C, serologies were implemented under informed consent for newly admitted people that were admitted.

Results and Discussion: 3452 rapid tests were performed, of which 77 tests (2.23%) were reactive with positive viral load in 76 cases (98.07%), all patients were male (100%), with an average age of 42.1 years. Of the patients studied, the main risk factor was intravenous drug use (98%). Viral loads were measured 3 months after treatment where 98.68% had virological cure, 1.3% migrated from a social rehabilitation center and 0% presented virological failure.

Conclusions: The intervention of health services continuously and jointly with the penal system is a determining factor in achieving virological cure and rehabilitation centers free of hepatitis C.

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P-11 REAL-WORLD DATA WITH PANGENOTYPIC DIRECT-ACTING ANTIVIRALS IN LATINAMERICA: PRELIMINARY RESULTS OF THE SVR10K STUDY

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Conflict of interest: Yes, Gilead-sponsored research

Introduction and Objectives: A previous real-world data (RWD) analysis demonstrated high effectiveness of sofosbuvir/velpatasvir (SOF/VEL) without ribavirin in > 6,000 HCV patients from 12 clinical cohorts across Australia, Canada, Europe & USA. Expand this research initiative with the ongoing SVR10K study, to include even more patients from additional geographical areas, which will allow to show SOF/VEL effectiveness across multiple diverse populations, including Latin-American (LATAM) region.

Patients / Materials and Methods: This RWD analysis includes patients ≥ 18 years treated with SOF/VEL without RBV for 12 weeks, as decided by the treating HCP, from 13 sites across Brazil, Colombia, Hong Kong, Mexico, Singapore, Sweden, Spain, Taiwan, and the United Arab Emirates. Age, sex, treatment experienced (TE), cirrhosis stage (no decompensated included), genotype, coinfections, time to treatment initiation (TTI) from HCV diagnosis, and SVR were analyzed for LATAM region.

Results and Discussion: Overall, 7,027 patients have been included up to now, 13% (n=890) of them from four sites in the LATAM region (Table). There, median age was 54.5 [IQR 43.2-63.5], where males 51%, and age > 50 years in 62%. Genotype 3 was present in 14%, cirrhotic (CC) 34%, TE 8%, while HIV, HBV and HDV coinfection was reported in 7.2%, 0.3%, and 0.0%, respectively. The TTI was available in 94%, with 28% having ≤30 days (In Brazil 57%). In terms of effectiveness, SVR was achieved in 99.6% of the treated population (n=788); being 98.2% in GT3 patients (n=112), 99.6% in CC patients (n=279), and 97.4% in GT3 CC patients (n=38).

Conclusions: Results on treatment effectiveness in LATAM region did not differ from RWD studies of patients in the North-Western countries, reinforcing that HCV treatment guidelines are globally applicable, and supporting the efficacy of panfibrotic, pangenotypic, and pangeographic DAA therapy. Although with positive signs, there is still a significant room for improvement in the time to treatment initiation in the LATAM region.

Table: Key demographics, Time to Treatment initiation, and SVR rate of patients by region and country

	Overall LATAM	Mexico**	Brazil	Colombia
# patients	*890*	*454*	*293*	*143*
Median age, y [IQR]	54.5 [43.2; 63.5]	50.9 [40.9; 59.5]	58.6 [47.8; 65.9]	61.3 [40.3; 68.9]
Male, %	50.9	52.9	47.1	52.4
≥50 y, % (male and female)	61.9	53.7	72.2	67.4
≥50 y male, %	30.5	29.7	35.4	22.5
≥50 y female, %	31.4	24.0	36.8	45.0
Genotype 3, %	14.4	11.0	25.3	2.8
Cirrhosis stage, %	33.9	48.5	14.0	28.7
# patients	*837*	*451*	*291*	*95*
Time to Treatment ≤ 1 month, %	27.5	10.6	57.1	17.9
# patients	*788*	*440*	*237*	*111*
Overall SVR, % *	99.6	99.5	100.0	99.1
SVR in GT3 patients, %	98.2	95.7	100.0	100.0
SVR in cirrhotic patients, %	99.6	99.5	100.0	100.0
SVR in GT3 & cirrhotic patients, %	97.4	96.0	100.0	100.0

*In effectiveness population, excludes patients who did not have a valid SVR status because of non-virological reasons or unknown reasons; ** Two sites

Key outcomes for LATAM in SVR10K study

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P-12 METHYL GROUP DONOR SUPPLEMENTATION IN A MetALD MODEL: REGULATION OF GUT MICROBIOTA AND METABOLIC PARAMETERS

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Conflict of interest: No

Introduction and Objectives: Patients who meet both *MASLD (Metabolic dysfunction-associated steatotic liver disease)* and *alcohol-related fatty liver disease (ALD)* criteria are categorized as having *MetALD (Metabolic and alcohol-related liver disease*) and its damage is characterized by metabolic dysfunction, gut dysbiosis and liver inflammation, resulting in steatosis and fibrosis. Methyl group donor supplementation in MASLD demonstrated metabolic benefits; we expect to corroborate those effects in MetALD and look for microbiota changes induced by methyl availability.

Patients / Materials and Methods: Twenty-four C57BL/6J male mice (25 ± 2g) were randomly assigned to 1) Control group (ND n=8); 2) MetALD (20% ethanol in water + 45% fat diet); 3) MetALD + MetMix (MetALD + methyl donors: methionine, betaine, zinc sulfate, choline, B9, B6 and B12). Each group maintained their respective diet/supplementation for 20 weeks. Liver, epididymal fat and body weight were weighted at sacrifice and liver enzymes, adipokines and lipid profile were measured on serum. Histopathological evaluation was performed on liver, adipose and colon tissues. Gene expression of IL6 and TNF-α was analyzed, while 16S rRNA gene sequencing in fecal DNA assessed gut microbiota.

Results and Discussion: Methyl donor supplementation decreased ($p<0.05$) body and epididymal fat weight, and reduced cholesterol, HDL, and LDL serum levels. A reduction (n.s.) in AST, ALT, TG, VLDL, insulin, leptin, glucagon, and resistin, and the mRNA levels of IL-6 and TNF-α were also observed. Hepatic steatosis and adipocyte area revealed a significant decrease ($p<0.05$) in MetALD + MetMix group. Intestinal crypts tended to be restored in length, similar to the control group. Microbiota Beta diversity was comparable between groups, while alpha diversity and Firmicutes/Bacteroidetes ratio showed a trend towards increase due to Firmicutes enrichment following supplementation.

Conclusions: Methyl donor supplementation improved body weight and lipid profile and reduced liver steatosis and adipocyte area, boosting the abundance and diversity of gut microbiota.

https://doi.org/10.1016/j.aohep.2024.101626

P-13 EVALUATION OF UNDIAGNOSED ALCOHOLIC LIVER DISEASE IN PATIENTS WITH METABOLIC DYSFUNCTION-ASSOCIATED FATTY LIVER DISEASE USING THE ANI SCORE

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Conflict of interest: No

Introduction and Objectives: The 2024 EASL-EASD-EASO guidelines on Steatotic Liver Disease emphasize the distinction between Metabolic Dysfunction-Associated Steatotic Liver Disease (MAFLD) and the subcategories with significant alcohol consumption: Alcoholic Liver Disease (ALD) and Metabolic ALD (MetALD). To this aim, a systematic record of alcohol consumption and/or validated biomarkers is recommended.

To evaluate the likelihood of associated but unrecognized alcohol-related liver disease (MetALD/ALD) in patients managed for MAFLD.

Patients / Materials and Methods: A single-center retrospective study that analyzes the probability of MetALD/ALD using the ALD/NAFLD (ANI) score in patients diagnosed with MAFLD during May/June 2024. MAFLD was defined by the presence of hepatic steatosis with alcohol intake <20/30 g/day (iwomen/men), at least one cardiovascular risk factor, and no other discernible cause. Patients with suspected advanced chronic liver disease were excluded. A probability of MetALD/ALD was considered if ANI>0 (indicative of a probability >50%). Sociodemographic variables, alcohol consumption, and hepatic fibrosis were recorded and compared between the ANI>0 and ANI<0 groups, with significance level set at $p<0.05$.

Results and Discussion: 85 patients were included, average age 61.8±9.7 years, 52.9% male. Alcohol consumption was documented in medical history for 63.3% (54/85) of patients, with 53.4% (29/54) reporting no consumption. Per ANI score, 21.2% (18/85) were identified as having a probability of MetALD/ALD (ANI>0), with half of these (9/18) showing a probability >90%. Alcohol intake (10-20/30 g/day) was significantly higher in the ANI>0 group, consisting solely of males. Hepatic fibrosis was more pronounced in this group (7.6± 3.6 vs 5.9±1.7) but did not reach statistical significance.

Conclusions: The significant prevalence of unrecognized MetALD/ALD by ANI score suggests that alcohol consumption may be underreported in the ANI>0 group. Therefore, the inclusion of the ANI score as a biomarker for accurate differentiation MAFLD from MetALD/ALD appears to be beneficial.

	ANI>0 (n = 18)	ANI<0 (n=67)	Odds ratio	p-value
Age (years)	62.2±9.4	61.8±9.8		0.97
Male	100% (18/18)	40.3% (27/67)	Infinity	**<0.001**
Body mass index	28.7±3.9	31.7±4.6		**0.02**
Arterial hypertension	61.1% (11/18)	59.7% (40/67)	1.06	0.86
Diabetes mellitus	50% (9/18)	40.3% (27/67)	1.48	0.64
Dyslipidemia	38.9% (7/18)	53.7% (36/67)	0.55	0.39
Recorded alcohol consumption:	72.2% (13/18)	61.2% (41/67)	1.71	0.51
0 g/week	23.1% (3/13)	63.4% (26/41)	0.17	**0.01**
10-20 g/week	15.4% (2/13)	12.2% (5/41)	1.31	0.54
30-60 g/week	7.7% (1/13)	4.9% (2/41)	1.65	0.57
10-20/30 g/day (female/male)	53.9% (7/13)	19.5% (8/41)	4.85	**0.03**
Fibrosis (Kpa)	7.6±3.6	5.9±1.7		0.18
CAP	292.7±46.6	305.6±51.9		0.41
AST (U/L)	46.7±35.7	34.1±15.9		0.08
ALT (U/L)	38.9±33.6	39.1±23.9		0.39

Comparison of ANI>0 and ANI<0 groups.

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P-14 DETECTION OF CIRRHOSIS DUE TO ALPHA-1 ANTITRYPSIN DEFICIENCY IN ADULTS: PHENOTYPE STUDY IN COSTA RICA

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Conflict of interest: No

Introduction and Objectives: Alpha-1 antitrypsin (A1AT) levels are normal in up to 20% of liver diseases, and this protein elevates in inflammatory states, causing false negatives. This disease does not follow an autosomal recessive inheritance pattern, so the classical concept of homozygosity does not apply. Instead, two codominant alleles manifest as liver or lung disease. *Objectives:* To determine the phenotypes associated with A1AT-related liver disease in Costa Rica.

Patients / Materials and Methods: Phenotypes detected in patients with suspected A1AT deficiency from 2014 to July 2024 were analyzed. Phenotype identification was carried out using isoelectric focusing in agarose gel with immunofixation. The presence of liver disease was determined through clinical, laboratory, and imaging findings.

Results and Discussion: During the specified period, 371 phenotype studies were conducted on 187 women and 184 men. The identified phenotypes were: 15 ZZ probands, 22 MZ probands, 1 SZ proband, 7 MS probands, 1 SS proband, 1 null proband, 1 M/null proband, 31 MM probands, and 2 null/null probands. No Z/null proband was detected. Among 53 probands, there were: 10 ZZ, 13 MZ, 1 SZ, 4 MS, 1 SS, 1 null, and 23 MM. It was established that the risk of liver disease is slightly increased in MZ, increased in SZ, and very increased in ZZ. Cirrhosis was diagnosed in 19 probands: 7 ZZ, 7 M/null, 4 MZ, and 1 SZ.

Conclusions: A1AT quantification has a 20% false-negative rate, so phenotype testing is recommended when there is suspicion. In Costa Rica, the ZZ variant has the highest risk of liver disease, followed by SZ and MZ; the M/null phenotype was also detected as a cause of liver disease. Medical monitoring is necessary, and in doubtful cases, genotype testing should be performed.

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P- 15 GENETIC AND CLINICAL CHARACTERISTICS IN LEAN MASLD PATIENTS WITH AND WITHOUT CIRRHOSIS IN LATINOAMERICAN POPULATION

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Conflict of interest: No

Introduction and Objectives: Metabolic dysfunction associated esteatotic liver disease (MASLD) is the most common chronic liver disease worldwide. It is associated with metabolic conditions and can also occur in lean patients with a normal or low BMI. Polymorphisms in *PNPLA3, TM6SF2* and *MBOAT7* genes have been linked to an increased risk of developing hepatocellular carcinoma (HCC) and greater severity of fibrosis. This study aimed to assess clinical and genetics characteristics in Latin American lean MASLD patients with and without cirrhosis.

Patients / Materials and Methods: This descriptive cross-sectional study evaluated 148 patients from an international database of chronic liver disease patients (ESCALON), including Colombia, Brazil, Chile, Ecuador, Argentina and Perú. MASLD was identified in patients with a BMI≤ 25. Patients with alcohol-associated and viral -related liver diseases, as well as other liver conditions, were excluded. Clinical features and main MASLD-related pathogenic variants were evaluated in this population. We used BlueSky software to evaluate two sample t -test for cirrhotic vs no cirrhotic variables. The assessment included the median age range and average BMI.

Results and Discussion: A total of 102 patients (69%) were found to have cirrhosis, with 57% being female and a median age of 65,6 years.42% had HCC, 39% had diabetes mellitus(DM), 14% had dyslipidemia, and 28% had hypertension (HTN).Common genetic variants were evaluated in 60.8% (90/148) of the study population with the following distribution: *PNPLA3 (rs738409)*: 45,6% (GG), 43,3% (CG);*MBOAT7(rs641738)*: 10%(TT), 43,3%(CT);*TM6SF2(rs58542926)*: 0%(TT), 12,2%(CT) and 87,8%(CC);*HSD17B13(rs72613567)*:1,2%(TT), 16,3%(AT);*GCKR(rs1260326)*:33,3%(CC), 50%(CT).The characteristics by group and the differences found are shown in table 1

Conclusions: Cirrhotic patients were older, with higher rates of diabetes mellitus, hypertension, dyslipidemia and HCC. The PNPLA3 GG variant was predominant in cirrhotics compared to non-cirrhotic patients, with no significant differences between groups in the other variants

Table 1: Characteristics of lean patients with and without cirrhosis

Variables	Cirrhosis N=102 (%)	Non-cirrhosis N=45 (%)	P-value
Sex			
Female	51 (50%)	33 (73.3%)	**0.008**
Male	51 (50%)	12 (26.7%)	
BMI (mean)	23.2	23.2	0.89
Age (mean)	68.8	62.2	**<0.001**
Diabetes	45 (44.1%)	12 (26.7%)	**0.04**
Dyslipidemia	9 (8.8%)	11 (24.4%)	**0.01**
Chronic kidney disease	4 (3.9%)	1 (2.2%)	0.60
Hypertension	1 (0.9%)	8 (17.8%)	0.08
Hepatocellular carcinoma (HCC)	54/102 (53%)	8/45 (17.8%)	**<0.001**
Common Variants: PNPLA3 (rs738409)			**0.05**
GG	31/56 (55.4%)	10/34 (29.4%)	
CG	20/56 (35.7%)	19/34 (55.9%)	
CC	5/56 (8.9%)	5/34 (14.7%)	
MBOAT7 (rs641738)			0.29
TT	7/56 (12.5%)	2/34 (5.9%)	
CT	25/56 (44.6%)	14/34 (41.2%)	
CC	24/56 (42.9%)	18/34 (52.9%)	
TM6SF2 (rs58542926)			0.64
TT	0/56 (0%)	0/34 (0%)	
CT	6/56 (10.7%)	5/34 (14.7%)	
CC	50/56 (89.3%)	29/34 (85.3%)	
HSD17B13 (rs72613567)			0.45
TT	0/53 (0%)	1/33 (3%)	
AT	9/53 (17%)	5/33 (15.2%)	
AA	44/53 (83%)	27/33 (81.8%)	
GCKR (rs1260326)			0.84
CC	18/56 (32.1%)	11/32 (34.3%)	
CT	30/56 (53.6%)	15/32 (46.9%)	
TT	8/56 (14.3%)	6/32 (18.8%)	

*The alleles description in the table begins with homozygous, heterozygous, and wild type in PNPLA3, MBOAT7, TM6SF2, HSD17B13, and GCKR, respectively

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P-16 UNLOCKING S-PINDOLOL'S POTENTIAL FOR MASLD: BENEFICIAL EFFECTS ON MUSCLE MASS AND FUNCTION AND LIVER HISTOLOGY IN WESTERN- DIET FED MICE

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Conflict of interest: No

Introduction and Objectives: Metabolic Dysfunction-Associated Steatotic Liver Disease (MASLD) is linked to sarcopenia, which worsens disease's prognosis. The complex liver-muscle crosstalk opens the possibility that improvements in muscle quantity and quality may be directly beneficial for MASLD. This study investigates the effects of s-pindolol, a beta-blocker known for its anabolic properties, on both muscle mass and function as well as on MASLD progression in mice.

Patients / Materials and Methods: Male C57BL6 mice were subjected to a western diet (WD) for 20 weeks to induce MASLD and then mice were randomly grouped and treated with 3 mg/kg s-pindolol twice a week or left untreated. Assessments included grip and isolated muscle strength, body composition via bioimpedance spectroscopy, Abdominal MRI, liver histology, serum analyses and gene expression profiling.

Results and Discussion: S-pindolol reduced liver steatosis and inflammation and was associated with lower levels of MCP-1, IL-10, TGF-β, and ACACA (Acetyl-CoA Carboxylase Alpha). S-pindolol also counteracted IGF-1 serum levels reduction seen in WD-fed mice. In addition, S-pindolol treatment led to an increase in muscle mass as confirmed by bioimpedance spectroscopy and MRI techniques. While exercise performance remained unchanged, grip strength improved together with a reduction in myosteatosis suggesting enhanced muscle quality. This was supported by an increase in muscle fiber diameter, indicating muscular hypertrophy independent of exercise.

Conclusions: S-pindolol treatment ameliorates MASLD and enhances muscle quality in WD-fed mice. It may be hypothesized that s-pindolol's positive effects on muscle mass and function could play a role in its beneficial effects on MASLD through improvement of secretion of various salutary myokines. The present data underscore S-pindolol's therapeutic potential in MASLD.

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P-17 AMIKACIN USE AND RISK OF NEPHROTOXICITY IN PATIENTS WITH LIVER CIRRHOSIS HOSPITALIZED FOR SEPSIS

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Conflict of interest: No

Introduction and Objectives: Aminoglycosides are a group of broad-spectrum antibiotics, which have action especially against gram-negative bacteria. It is associated with nephrotoxicity in 10-20% of cases, a figure that increases in patients with liver cirrhosis. Amikacin is frequently used in sepsis, with little information about the risk of nephrotoxicity in cirrhosis. The aim was to determine the association between amikacin use and renal function deterioration in patients with liver cirrhosis and sepsis.

Patients / Materials and Methods: Retrospective, observational, analytical study in patients with liver cirrhosis of any etiology, who required hospitalization for sepsis between 2017 and 2023, and who received antibiotic therapy. An increase in serum creatinine $\geq$ 0.3 mg/dl in the first 7 days of hospitalization was used as a marker of renal function deterioration. Clinical variables, renal failure and mortality were compared between patients who received amikacin and those who did not. Stata 13.0 was used for data analysis with a statistical significance of 0.05.

Results and Discussion: In this study 228 patients were included, median age 65 years (54-70), 100 (44%) women, 70 received amikacin (31%). Renal function deterioration was present in 25 (36%) patients with amikacin and 33 (21%) without amikacin. In patients with initial serum creatinine > 2.0 mg/dl and in those with Child-Pugh C cirrhosis, the probability of developing renal function deterioration was higher in those who received Amikacin (OR 7.5; 95% CI 1.1

– 48.0, p= 0.031 and OR 2.51; 95% CI 1.06 – 5.97, p = 0.036, respectively). A comparative table of different subgroups is attached.

Conclusions: The use of amikacin was associated with renal function deterioration in patients with liver cirrhosis and sepsis, mainly in Child-Pugh C cirrhosis and with initial serum creatinine > 2.0 mg/dl.

Table 1. Evaluation of the development of renal function deterioration in different groups of patients depending on the use or not of Amikacin

		Renal function deterioration	Without Renal function deterioration	Valor p
According to initial creatinine level				
Creatinine < 1.5 (N = 166)	Amikacin	13 (36)	35 (27)	0.282
	Without Amikacin	23 (64)	95 (73)	
Creatinine 1.5 - 1.99 (N = 33)	Amikacin	4 (33)	4 (19)	0.357
	Without Amikacin	8 (67)	17 (81)	
Creatinine ≥ 2.0 (N = 28)	Amikacin	7 (78)	6 (32)	**0.029**
	Without Amikacin	2 (22)	13 (68)	
Initial suspicion of infection by Gram (-) bacteria according to infectious focus				
Suspected Gram (-) infection (N = 171)	Amikacin	21 (48)	41 (32)	0.066
	Without Amikacin	23 (52)	86 (68)	
Without suspicion of Gram (-) infection (N = 57)	Amikacin	4 (28)	4 (9)	0.071
	Without Amikacin	10 (71)	39 (91)	
According to the development of septic shock				
With septic shock (N = 74)	Amikacin	16 (57)	22 (48)	0.437
	Without Amikacin	12 (43)	24 (52)	
Without septic shock (N = 154)	Amikacin	9 (30)	23 (19)	0.165
	Without Amikacin	21 (70)	101 (81)	
According to Child-Pugh Score				
Child-Pugh A – B (N = 104)	Amikacin	10 (34)	18 (24)	0.280
	Without Amikacin	19 (66)	57 (76)	
Child-Pugh C (N = 123)	Amikacin	14 (50)	27 (28)	**0.033**
	Without Amikacin	14 (50)	68 (72)	
According to MELD-Na Score				
MELD-Na < 20 (N = 77)	Amikacin	3 (25)	14 (21)	0.524
	Without Amikacin	9 (75)	51 (78)	
MELD-Na ≥ 20 (N = 150)	Amikacin	21 (47)	31 (30)	**0.034**
	Without Amikacin	24 (53)	74 (70)	

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P-18 ANTI-HBC POSITIVITY IS AN INDEPENDENT PREDICTIVE FACTOR FOR HCC DEVELOPMENT AND SHOULD BE INCORPORATED TO THE HCC RISK SCORE PREDICTION MODEL IN ADVANCED FIBROSIS

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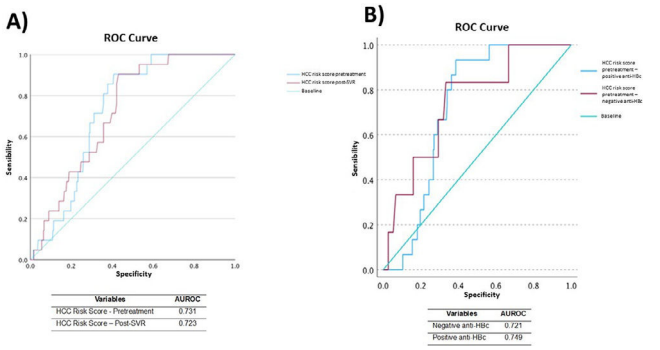
Conflict of interest: No

Introduction and Objectives: After hepatitis C virus (HCV) treatment with direct-acting antivirals (DAAs), the sustained viral response increased to 95%, although it may be lower in advanced fibrosis. Continuous follow-up of HCV cured individuals is essential. In that context, identifying higher risk populations to intensify its surveillance is important to allow early hepatocellular carcinoma (HCC) detection and optimize costs. Our group previously demonstrated a risk association between anti-HBc and HCC, since the presence of hepatitis B virus infection has oncogenic properties. Our objective is to evaluate the HCC risk score prediction model accuracy in our population and investigate the inclusion of anti-HBc positivity in the model.

Patients / Materials and Methods: This is a retrospective, observational, descriptive and analytic study in a series of cases in which 365 HCV patients were evaluated. Demographic, clinical and laboratory data were obtained through electronic medical records. The HCC risk score was applied before and after SVR.

Results and Discussion: A total of 21 patients had HCC diagnosis after RVS (5.75%). The variables associated with higher HCC occurrence were: genotype 3 (p=0.025), AST pretreatment (p=0.026), elastography > 10kPa (p=0.003) and advanced fibrosis (p=0.016). Among advanced fibrosis patients, positive Anti-HBc (p=0.047) was an independent predictor factor associated with HCC. After univariated analysis, genotype 3 and positive anti-HBc were predictive factors of HCC occurrence in advanced fibrosis. When applying the HCC risk score before treatment, the area under the receiver operating characteristic curve (AUROC) was 0.731, while after SVR had a slightly lower value (0.723) – Figure 1A. After incorporating anti-HBc to all other variables used in HCC risk score, the accuracy was 0.744 – Figure 1B.

Conclusions: The HCC risk score is a validated prediction model of HCC occurrence before and after SVR. Anti-HBc positivity might be a good candidate to be incorporated to the model.



HCC risk score ROC curves. A) Pretreatment x Post-SVR. B) After anti-HBc incorporation

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P-19 ASSOCIATION OF TM6SF2 GENE POLYMORPHISMS WITH CARDIOVASCULAR RISK IN PATIENTS WITH METABOLIC DYSFUNCTION –ASSOCIATED STEATOTIC LIVER DISEASE (MASLD) IN A HISPANIC ADULT POPULATION

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Conflict of interest: No

Introduction and Objectives: Genes that influence lipids have led to the discovery of a non-synonymous variant (rs58542926) located in the TM6SF2 gene (transmembrane 6 member of

superfamily 2) that is associated not only with the serum lipid levels, including serum total cholesterol, low-density cholesterol (LDL-C), and triglycerides, but also the risk of cardiovascular disease. The Dallas Heart Study reported that rs58542926 is associated with hepatic fatty infiltration. *Objective:* To establish the frequency of the C> T polymorphism in the TM6SF2 gene (rs58542926).

Patients / Materials and Methods: A multistage random sample was drawn from an inpatient population between 40 and 70 years of age.

We analyzed the DNA of thirty-five (35) patients. Genomic DNA was extracted from peripheral blood leukocytes. For genotyping of SNP rs58542926, the following pair of primers was used: forward = 5′- GGT CTT GGC ACA AAT CCG GT-3′ and reverse = 5′- AAG AGA AAT TGG CAG CTG GA-3′.

Results and Discussion: The frequency of the minor allele T (KK) was 0.000 and the frequency of the ancestral allele C (EE) was 1.0000; These frequencies were similar to those observed in a frequency report from the 1000 genomes project (http://browser.1000genomes.org/). The association with fatty liver infiltration may be due to the founder effect, genetic drift, or possibly population inbreeding. In addition, it could be a selective disadvantage compared to other pathologies such as fatty liver.

Conclusions: The results for the C/C and C/T genotypes studied are like those of other previous studies. The presence of the ancestral C allele (EE) in 100% of the patients suggests a probable genetic deviation or founder effect, probably increasing the frequency of this allele over the other existing alleles.

SAMPLE	*1622*	*1623*	*1624*	*1525*	*1626*	*GenotYPE*
TM6SF2 rs58542926	G	G	C	T	C	C/C
1	G	G	C	T	C	C/C
2	G	G	C	T	C	C/C
3	G	G	C	T	C	C/C
4	G	G	C	T	C	C/C
5	G	G	C	T	C	C/C
6	G	G	C	T	C	C/C
7	G	G	C	T	C	C/C
8	G	G	C	T	C	C/C
9	G	G	C	T	C	C/C
10	G	G	C	T	C	C/C
11	G	G	C	T	C	C/C
12	G	G	C	T	C	C/C
13	G	G	C	T	C	C/C
14	G	G	C	T	C	C/C
15	G	G	C	T	C	C/C
16	G	G	C	T	C	C/C
17	G	G	C	T	C	C/C
18	G	G	C	T	C	C/C
19	G	G	C	T	C	C/C
20	G	G	C	T	C	C/C
21	G	G	C	T	C	C/C
22	G	G	C	T	C	C/C
23	G	G	C	T	C	C/C
24	G	G	C	T	C	C/C
25	G	G	C	T	C	C/C
26	G	G	C	T	C	C/C
27	G	G	C	T	C	C/C
28	G	G	C	T	C	C/C
29	G	G	C	T	C	C/C
30	G	G	C	T	C	C/C
31	G	G	C	T	C	C/C
32	G	G	C	T	C	C/C
33	G	G	C	T	C	C/C
34	G	G	C	T	C	C/C
35	G	G	C	T	C	C/C

Results: TMG polymorphisms

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P-20 HIGH PREVALENCE OF CHRONIC HEPATITIS B IN ACHE COMMUNITIES IN THE DEPARTMENT OF CANINDEYU-PARAGUAY

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Conflict of interest: No

Introduction and Objectives: Hepatitis B is a disease that can lead to cirrhosis, acute liver failure, hepatocellular carcinoma, or death. Paraguay is considered a country with a low incidence of hepatitis B. The discovery of two cases of hepatocellular carcinoma associated with hepatitis B, in a community of the Aché indigenous group in the Department of Canindeyú, motivated an initial investigation that aroused the suspicion of a high rate of hepatitis B in those communities. *Objectives:* Determine the prevalence of hepatitis B in the Aché communities of the department of Canindeyú-Paraguay in order to program therapeutic and preventive measures in said population.

Patients / Materials and Methods: A joint working group was organized between the Ministry of Health and a Medical University. The population studied were the inhabitants of the “Kué Tuvy” and “Chupa Pou” communities, of the Aché ethnic group in the department of Canindeyú, Paraguay. In November 2022 and March 2023, a total of 399 natives attended the call made by community leaders and were subjected to capillary blood detection tests for HBsAg. In patients with a positive test, the following were performed: clinical history, physical examination, anthropometry, and abdominal ultrasound.

Results and Discussion: In the first community of 226 people tested, 17 were positive. In the second community, 173 samples were taken and 19 were positive. Globally it represents a prevalence of 9.02% (36/399). The positive cases for HBsAg were distributed by sex: 53% men and 47% women, with an age range of 21 to 56 years with a median of 38 years.

Conclusions: The prevalence of hepatitis B in Aché communities in Paraguay is much higher than in the general population, so it is necessary to carry out a microelimination and prevention plan.

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P-21 THE ROLE SP-INDUCED MAST CELL ACTIVATION IN LIVER FIBROSIS

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Conflict of interest: No

Introduction and Objectives: A high density of liver mast cell is associated to liver damage progression in chronic liver diseases. Emerging evidence have suggested that MC degranulation play a crucial role in liver fibrosis induced by hepatic stellate cells (HSCs) activation. However, the contribution of neuroimmune activation of MC by stress related neuropeptide Substance P(SP)remains unexplored. *Objective:* To evaluate the impact of SP-dependent MC activation in HSCs transdifferentiation.

Patients / Materials and Methods: In vitro studies were performed by using Human mast cell line (HMC-1), stimulated with SP (30min), and HSCs cell line (LX-2), subsequently stimulated by 24h with supernatants of SP-MC activated. Supernatants of unstimulated (ns) MC and MC stimulated with 48/80 compound, as well as a direct LX-2 SP (dSP) stimulation were considered as experimental control. Western blotting was performed to measure alfa-smooth muscle actine (α-SMA) expression level, a HSCs transdifferentiation marker, and GADPH, as loading control. A direct stimulation of HSCs by tryptase for 24h and subsequent α-SMA immunostaining by indirect immunofluorescent was performed for qualitative assessment of HSC morphology. Statistical analyses: ANOVA test in experimental replicates (N=3), by using GraphPad Prisma. Significance was set at $p<0.05$.

Results and Discussion: Despite not statistically differences were observed infold change α-SMA/GADPH level expression among SP stimulated MC and other experimental groups (ns MC, 0.394 ± 0.08; 48/80 MC, 0.256 ± 0.130; SP MC, 0.274 ± 0.120; dSP, 0.621 ± 0.524) p=0.544, morphological changes of HSCs associated to cell transdifferentiation were observed after 24h of tryptase stimulation.

Conclusions: Our results shown that MC tryptase can induce HSCs transdifferentiaton. Short-term effect of SP-MC activation fail to achieve in HSCs activation, suggesting long term MC stimulation need to be explored to evaluate SP-MC impact in HSCs transdifferentiaton. Funding OAIC n°13022.

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P-22 URINARY BIOMARKER NEUTROPHIL GELATINASE-ASSOCIATED LIPOCALIN (NGAL) FOR IDENTIFYING ACUTE KIDNEY INJURY IN PATIENTS WITH SEVERE ALCOHOLIC HEPATITIS AND CIRRHOSIS

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Conflict of interest: No

Introduction and Objectives: Patients with hepatic cirrhosis (HC) and severe alcoholic hepatitis (AH) are at risk of developing acute kidney injury (AKI) due to multiple factors. The main phenotypes of AKI include hypovolemic, acute tubular necrosis (ATN), hepatorenal syndrome (HRS), and miscellaneous types. The urinary biomarker Neutrophil Gelatinase-Associated Lipocalin (NGAL) may be useful for differential diagnosis, as it is an early-produced protein at the renal tubular level.

The objective of this study is to establish the correlation between urinary biomarker NGAL levels and the phenotype of acute kidney injury in cirrhotic patients with severe alcoholic hepatitis.

Patients / Materials and Methods: Descriptive, retrospective, and analytical study of patients with a diagnosis of severe alcoholic hepatitis with cirrhosis, acute kidney injury classified by AKI-ICA (Acute Kidney Injury Criteria-International Club of Ascites), and urinary NGAL values. Three groups were compared: one with hypovolemic AKI, the second group with ATN-type AKI, and a control group of 55 patients with non-alcoholic cirrhosis and ATN-type AKI. *Statistical analysis:* Data are presented as Mean $\pm$ SD or Median (IQR 25-75). Univariate analysis was conducted to compare AKI phenotypes (hypovolemic, ATN, and non-alcoholic etiology ATN with a cohort of 55 patients) with MELD and Child-Pugh as cofactors; significance was considered at ≤ 0.05.

Results and Discussion: A total of 102 patients were included with an average age of 45 (39.7-51) years; 93 (91.17%) were men and 9 (8.82%) were women. Cirrhosis was classified as Child-Pugh A: 4 (3.92%), B: 5 (4.9%), and C: 93 (91.17%). Severe Alcoholic Hepatitis had a MELD score of 32 (26-39) points, a modified Maddrey score of 58.9 (44.9-102.2) points, an ABIC (Age-Bilirubin-INR-Creatinine) score of 8.5 ± 1.4 points, and a Glasgow score of 9 (8-10) points. Acute kidney injury was present in 74.5% (n=76) of cases with the following AKI-ICA grades: 1A: 9 (8.82%), 1B: 9 (8.82%), 2: 17 (16.66%), and 3: 41 (40.19%). The phenotypes were: Hypovolemic AKI: 50 (65.78%), Acute Tubular Necrosis (ATN): 23 (30.26%), and Hepatorenal Syndrome: 3 (3.94%).

The mean NGAL levels for the acute kidney injury phenotypes were hypovolemic 79.64 ± 61.73, ATN 857.79 ± 914.95, and non-alcoholic etiology ATN 743.09 ± 971.39. Significant differences were found between groups $F(74,1)=30.54$ $p\leq.001$; comparisons between groups were important for hypovolemic acute kidney injury vs. ATN $p\leq.001$; hypovolemic acute kidney injury vs. non-alcoholic ATN $p\leq.001$, and not significant between ATN groups p=0.806 (Figure 1).

Conclusions: There is a relationship between urinary biomarker NGAL values and the hypovolemic acute kidney injury phenotype compared to ATN in cirrhotic patients with severe alcoholic hepatitis and ATN of other etiologies; it is an early biomarker of renal damage useful for establishing severity and prognosis.

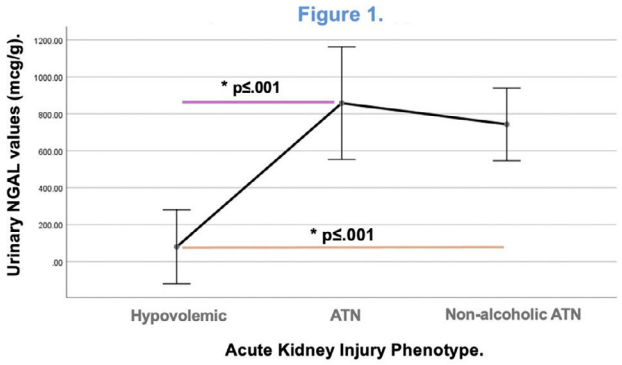

Figure 1. Univariate analysis of AKI phenotypes (hypovolemic, ATN, and Non-alcoholic ATN etiology) with NGAL values.

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P-23 PORTAL VEIN THROMBOSIS IS ASSOCIATED WITH HEPATIC DECOMPENSATIONS WITHOUT LIVER STIFFNESS INCREASE IN HEPATOSPLENIC SCHISTOSOMIASIS

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Conflict of interest: No

Introduction and Objectives: Hepatosplenic schistosomiasis (HSS) is one of the main causes of non-cirrhotic presinusoidal portal hypertension. Although liver stiffness in HSS is typically lower than in cirrhosis, it is still unknown if over the years liver injury related to periportal fibrosis, to metabolic disease or vascular complications can alter liver stiffness and impact in serious hepatic events. This study aims to determine whether metabolic factors, portal vein thrombosis (PVT), or changes in liver stiffness over time are associated with serious hepatic events (SHE) in HSS patients.

Patients / Materials and Methods: In this prospective study, adults with laboratory and radiologically confirmed HSS, without concurrent cirrhosis or other liver diseases, were included. All participants underwent initial transient elastography, followed by a second assessment after at least 3 years. The primary outcome was the occurrence of SHE, defined as upper variceal bleeding and/or ascites.

Results and Discussion: Among the 26 patients studied, 65.4% were male, with a mean age of 55 ± 9 years. The main metabolic comorbidities were obesity (27%), hypertriglyceridemia (8%), low HDL-c (4%), and diabetes (13%). Baseline liver stiffness measurement (LSM) was 9.9 kPa (±3.9) and the controlled attenuation parameter (CAP) was 238 dB/m (IQR 121-270). After a median follow-up of 59 months (IQR 51-64), serious hepatic events occurred in 46% of the patients. There was a non-significant median absolute increase in LSM of 1.4 kPa (IQR -1.5 to +3.6) and a median relative increase of +14% (IQR -17% to +50%), with no statistically significant differences in paired analysis (p = 0.140). No metabolic or anthropometric factors were associated with changes in liver stiffness. PVT occurred in 7 patients (26.9%) and was the only factor significantly associated with the occurrence of serious hepatic events (p = 0.026), although it did not significantly interfere with LSM (p = 0.842).

Conclusions: LSM remained relatively stable in HSS patients over a median follow-up of almost 5 years, proving to be a useful tool in distinguishing HSS from cirrhosis. SHE were primarily associated with PVT, which may further elevate portal pressure.

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P-24 DESCRIPTION OF SERUM MICRORNAS EXPRESSION AMONG INDIVIDUALS WITH VIRAL HEPATITIS AND LONG COVID

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Conflict of interest: No

Introduction and Objectives: Long COVID syndrome affects millions of people and is characterized by the permanence of signs and symptoms after 90 days of SARS-CoV-2 infection. MicroRNAs (miRNAs) are small non-coding RNAs that are related to different conditions and can characterize profiles including liver disease. OBJECTIVES: Characterize the serum expression of miRNAs in relation to viral hepatitis B and C and Long COVID.

Patients / Materials and Methods: Serums were obtained from 69 individuals from 4 groups: (i) only Long COVID (n=18); (ii) Viral Hepatitis/Long COVID (n=21); (iii) only Viral Hepatitis (n=10) and (iv) control individuals (n=20). MiRNAs were isolated using a commercial extraction kit and miR-122, miR-143 and miR-223 were evaluated using quantitative real-time PCR. The expression of the examined genes was calculated from the formula RQ = 2-ΔΔCT. Statistical analysis was carried out using GraphPad Prism 9.5.1 software.

Results and Discussion: The upregulation of the miRNAs analyzed was observed in the groups with diseases compared to the control, all with statistical significance (p<0.05). Of the groups with diseases, the Viral Hepatitis/Long COVID group showed the highest expression of all three miRNAs analyzed. For miR-122, the Viral Hepatitis/Long COVID and only Viral Hepatitis groups were up-regulated with mean RQ of 100.38 ± 122.06 and 80.72 ± 173.16, respectively, compared to the control 3.20 ± 8.75 (p<0.05). For miR-143 and mir-223, the highest expression was in the Hepatitis/Long COVID (mean RQ: 316.36 ± 572.96 and 270.45 ± 558.55, respectively) followed by the only Long COVID group (mean RQ: 158.12 ± 262.42 and 115.65 ± 191.30, respectively), both with statistical significance when compared to the control (mean RQ: 4.12 ± 5.37 and 3.78 ± 8.5, respectively).

Conclusions: The presence of disease affects the expression of these miRNAs when compared to healthy individuals. The description of these targets will contribute to the understanding of Long COVID and its association with other diseases.

https://doi.org/10.1016/j.aohep.2024.101638

P-25 IMPEDANCE CARDIOGRAPHY AND SPLEEN STIFFNESS MEASUREMENT TO ASSESS THERAPEUTIC RESPONSE IN CIRRHOTIC PATIENTS TREATED WITH NON-CARDIOSELECTIVE BETA-BLOCKERS

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Conflict of interest: No

Introduction and Objectives: Non-cardioselective beta-blockers (NCBBs) are used as prophylaxis for variceal bleeding but have limitations in therapeutic follow-up. Impedance cardiography (IC) evaluates systemic hemodynamics, and splenic elastography (SE) quantifies spleen stiffness. A decrease in spleen stiffness measurement (SSM) is associated with a reduction in the hepatic venous pressure gradient, which is the ultimate goal of the treatment. This study aimed to describe systemic hemodynamic changes and SSM in cirrhotic patients under prophylaxis with NCBBs using non-invasive methods.

Patients / Materials and Methods: This observational and prospective study involved cirrhotic patients indicated for NCBB treatment at the Military Hospital from July 2022 to June 2024. Hemodynamic assessment was performed using IC with Z_logic® (Exxer®, Argentina) and SSM with FibroScan® (Echosens®, France). Patients were evaluated before treatment and at the target dose.

Results and Discussion: Twenty-six patients participated in the study, of which 14 were men. The mean age was 57.8 ± 18.4 years. Alcoholic cirrhosis was the main etiology (n=10). 69% were classified as Child-Pugh A. The MELD-Na score was 11.8 ± 5.3. Before treatment, patients did not present parameters of hyperdynamic circulation, and the SSM was 58.9 ± 15.1 kPa. In 19 patients, there was a decrease in SSM, with an average value dropping to 47.6 ± 17.3 kPa (p=0.018). Systemic vascular resistance (SVR) was higher in patients with a decrease in SSM (1538.8 ± 1068.9 dyn.s.cm^{-5} vs. 985.9 ± 164.3 dyn.s.cm^{-5}, p=0.042) (Table). A negative correlation was observed between the change in SVR and the decrease in SSM (p=0.029, Pearson's r = -0.438).

Conclusions: Systemic hemodynamic changes and SSM in NCBB-treated patients were described. SSM showed the most significant changes. A correlation was found between the increase in SVR and the decrease in SSM once the target doses were achieved. According to these findings, SVR values could be a marker of an adequate response to NCBBs.

	Decrease in SSM (n = 19)	No decrease in SSM (n = 7)	P value
Heart Rate (beats/min)*	61 (54 – 68)	67 (56 – 87)	0.072
Cardiac Index (L/min/m²)*	2.8 (1.7 – 4.1)	3.6 (2.7 – 4.4)	0.646
Cardiac Output (L/min)	5.8 +/- 3.5	6.6 +/- 1.9	0.595
Systolic Blood Pressure (mmHg)	110.4 +/- 17.4	113.3 +/- 17.2	0.718
Diastolic Blood Pressure (mmHg)	65.7 +/- 12.2	66.7 +/- 10.8	0.869
Systolic Discharge (mL/min)	91.9 +/- 52.2	99.6 +/- 48.1	0.753
Ventricular-Arterial Coupling Capan: EA/EES	1.0 +/- 0.3	1.0 +/- 0.3	0.956
Ventricular-Arterial Coupling Weissler: EA/EES	1.0 +/- 0.4	1.0 +/- 0.3	0.998
Arterial Compliance (ml/mmHg)*	1.6 (1.2 – 3.0)	2.0 (1.3 – 2.7)	0.886
Thoracic Fluid Content	44.6 +/- 7.1	45.3 +/- 10.4	0.841
Thoracic Fluid Content Normalized by Regression	103.7 +/- 17.0	105.2 +/- 19.6	0.859
Effective Aortic Elastance	1.5 +/- 0.9	1.2 +/- 0.5	0.483
Left Ventricular End-Systolic Elastance Capan*	1.1 (1.0 – 1.5)	1.1 (1.0 – 1.3)	0.370
Left Ventricular End-Systolic Elastance Weissler*	1.2 (1.0 – 1.6)	1.1 (1.1 – 1.2)	0.354
Ejection Fraction Capan (%)	56.6 +/- 5.3	55.0 +/- 6.9	0.571
Ejection Fraction Weissler (%)	58.9 +/- 10.3	55.9 +/- 13.5	0.571
IC/SBP (ml/mmHg.m²)*	24.4 (15.4 – 36.8)	30.5 (26.7 – 36.2)	0.897
Arterial Compliance Index (ml/mmHg.m²)*	1.0 (0.6 – 1.5)	1.2 (0.7 – 1.4)	0.851
Systolic Discharge Index (ml/beat/m²)*	47.8 (26.9 – 55.7)	50.9 (30.5 – 79.5)	0.813
Systemic Vascular Resistance Index (dyn.sec.cm^{-5}.m²)*	2253.5 (1436.9 – 3590.7)	1823.9 (1571.6 – 2014.2)	0.040¶
Mean Arterial Pressure (mmHg)	80.6 +/- 13.7	82.2 +/- 12.8	0.801
Pulse Pressure (mmHg)*	45 (40 – 50)	45 (40 – 53)	0.584
SVR: Suga Index: End-Systolic Pressure/Volume Ratio (mmHg/mL)*	1.4 (1.2 – 3.6)	1.6 (1.0 – 2.0)	0.329
Systemic Vascular Resistance (dyn.sec.cm^{-5})	1538.8 +/- 1068.9	985.9 +/- 164.3	0.042¶

Hemodynamic status in patients who showed a decrease or no decrease in spleen stiffness value under treatment with NCBBs. * Median and interquartile range are provided for these data. Remaining values are expressed as mean ± standard deviation. (¶: $p < 0.05$).

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P-26 EPIGENETIC MARKS IN PATIENTS WITH SUSTAINED VIRAL RESPONSE TO HCV AND RESIDUAL LIVER FIBROSIS ARE RESTORED BY PROLONGED-RELEASE PIRFENIDONE

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Conflict of interest: No

Introduction and Objectives: Patients with residual liver fibrosis following the eradication of hepatitis C virus (HCV) represent a significant clinical challenge due to the continuous risk of disease progression and the development of hepatocellular carcinoma. This study aimed to evaluate the efficacy of a 12-month treatment with

prolonged-release pirfenidone (PR-PFD) plus standard of care for the regression of liver fibrosis and its effect on key epigenetic marks.

Patients / Materials and Methods: HCV patients who responded to direct-acting antivirals (DAAs) and had residual fibrosis received PR-PFD (1200 mg/day) for 12 months. Liver biopsies and serum samples were analyzed at the beginning and end of the treatment. Additionally, six non-fibrotic controls were included to compare the epigenetic marks.

Results and Discussion: 38 patients completed the 12-month treatment, and 28.94% showed a reduction of at least one fibrosis stage according to liver biopsies, while 57.57% experienced an improvement in fibrosis according to transient elastography. Levels of bilirubin, alkaline phosphatase, AST, INR, and APRI significantly decreased. Profibrogenic miRNAs (miR-34a, miR-21, miR-16, miR-181b, miR-200a, and miR-200b) showed a significant increase in advanced fibrosis compared to non-fibrotic controls. Notably, PR-PFD treatment restored the expression of miR-34a, miR-16, miR-192, miR-200a, and miR-122. In cell-free DNA (liquid biopsy), PDGFα showed hypermethylation in patients with mild fibrosis, while in liver tissue hypomethylation was present in non-fibrotic controls. In the circulating DNA of non-fibrotic controls, PPAR-δ was hypermethylated compared to mild and advanced fibrosis cohorts. Treatment with PR-PFD induced hypermethylation in three islets of TGFβ1, suggesting a decrease in the transcription of this profibrogenic cytokine.

Conclusions: These findings indicate, for the first time, that PR-PFD treatment could exert therapeutic effects in Hispanic patients with residual fibrosis by modulating miRNA expression and methylation of specific CpG sites.

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P-27 OBESITY AND LIVER STEATOSIS IN ADOLESCENTS AND YOUNG ADULTS - RELATED FACTORS AND THE IMPACT OF LIFESTYLE

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Conflict of interest: No

Introduction and Objectives: Obesity and lifestyle are factors associated with steatotic liver disease related to metabolic dysfunction (MASLD). *Objective:* To describe the frequency of obesity and MASLD in adolescents/young adults and related factors.

Patients / Materials and Methods: Cross-sectional study. Demographic, anthropometric and lifestyle data were assessed (self-completed questionnaire). All underwent liver elastography with CAP (Fibroscan® Touch 502, Echosens, Fr) to estimate the frequency of steatosis (CAP ≥ 248 DB/m) and significant fibrosis (E > 7.9 kPa). The related factors for obesity and steatosis were assessed by logistic regression analysis.

Results and Discussion: One hundred and twenty-three healthy individuals participated in the study (68.3% women, 19.5 ± 1.5 years). Pre-hypertension, overweight and obesity were identified in 13.3%, 16.3% and 10.6% respectively (62.8% were not satisfied with their weight). Alcohol consumption was 26.7% (2-4 drinks/week), higher in men. 6% had glycated hemoglobin ≥ 5.7% (Pre-diabetes) and 28% had hypercholesterolemia. Steatosis was identified in 21.1%, and no individual had significant fibrosis [median E = 4.4 (3.6 − 5.3) kPa]. The median daily time spent on the computer was 5 (3-8 hours), and 56% used the computer for more than 4 hours/day. The factors that were independently associated with obesity in these adolescents were pre-hypertension (OR 8.7: 95% CI 2.1-36.0, p=0.003) and time spent using a computer (OR 6.1: 1.09-34.9; p=0.039). Obesity (OR 71.4: 95%CI 7.0-725.5, p<0.001), pre-hypertension (OR 7.4: 95%CI 1.3-41.9, p=0.024) and male sex (OR 13.5: 95%CI 1.3-137.3, p=0.027) but not alcohol use was associated with the presence of hepatic steatosis.

Conclusions: The prevalence of obesity, pre-hypertension and hepatic steatosis in adolescents/young adults is high. Lifestyle changes, including better control of screen time, must be implemented urgently in this population to combat obesity and steatosis.

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P-28 CHARACTERIZATION OF CHRONIC LIVER DISEASE, CIRRHOSIS, AND HEPATOCELLULAR CARCINOMA PROGRESSION IN A COLOMBIAN HEALTH MAINTENANCE ORGANIZATION: A TEN-YEAR RETROSPECTIVE STUDY

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Conflict of interest: Yes, Roche employee as co-authors

Introduction and Objectives: Chronic liver disease (CLD), cirrhosis, and hepatocellular carcinoma (HCC) pose a significant global health burden. In Colombia, these conditions challenge the healthcare system, necessitating a thorough understanding of their progression and impact. This study aimed to evaluate the prevalence, progression, median survival time and transition rates of patients with CLD, cirrhosis, and HCC in a Colombian Health Maintenance Organization.

Patients / Materials and Methods: This retrospective cohort study was conducted from 2012 to 2022, identifying patients with CLD, cirrhosis, and HCC using ICD-10 codes from a claims database and electronic health records. The focus was on the cumulative 5- and 10-year survival rates of patients with cirrhosis and HCC.

Results and Discussion: The study included 33,315 CLD patients (median age: 49.1 years; 57.14% female), with the primary causes being fatty liver disease (82.98%) and chronic viral hepatitis (5.18%). Among these, 1,021 developed cirrhosis (median age: 61.45 years; 52.89% female), and 67 progressed to HCC (median age: 67.18 years; 50.75% male). The incidence rate was 165.03 per 10,000 patients. The probabilities of progression from CLD to cirrhosis at 5 and 10 years were 4% and 7%, respectively, whereas the probabilities of developing HCC from cirrhosis were 6% at 5 years and 20% at 10 years. The 5-year and 10-year cumulative survival rates for cirrhosis were 80% and 63%, respectively, whereas those for HCC were 34% and 23%, respectively.

Conclusions: This study provides a comprehensive overview of CLD in Colombia, identifying fatty liver disease as its primary etiology. It reveals the significant risks of disease progression and reduced

survival rates in advanced liver conditions, underscoring the need for improved monitoring and therapeutic interventions within the Colombian healthcare system. Future research should focus on developing effective healthcare strategies to enhance outcomes in these populations.

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P-29 DIFFERENCES IN THE PROGRESSION OF BODY COMPOSITION AND LIVER DAMAGE IN A MURINE MODEL OF METABOLIC SYNDROME: A SEX PERSPECTIVE

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Conflict of interest: No

Introduction and Objectives: The Metabolic dysfunction associated with fatty liver (MAFLD) is the most common hepatic affection worldwide[1]. The critical pathophysiological hallmark of MAFLD is the hepatocyte's accumulation of intracellular fats[2].

The gold standard for diagnosing MAFLD is liver biopsy; however, this method is invasive and cannot be used to follow the progression of the disease. On the other hand, changes in total weight and body fat distribution can be used for clinically suspected indicators of MAFLD progression[3,4]; however, sex dependence is not completely elucidated.

This study aims to investigate the sex differences in body composition changes and their relationship with liver disease progression in the eNOS KO. The eNOS KO is a metabolic model of MAFLD and recapitulates the disease in 8-12 weeks when fed a high-calorie and high-fat diet[5].

Patients / Materials and Methods: We fed 8 groups of 12-week-old eNOS KO mice for 0 weeks (n=6), 4 weeks (n=6), 8 weeks (n=6), and 12 weeks (n=6)

At each time point, an in vivo MRI imaging of body composition and Dixon Quant quantification were acquired using a Philips Ingenia 3T MR scan. We harvested the liver each time for histology analyses and obtained plasma for serological measurements.

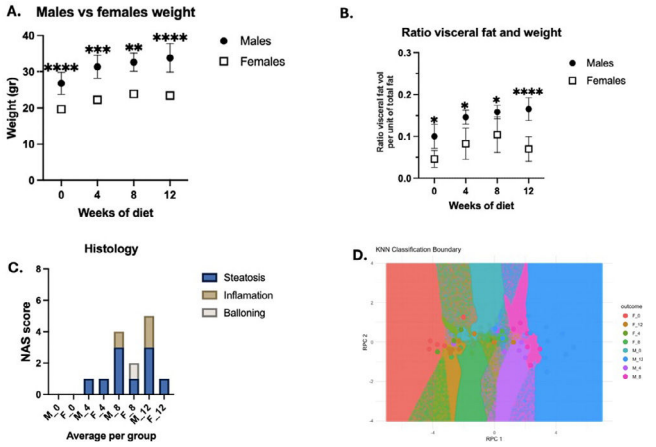
All data were analyzed using no parametric statistics in Prism 9.0.0 (GraphPad Software Inc, La Jolla, CA). Principal Component Analysis (PCA) statistical package R v4.0.2.

Results and Discussion: Males and females increased their weight during the diet intervention (23% males, 13% females, fig. 1A); however, both groups ate a similar amount of food. Males showed greater visceral fat accumulation than females throughout the intervention period; when we adjust for body weight, males have a significantly higher proportion of visceral fat volume per unit of mass than females (fig. 1B).

During the dietary intervention, the mice showed a progressive increase in the NAS score, with females reaching a maximum score of 3 and males reaching 5 (fig. 1C).

Using the dimensionality reduction technique and the KNN classification boundary, it was possible to demonstrate that the animals are grouped according to the progression of the disease but also grouped by sex (fig. 1D).

Conclusions: The progression of MAFLD showed different phenotypes in males and females. Using markers from body composition, liver and muscle fat fraction, it was possible to identify sex-dependent clusters that correlate with the liver damage progression. Our results suggest the need to identify diagnostic and progression markers of MAFLD differentiated by sex.



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P-30 NURSING EXPERIENCE IN THE ONLY ADULT-TO-ADULT LIVING DONOR LIVER TRANSPLANT PROGRAM IN COLOMBIA

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Conflict of interest: No

Introduction and Objectives: Fundación Cardioinfantil is the only healthcare institution (IPS) in Colombia registered at the national level to perform adult living donor liver transplants (THADV). The low availability of deceased donors and the high mortality rate on the waiting list motivated the creation of the program. Nursing plays a fundamental role in promoting and educating the living donor and their family, which is essential for the program's success.

To describe the nursing experience and evaluate the quality of education provided to living donors in the adult liver transplant program at Fundación Cardioinfantil, Colombia.

Patients / Materials and Methods: A descriptive observational study was conducted in the THADV program, which included the review of nursing education records of donors studied between 2017 and 2023. Quantitative and qualitative data were analyzed using R-Studio software to assess the understanding of the information, motivations for donating, and educational needs.

Results and Discussion: A total of 187 donors were studied. 97% adequately understood the education provided regarding anatomy, donation process, evaluation, and motivation. Only 3% of the donors studied required re-education. Among the donors studied, the male gender represented the highest percentage of donations at 51.87%. The median age was 31.9 years, and the most prevalent relationship was "son/daughter" at 59%. Lastly, the primary motivation for donating was love for a loved one and improving their quality of life.

Conclusions: The education provided by the nursing staff to potential donors in the first THADV program in Colombia is effective, well-regarded, and crucial for the program's long-term success and sustainability.

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P-31 ACUTE LIVER FAILURE DUE TO WILSON'S DISEASE IN COSTA RICA: A LOOK AT GENETICS

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Conflict of interest: No

Introduction and Objectives: Acute liver failure (ALF) can be defined as a complex clinical syndrome characterized by coagulopathy, alteration in liver biochemistry and encephalopathy in a patient without underlying chronic liver disease. An exception occurs in patients with Wilson's Disease (WD) manifested precisely by ALF. Costa Rica is known as a country with a high incidence of WD, a pioneer in the study of the genetics of this disease, documenting more than 1,161 pathogenic variants. Taking advantage of the work of the genetics laboratory of the National Children's Hospital, we undertook the task of assessing the genetic spectrum of patients with FHA due to Wilson in the last 2 years in our country. *Objective*: To analyze and describe the genetic spectrum of acute liver failure due to WD in Costa Rica during the last two years.

Patients / Materials and Methods: Molecular Sequencing (Sanger NGS) for molecular confirmation, as well as MLPA techniques and Copy Number Variation Analysis (CNVs).

Results and Discussion: During the period (2022-2023), 86 patients with WD variants were identified, of which 30 had confirmatory genetics of the disease. 4 of them presented as having FHA, being managed with a liver transplant, and to this day all of them are alive. It was evident that 100% of the patients presented the c.3809A>G variant, with half of the patients being homozygous and the other half being c.3207C>A / c.3809A>G compound heterozygotes.

Conclusions: The c.3809A>G variant was found in all patients who presented ALF due to Wilson's disease in Costa Rica in the last 2 years. There is a lack of studies that assess the association between this variant and more aggressive presentations of the disease, however these results allow us to open a debate about the study of genetics as a predictor of ALF due to WD.

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P-32 ACCESSIBILITY TO SEQUENTIAL SYSTEMIC TREATMENT AFTER TACE: IMPACT ON SURVIVAL IN A LATIN AMERICAN PROSPECTIVE COHORT

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Conflict of interest: No

Introduction and Objectives: Stopping rules following transarterial chemoembolization (TACE), either tumor progression or “unTACEable” progression are needed. Avoiding liver decompensation after TACE may lead better access to systemic treatment and survival. These scenarios are unknown in our region. We aimed to evaluate accessibility to systemic therapy following TACE and its impact on survival.

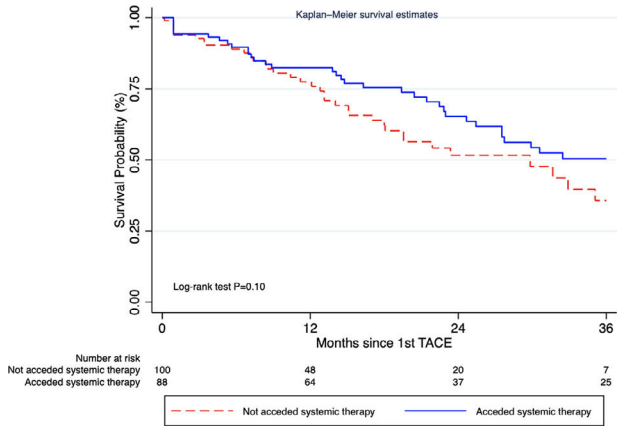
Patients / Materials and Methods: A multicenter prospective cohort study conducted in Latin America, included HCC patients receiving TACE from May 15, 2018 to March 15, 2024. We excluded patients on the liver transplant waiting list, or Child Pugh C. Survival since first TACE was compared between groups accessing (A) and not accessing (no-A) to systemic therapy after TACE through Cox proportional hazard survival analysis, and adjusted treatment effect was further evaluated using a propensity score (PS) and inverse probability treatment weighting (IPTW).

Results and Discussion: rom 258 receiving TACE, 188 were included after excluding 33 patients on the waiting list and 37 Child C (Table). Access to any systemic therapy was 46.8% (95% CI 39.5-54.2%), within a median time from TACE to first line of 9 months (range 3.7-17.0). In group A (n=88) systemic treatments following TACE were sorafenib 62.5%, atezolizumab + bevacizumab 31.8%, and lenvatinib 4.5%. Paradoxically, while presenting better liver function reserve, liver decompensation after TACE was more frequent in group A (7% vs 0%; P=0.004), without significant differences regarding median number of TACEs, modality, or tumor burden. Median survival since first TACE between groups was A 37.4 months vs no-A 29.8 months [HR 0.69 (95% CI 0.44-1.10), adjusted for the HAP score (Figure), which was unchanged after PS and IPTW.

Conclusions: In our region, less than half of HCC systemic treatment candidates acceded to sequential TACE-systemic therapy. Although not statistically significant, due to underpowered estimations, numerically higher survival was achieved with TACE-systemic therapies.

VARIABLE	*Acceded systemic therapy n=88 (46.8%)*	*Not acceded systemic therapy n=100 (53.2%)*	*P values*
Age, years (± SD)	68 ± 9.5	65 ± 9.4	0.04
Gender, Male, n (%)	63 (71.6)	72 (72.0)	0.95
Cirrhosis, n (%)	76 (86.4)	95 (95.0)	0.04
Etiology of liver disease, n (%)			
Viral/non-viral	29 (32.9)/59 (67.0)	38 (38.0)/62 (62.0)	0.47
Hepatitis C	25 (28.4)	33 (33.0)	0.49
Metabolic associated steatotic liver disease	33 (37.5)	29 (29.0)	0.21
Alcoholic liver disease	6 (6.8)	12 (12.0)	0.79
Pre TACE characteristics			
Child Pugh A/B, n (%)	71 (80.7)/17 (19.3)	73 (73.0)/27 (27.0)	0.21
Prior decompensation, n (%)	17 (22.4)	13 (13.7)	0.14
ECOG 0-1, n (%)	87 (98.9)	96 (96.0)	0.22
Median total Bilirubin, mg/dl (IQR)	1.0 (0.7-1.5)	1.2 (1.0-1.6)	0.003
Median Albumin, g/dl (IQR)	3.8 (3.4-4.1)	3.5 (3.2-3.9)	0.008
Median INR, (IQR)	1.1 (1.0-1.3)	1.2 (1.0-1.3)	0.07
Mild/moderate Ascites, n (%)	3 (3.4)	8 (8.0)	0.31
Hepatic encephalopathy, n (%)	3 (3.4)	2 (2.0)	0.48
Median number of HCC nodules, (IQR)	2 (1-3)	2 (1-3)	0.61
Median serum AFP, ng/ml (IQR)	25.0 (7.4-147)	11.3 (4.2-159)	0.21
AFP ≥400 ng/ml, n (%)	11 (15.1)	16 (20.2)	0.40
BCLC before TACE, n (%)			
0	1 (1.1)	3 (3.0)	0.32
A	23 (26.1)	16 (16.0)	
B	55 (62.5)	70 (70.0)	
C	9 (10.2)	11 (11.0)	
HAP score before TACE, n (%)			
A	32 (36.4)	15 (15.0)	0.003
B	37 (42.0)	45 (45.0)	
C	13 (14.8)	28 (28.0)	
D	6 (6.8)	12 (12.0)	
TACE characteristics			
Median target lesion diameter, mm (IQR)	48.0 (35.5-60.0)	42.0 (31.5-55.0)	0.18
TACE modality, n (%)			
DEB-TACE	39 (47.0)	41 (44.6)	0.60
cTACE	44 (53.0)	49 (53.3)	
Other (TAE, chemoinfusion)	-	2 (2.2)	
Unknown	-	-	
Median number of TACEs	2 (2-3)	2 (1-3)	0.09
Post TACE outcomes			
ORR 1st TACE	49 (55.7)	48 (48.0)	0.29
ORR last TACE	19 (24.7)	22 (31.4)	0.36
Liver decompensation, n (%)	7 (7.9)	- (0)	0.004

Comparison between patients acceding and not acceding to systemic therapies



Survival comparison between patients acceding and not acceding to systemic

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P-33 COMBINATION OF FIB-4 SCORE AND D-DIMER TO PREDICT OUTCOME IN HOSPITALIZED COVID-19 PATIENTS

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Conflict of interest: No

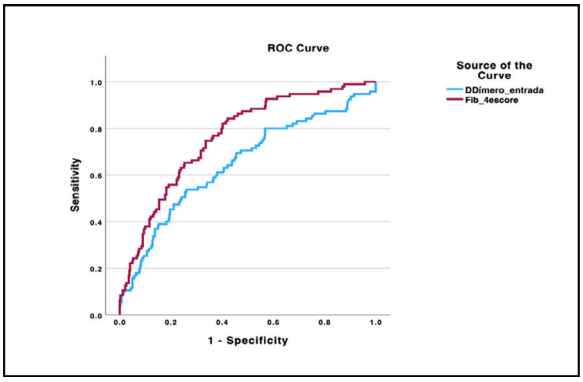
Introduction and Objectives: Identifying risk factors for poor outcomes is crucial for defining treatment strategies and allocating resources in COVID-19. The Fibrose-4 score (FIB-4) and D-dimer (DD) have emerged as prognostic markers; however, precise cutoff points and their combined use remain unstudied. *Objectives:* This study aimed to compare the individual and combined performance of FIB-4 and DD in predicting outcomes among COVID-19 patients.

Patients / Materials and Methods: Materials and Methods: From March to December/2020, hospitalized COVID-19 patients were evaluated regarding laboratory admission tests, chest CT scan, gender, age, lung involvement, ICU admission, hemodialysis, mechanical ventilation, and mortality. Optimal FIB-4 and DD cutoffs to predict in-hospital mortality, aiming to maximize sensitivity and specificity, were established. A sequential diagnostic strategy using both markers was subsequently evaluated.

Results and Discussion: Results and Discussion: Among 518 patients (61±16 years, 64% men), the in-hospital mortality rate was 18%. FIB-4 showed superior performance in predicting mortality compared to DD (AUROC 0.76 *vs.* 0.65, p=0.003) and was chosen as

the first step in sequential analysis. Mortality was higher in patients with FIB-4≥1.76 vs. FIB-4<1.76 (26% vs. 5%, p<0.001) and DD≥2000 ng/mL FEU vs. DD<2000 ng/mL FEU (38% vs. 16%, p<0.001). FIB-4 was used as a screening test, with a cutoff point of 1.76 (90% sensitivity in ROC curve analysis), followed by DD measurement with a cutoff value of 2000 ng/mL FEU (specificity of 90%). Through this approach, a subgroup of patients with a higher mortality rate was identified, compared to the use of FIB-4 alone (48% vs. 26%, p<0.001), missing the identification of only 4.7% of deaths.

Conclusions: The sequential use of FIB-4 and DD represents a comprehensive strategy to identify high-risk COVID-19 patients at hospital admission, potentially minimizing unnecessary DD assessments in patients initially classified by FIB-4 as low-risk for adverse outcomes.



Analyze of the performance of FIB-4 and DD in predicting in-hospital mortality through ROC curve analysis

Table 1. Comparison of primary and secondary outcomes of patients with low and high FIB-4†

	Total (n=518)	FIB-4 < 1.76 (n=191)	FIB-4 ≥ 1.76 (n=327)	p-value
Mortality (n, %)	95 (18%)	9 (5%)	86 (26%)	<0.001
Hospital length of stay (days)	14 ± 17	9 ± 12	16 ± 19	<0.001
ICU‡ admission (n, %)	358 (69%)	120 (63%)	238 (73%)	0.018
ICU length of stay (days)	12 ± 15	8 ± 9	14 ± 17	<0.001
Hemodialysis (n, %)	76 (15%)	7 (4%)	69 (21%)	<0.001
Mechanical ventilation (n, %)	106 (21%)	17 (9%)	89 (27%)	<0.001
Lung involvement on chest CT§ ≥ 50%	67 (13%)	11 (6%)	56 (17%)	<0.001

Abbreviations: †FIB-4, fibrosis-4 score; ‡ICU, intensive care unit; §CT, computed tomography.

Comparison of primary and secondary outcomes of patients with low and high FIB-4

Table 2. Comparison of primary and secondary outcomes of patients with low and high DD†

	Total (n=518)	DD < 2000 (n=454)	DD > 2000 (n=64)	p-value
Mortality (n, %)	95 (18%)	71 (16%)	24 (38%)	<0.001
Hospital length of stay (days)	14 ± 17	13 ± 17	16 ± 16	0.160
ICU‡ admission (n, %)	358 (69%)	301 (66%)	57 (89%)	0.018
ICU length of stay (days)	12 ± 15	12 ± 16	10 ± 10	0.311
Hemodialysis (n, %)	76 (15%)	57 (13%)	19 (30%)	<0.001
Mechanical ventilation (n, %)	106 (21%)	81 (18%)	25 (39%)	<0.001
Lung involvement on chest CT§ ≥ 50%	67 (13%)	45 (12%)	9 (20%)	0.117

Abbreviations: †DD, D-dimer; ‡ICU, intensive care unit; §CT, computed tomography.

Comparison of primary and secondary outcomes of patients with low and high DD

Table 3. Hospital mortality rates according to FIB-4† and DD‡ levels

		Discharge (n=423)	Death (n=95)	p-value
FIB-4 < 1.76	DD < 2000 (n=173)	166 (96%)	7 (4%)	0.203
	DD ≥ 2000 (n=18)	16 (89%)	2 (11%)	
	Total = 191	182 (95%)	9 (5%)	
FIB-4 ≥ 1.76	DD < 2000 (n=281)	217 (77%)	64 (23%)	<0.001
	DD ≥ 2000 (n=46)	24 (52%)	22 (48%)	
	Total = 327	241 (73%)	86 (26%)	
Total (n=518)		423	95	<0.001

Abbreviations: †FIB-4, fibrosis-4 score; ‡DD, D-dimer.

Hospital mortality rates according to FIB-4 and DD levels

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P-34 ALBUMIN-BILIRUBIN GRADE ANALYSIS OF OVERALL SURVIVAL WITH ATEZOLIZUMAB PLUS BEVACIZUMAB IN PATIENTS WITH UNRESECTABLE HEPATOCELLULAR CARCINOMA

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Conflict of interest: No

Introduction and Objectives: Atezolizumab-bevacizumab (atezo-bev) is currently recommended as first-line therapy for patients with unresectable hepatocellular carcinoma (uHCC). However, its effectiveness in patients with albumin-bilirrubin (ALBI) grade 2 has been questioned in a recent post-hoc analysis of the Phase III IMbrave 150 study, which showed that atezo-bev had a similar overall survival (OS) compared to sorafenibe in that population. To evaluate the impact of ALBI grade on OS in patients with uHCC treated as first-line systemic therapy with atezo-bev.

Patients / Materials and Methods: This prospective cohort study was conducted in Hospital de Clinicas de Porto Alegre and Hospital Moinhos de Vento, two tertiary healthcare centers in the city of Porto Alegre, Brazil. It comprised all Child A patients with uHCC that started atezo-bev as first line therapy between August 2020 and May 2023. ALBI grade within 30 days of treatment initiation was calculated using MDCalc, available online free of charge. Mean OS was established for patients with ALBI-1 versus ALBI-2 and 3.

Results and Discussion: A total of 20 Child A patients with uHCC were included, 1 classified as Barcelona Clinic Liver Cancer B (BCLC-B) and 19 as BCLC-C. Mean age was 65 years, 75.6% were males and all were cirrhotic. According to ALBI grade, 10 patients were classified as ALBI-1 and 10 as ALBI non-1 (9 grade 2 and 1 grade 3). Mean OS among those with ALBI-1 was 56.3 weeks and among those with ALBI non-1 was 32 weeks (P<0.05). Macrovascular invasion (MVI) was similar in ALBI-1 vs non-1 (40% vs 50%, respectively). However, variceal bleeding during atezo-bev was remarkably different among ALBI-1 vs non-1 patients (0 vs 50%, respectively).

Conclusions: Overall, the findings of this study showed that the baseline ALBI grade was superior to Child score in predicting the prognosis of patients with uHCC treated with atezo-bev.

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P-35 CLINICAL AND EPIDEMIOLOGICAL DIFFERENCES BETWEEN PATIENTS MONOINFECTED WITH HEPATITIS B AND COINFECTED WITH HEPATITIS DELTA IN A HYPERENDEMIC REGION OF HEPATITIS B

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Conflict of interest: No

Introduction and Objectives: Hepatitis B and co-infection with hepatitis delta are viral liver diseases that can rapidly progress to cirrhosis and hepatocellular carcinoma (HCC). *Objectives:* To compare the epidemiological profile between patients mono-infected with hepatitis B and patients co-infected with hepatitis B and delta in a hyperendemic region.

Patients / Materials and Methods: A cross-sectional and historical cohort study analyzing 286 medical records of co-infected individuals and 649 medical records of mono-infected. Variables: sex, age, stage of liver fibrosis, levels of liver enzymes, albumin, platelets, alpha-fetoprotein, presence of HCC, and outcomes (liver transplant or death).

Results and Discussion: Of the 286 co-infected, 189 (70.5%) were male, mean age 56 ± 19. About stage of fibrosis, 97 (34%) had no fibrosis, 163 (57%) had (F1F3), and 26 (9%) had cirrhosis (F4). Mean GGT were 64.6 ± 86.6 U/L, ALT 36.2 ± 33.1 U/L, AST 41.2 ± 61.1 U/L, albumin 4.1 ± 0.75 g/dL, platelets 192 ± 77 thousand/mm^3, alpha-fetoprotein 122.7 ± 181.1 ng/mL. 12 (4.2%) developed HCC, mean age of 53 ± 11.8; 8 (2.8%) underwent liver transplantation, and 22 (7.7%) died. Of the 659 mono-infected, 449 (68.14%) were male, mean age 53 ± 12.7. About stage of fibrosis, 248 (36%) had no fibrosis, 335 (48.69%) had fibrosis (F1F3), and 105 (15.26%) had cirrhosis (F4). Mean GGT were 64.4 ± 85.9 U/L, ALT 36.2 ± 33.8 U/L, AST 40.7 ± 59.9 U/L, albumin 4.19 ± 0.74 g/dL, platelets 3.27 ± 3.4 thousand/mm^3, alpha-fetoprotein 117.6 ± 2133.5 ng/mL. 31 (4.7%) developed HCC, mean age of 57.4 ± 12.6; 18 (2.7%) died.

Conclusions: Co-infected patients have a higher prevalence of liver fibrosis and develop HCC at a younger age. There was statistical significance in platelet count, indicating greater severity of liver dysfunction in the mono-infected group.

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P-36 THE PROGNOSTIC ROLE OF NEUTROPHIL-LYMPHOCYTE RATIO IN PATIENTS WITH ALCOHOLIC HEPATITIS

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Conflict of interest: No

Introduction and Objectives: The neutrophil-lymphocyte ratio (NLR) has been used as a predictor of survival in critically ill patients. However, there are scarce studies that evaluate the relationship between NLR and alcoholic hepatitis.

To determine the association between NLR with mortality and the degree of acute-on-chronic liver failure (ACLF).

Patients / Materials and Methods: Longitudinal, retrospective, observational and descriptive cohort study of a hospital center. The subjects met criteria for alcohol hepatitis established by the National Institute on Alcohol Abuse and Alcoholism. Patients with concomitant infections or conditions that could alter the NLR were excluded.

Statistical analysis was performed with the SPSS version 26 program. To compare clinical values, Student's T-test or Mann Whitney U test were performed according to the distribution of the data. The association analysis between NLR and 30-day mortality, as well as the association between NLR and ACLF degrees, were carried out using a point-biserial correlation. Cohen's d test was performed to determine the effect size.

Results and Discussion: This study included 58 patients with alcoholic hepatis (98% men). There was significant difference between patients who died within 28 days compared with those who survived (Table 1). The mean NLR value in patients who survived was approximately three times the value presented in patients who died within 28 days ($p < 0.001$). A gradual increase in severity-dependent NLR was identified based on the CLIF-C ACLF SCORE.

In addition, significant associations between NLR and 28-day mortality ($p < 0.001$), and between NLR and the degree of ACLF ($p < 0.001$) were found. According to Cohen's test, the effect size of the NLR was moderate (0.678).

Conclusions: The association between high NLR levels and mortality within 28 days is confirmed. Furthermore, there is an association between NLR and the severity of ACLF. Therefore, the NLR could be a useful prognostic factor in the clinical practice for alcoholic hepatitis.

Table 1. Comparison of clinical data and severity scales between surviving and non-surviving subjects at 28 days.			
Variable	Death in the first 28 days (n=33)	Survivors after 28 days (n=25)	*p*
Age	46.0 ± 8.7	41.8 ± 10.1	0.094
Leukocytes	21.6 (15.0, 29.6)	9.6 (7.7, 13.2)	< 0.001
Platelets	168.9 ± 97.1	138.8 ± 91.9	0.234
PT	23.0 (19.1, 28.6)	22.2 (17.9, 25.7)	0.236
BT	24.4 ± 9.3	15.0 ± 10.1	< 0.001
INR	2.00 (1.79, 2.70)	1.94 (1.50, 2.27)	0.118
Cr	2.16 (1.30, 3.19)	1.30 (0.82, 2.09)	0.007
NLR	23.0 (18.0, 34.0)	8.0 (5.0, 11.0)	< 0.001
CLIF-C ACLF Score	56.18 ± 6.28	46.88 ± 6.35	< 0.001
MADDREY	71.3 (55.3, 99.1)	65.6 (33.4, 74.5)	0.059
MELD	35.7 ± 12.5	25.0 ± 8.6	< 0.001
MELD NA	39.2 ± 15.8	29.7 ± 13.8	0.021

Abbreviations: *PT: prothrombin time, BT: Total bilirubin, Cr: creatinine, NLR: neutrophil lymphocyte ratio.*

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P-37 ENHANCED DIAGNOSTIC ACCURACY OF FIB-4 WITH M30 FOR IDENTIFYING AT-RISK PATIENTS WITH STEATOTIC LIVER DISEASE

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Conflict of interest: No

Introduction and Objectives: Liver fibrosis is an important prognostic factor in alcohol-associated liver disease (ALD) and metabolic dysfunction-associated steatohepatitis liver disease (MASLD). New drugs in steatotic liver disease (SLD), such as Resmetirom, are indicated in individuals with at least significant fibrosis. Cytokeratin-18 is a hepatocyte cytoskeleton protein that is released during apoptosis in its cleaved form by caspases (M30) and can be used as a non-invasive test (NIT) to stratify liver fibrosis. However, data on its performance is scarce in the Hispanic population. We aim to evaluate the diagnostic performance and additive value of M30 to identify significant fibrosis in a cohort of patients with ALD and MASLD.

Patients / Materials and Methods: We conducted a cross-sectional cohort study of patients with ALD and MASLD who underwent liver biopsy or transient elastography between 2014–2023. The cut-off points for significant fibrosis (F2) and cirrhosis by transient elastography were ≥7.8 and ≥12.5 kPa, respectively. A receiver operator characteristic (ROC) was used to assess the performance of M30 and FIB-4.

Results and Discussion: We included 55 ALD and 43 MASLD patients. The median age was 51 [42–60] years and 70.4% were male. Median liver stiffness was 6.8 [4.6–27.9] kPa and median M30 190.4 [146-274.8] U/l. Around 41.8% had F2 and 33.6% had cirrhosis. FIB-4 outperformed M30 in predicting significant fibrosis (AUROC 0.88 vs. 0.66, p-value=0.007) and cirrhosis (AUROC 0.93 vs. 0.56, p-value<0.001) (Figure 1). Five out of 29 (17.2%) patients had a low FIB-4 (<1.3) but significant fibrosis; in this scenario, M30 correctly identified F2 in 4 (80%) of them. Thus, the misclassification of significant fibrosis was reduced from 5.1% to 1.0% using a stepwise assessment with FIB-4 and then M30.

Conclusions: M30 had limited diagnostic value in detecting liver fibrosis in the Hispanic population, but its use in combination with FIB-4 can identify more patients with significant fibrosis than FIB-4 alone.

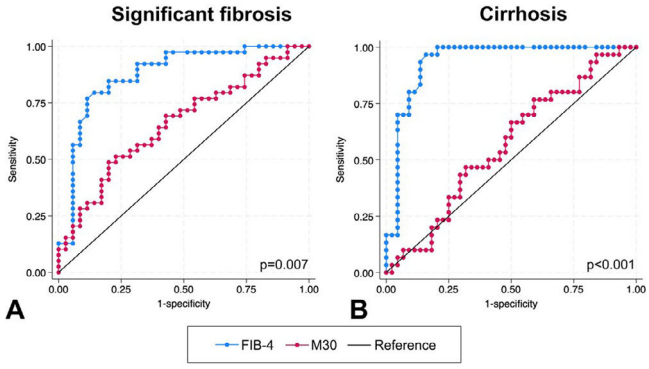

Figure 1. Receiver operator characteristic curves of M30 and FIB-4 to predict significant fibrosis and cirrhosis in a cohort of patients with alcohol-associated liver disease (ALD) and metabolic dysfunction-associated steatohepatitis liver disease (MASLD)

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P-38 EVALUATION OF THE GENETIC AND VIROLOGICAL PROFILE OF PREGNANT WOMEN INFECTED WITH HEPATITIS B AND C VIRUSES IN A REFERENCE CENTER IN RIO DE JANEIRO, BETWEEN 2016 AND 2022

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Conflict of interest: No

Introduction and Objectives: It is estimated that there are around 400 million people living with hepatitis B (HBV) and/or C virus (HCV) infections worldwide. This situation is relevant because both viruses can be transmitted vertically (VT). Despite efforts to prevent VT, many measures still need to be reinforced, especially

regarding the spread of clinically relevant viral variants. Therefore, this study aimed to demonstrate the clinical/laboratory profile of pregnant women identified as positive for HBV and HCV during prenatal care, and referred to a specialized viral hepatitis unit in Rio de Janeiro between 2016-2022, and to identify those with clinically relevant mutations that can be transmitted vertically.

Patients / Materials and Methods: To this end, all pregnant women with positive rapid tests were retested by eletrochemioluminescence using commercial tests for HBV antigens and antibodies against HBV and HCV. In addition, molecular tests were carried out to quantify HBV DNA and/or HCV RNA. Liver enzyme tests were also carried out in order to classify pregnant women according to HBV clinical phase.

Results and Discussion: Two hundred and thirty-two pregnants women with HBV and HCV infection were analyzed. Among the 138 pregnant women with HBV, 95% had HBeAg-negative chronic infection and the mean viral load was 3.70 log IU/ml. Up to now, 6 samples were sequenced, Genotypes A1 (n=5/6,83%) and D3 (n=1/6,16%) were identified and the mutation Y100C was found. In 94 pregnant women with HCV, 75.7% had HCV RNA successfully amplified, with subtypes 1a (n=12/33; 36,4%), 1b (n=17/33; 51,5%) and 3a (n=3/33; 9,1%) detected. Clinically relevant mutations were found V321L, V321IV, C316N.

Conclusions: Identifying mutations in HBV and HCV infections is crucial for epidemiological surveillance and postpartum treatment. Our findings highlight the importance of monitoring drug-resistant mutations in pregnant women with these infections.

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P-39 PREVALENCE AND FACTORS ASSOCIATED WITH TREATMENT ADHERENCE IN LIVER TRANSPLANT PATIENTS ATTENDED AT LACARDIO, BOGOTÁ, COLOMBIA

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Conflict of interest: No

Introduction and Objectives: Patients undergoing liver transplantation need long-term follow-up to ensure graft success and survival. Adherence to lifestyle recommendations and medication, particularly immunosuppressive therapy, is a key factor in graft survival and in reducing public health costs. Adherence impacts graft survival and public health costs. Given its importance and the lack of research in Latin America and Colombia, we assess local adherence levels and explore factors associated with non-adherence. *Objective:* To determine the prevalence of adherence to pharmacological and non-pharmacological treatments and the associated factors among liver transplant patients treated at a tertiary care hospital in Colombia

Patients / Materials and Methods: The BAASIS questionnaire was used to assess adherence among liver transplant patients at a specialized transplant center in Colombia. In addition, ITBS questionnaire was used for the identification of barriers to immunosuppressive medication adherence (external vs. patient-controlled barriers). Demographic and clinical data were collected from 2006 to 2024.

Results and Discussion: In this study, 398 post-transplant patients with a mean age of 49 at transplantation were analyzed. Logistic regression using the BAASIS scale showed 35.1% (140) were non-adherent to their immunosuppressive regimen. The ITBS scale categorized barriers as unintentional (e.g., skipping medications due to travel, depression, or running out) or intentional (e.g., forgetting, side effects, feeling well, or routine deviations). Bivariate analysis revealed a significant association with adherence at a 5% significance level. Pre-transplant follow-up variables also showed links to non-adherence and prior assessments of unsuitability by social work or psychology.

Conclusions: Non-adherence in post-transplant patients is influenced by both intentional and unintentional factors, underscoring the need to address these in pre- and post-transplant education. Special attention should be given to non-adherence histories during pre-transplant evaluations and psychological or social work assessments that deem patients unsuitable at any point. More targeted follow-up and education could significantly reduce non-adherence rates.

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P-40 ASSOCIATION BETWEEN LIVER STIFFNESS MEASUREMENTS USING MR ELASTOGRAPHY AND PORTOSYSTEMIC SHUNTS IN PATIENTS WITH ADVANCED CHRONIC LIVER DISEASE

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Conflict of interest: No

Introduction and Objectives: Spontaneous portosystemic shunts (SPSSs) have been reported in 60% of cirrhotic patients and its prevalence increases with the deterioration of liver function. SPSSs are often associated with hepatic encephalopathy, gastroesophageal varices and increased risk for complications and death. Therefore, the selection of patients with a high probability of having significant SPSSs can have great impact in the management of patients with liver cirrhosis. In cirrhotic patients, liver stiffness measurements show a good correlation with the severity of disease and the occurrence of gastroesophageal varices. We hypothesize that liver stiffness values could also correlate well or even predict the presence of significant portosystemic shunts.

Patients / Materials and Methods: This was a retrospective study of 51 patients with advanced chronic liver disease/cirrhosis who underwent liver magnetic resonance imaging with elastography (MRE) from 2022 to 2023. MR images were reviewed by two radiologists looking for the presence of SPSSs, defined as spontaneous communications between the portal venous system and/or splanchnic veins and the systemic venous system. In addition, presence or absence of gastroesophageal varices was also recorded. Regarding SPSSs, patients were assigned into two groups: with and without SPSSs. Among patients with SPSSs patients were assigned into two groups: Large SPSSs (L-SPSSs, ≥8 mm), small SPSSs (S-SPSSs <8mm), or without SPSSsMedian. Levels of MRE between patients with and without SPSSs was analyzed and the accuracy of liver stiffness by MRE to predict SPSSs was evaluated by AUROC curves. A statistical significance level of 0.05 was adopted.

Results and Discussion: Among 51 included patients, 68% were male, and mean age was 64 years old. SPSSs were present in 28% of patients with only 6.5% having LSPSSs. Gastroesophageal varices were identified in 32%. Mean liver MRE stiffness values was 4.4 kPa (3.0 – 13.1 kPa). The performance of MRE for the prediction of SPSSs and gastresophageal varices was good, with an AUROC of 0.85 (0.75 – 0.97; p< 0.001) for SPSSs and 0.84 (0.72 – 0.96; p<0.001) for Gastroesophageal varices. The best MRE elastography cutoff for the presence of SPSSs and gastroesophageal varices was 5.0 kPa (S=85%,

Sp=83%,PPV=61% and NPV=93%) and for the detection of gastroesophageal varices was 4.4 KPa (S=83%,Sp=77%, PPV=66% and NPV=91%).

Conclusions: MRE elastography is a reliable tool to adequately exclude non-invasively the presence of portosystemic shunts and gastresophageal varices and help identify patients at low risk for the development of related complications.

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P-41 MICRORNAs FROM EVs AS POTENTIAL LIVER FIBROSIS NON-INVASIVE BIOMARKERS IN CHRONIC HEPATITIS C

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Conflict of interest: No

Introduction and Objectives: Liver fibrosis evaluation is essential in management of chronic hepatitis C (CHC). Extracellular vesicles (EVs) are essential components of liquid biopsy. MicroRNAs (miRNAs) within EVs could serve as biomarkers of damage due to their role in regulating fibrogenesis through gene expression modulation. The objective was: evaluate plasma derived (p)EVs-miRNAs as biomarkers of significant fibrosis (F≥2) in CHC.

Patients / Materials and Methods: pEVs were isolated using exoRNeasy kit (QIAGEN) from 50 CHC cases (36% F≥2, assessed by liver fibrosis). miRNA-enriched RNA was extracted, sequenced by NGS and significant differential expression (SDE) analysis was performed between F≥2 and F<2 cases [fold change (FC)≥1.5; false discovery rate (FDR)≤0.2]. Diagnostic value of SDE miRNAs was assessed using ROC curves analysis. A score to predict significant fibrosis was generated by a binomial logistic regression model and its performance was compared with those of APRI and FIB-4 indexes. Plasma expression of SDE miRNAs was evaluated by RT-qPCR.

Results and Discussion: SDE analysis showed upregulation of miR-122-5p (FC=3.06, FDR<0.001) and downregulation of miR-92a-3p (FC=-1.5, FDR=0.051) in pEVs from F≥2 individuals. Each miRNA showed moderate power to discriminate F≥2 cases, but excellent power in the generated score ($AUROC_{miR-122}$=0.746; $AUROC_{miR-92a}$=0.767; $AUROC_{score}$=0.858). By APRI and FIB-4 indexes, 15 and 14 cases were classified as indeterminate, respectively. The score managed to correctly classify 11 APRI and 13 FIB-4 misclassified cases (Table 1). In plasma, no differences were observed in miRNA expression between fibrosis stages ($p\text{-value}_{miR-122}$=0.874; $p\text{-value}_{miR-92a}$=0.650).

Conclusions: Different stages of liver fibrosis showed specific pEVs-miRNA expression signatures. The combined evaluation of miR-122 and miR-92a in the score demonstrated excellent performance for discriminating F≥2 cases and improve APRI and FIB-4 performances. Direct plasma evaluation did not reflect the profiles observed in pEVs, highlighting the value of pEVs as potential biomarkers of liver fibrosis.

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P-42 ASSESSING THE TRAINING NEEDS OF PERUVIAN HEALTHCARE PROFESSIONALS

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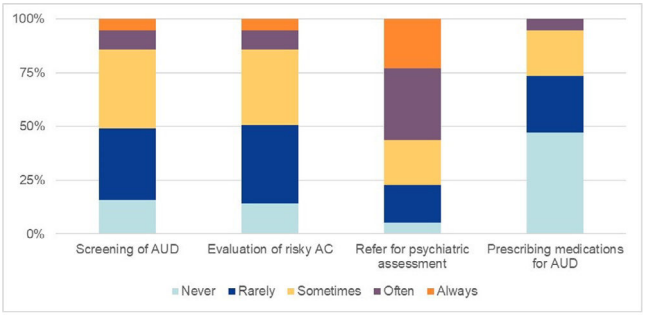
Conflict of interest: No

Introduction and Objectives: Alcohol-associated liver disease (ALD) is the most frequent cause of cirrhosis in Western countries. Although Peru does not have the highest alcohol per capita consumption, the prevalence of alcohol-related health consequences is extremely high. To overcome the higher burden of disease due to alcohol, we aimed to assess the understanding and knowledge gaps in the management of alcohol use disorder (AUD) and ALD in Peruvian healthcare providers.

Patients / Materials and Methods: We performed a non-probabilistic survey among physicians who are involved in the assessment and treatment of patients with ALD. Firstly, we developed fourteen questions from an expert panel on ALD in Latin America. Once the instrument was refined, it was submitted to physicians through the Peruvian Association for the Study of the Liver (APEH). The questionnaire included demographic data, assessment of alcohol intake in clinical practice, AUD treatment, and treatment of alcohol-associated hepatitis.

Results and Discussion: Fifty-seven healthcare professionals were recruited. Median age was 39 [34–51] years old, and 51% were women. Eighty-one percent of physicians were gastroenterologists and the median experience time was 7 [2–17]. Most physicians do not assess alcohol intake routinely (86%) and only 14% screen for AUD. Also, about 75% rarely or never prescribe medications for AUD, while only 56% refer to addition therapist routinely. Finally, only 19% perform a management of alcohol-associated hepatitis in line with the current recommendation, and 11% of participants do not use any international guidelines for managing ALD.

Conclusions: There is a huge gap in the clinical skills to assess and manage AUD and ALD properly. Training opportunities are urgently needed in the Peruvian health care providers to early detect and treat AUD and its striking consequences.



Assessment of diary clinical practice

	N = 57
Age (years)	39 (34-51)
Sex (%)	
Women	29 (51)
Medical doctor (%)	
Gastroenterologist	46 (81)
General practitioner	11 (19)
Years of experience	7 (2-17)
Region (%)	
Coast	45 (79)
Highland	12 (21)
Medical center (%)	
Private outpatient	3 (5)
Primary health care	7 (12)
Secondary health care	23 (40)
Tertiary health care	24 (42)

General characteristics

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P-43 PROGNOSTIC MODELS AFTER TRANSARTERIAL CHEMOEMBOLIZATION IN A LATIN AMERICAN PROSPECTIVE COHORT STUDY

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Conflict of interest: No

Introduction and Objectives: With the advent of new therapeutic options for patients with hepatocellular carcinoma (HCC) at intermediate stage of the Barcelona Clinic Liver Cancer (BCLC), regional real-world data regarding prognostic survival factors are significant. The aim of this study was to evaluate pre and post-prognostic survival variables after transarterial chemoembolization (TACE).

Patients / Materials and Methods: A multicenter prospective cohort study was conducted in Argentina, Chile, Brazil, and Colombia, including HCC patients at BCLC B or C stages who were treated with TACE from 2018 to 2024. The effect on survival since date of first TACE was evaluated through Cox proportional hazard survival analysis. Harrell's c-statistic index for model discrimination was estimated through somers-d.

Results and Discussion: Overall, 625 patients were included, of which 41.3% (n=258) received TACE (Table 1), and 4.6% (n=29) selective internal radiation therapy (SIRT). The median number of TACEs procedures was 2 (range 1-3); 54.5% conventional TACE, and 44.7% with drug-eluting beads. Median follow-up since first TACE was 17.7 months, with a median overall survival of 27.3 months (range 21.9-35.1). Radiological objective response rates (ORR) after first and last TACEs were 49.2% (95% CI 42.9-55.5%), and 29.0% (95% CI 22.6-36.1%), with significantly better post TACE survival [HR of 0.48 (95% CI 0.29-0.78); P=0.003]. The pre-TACE prognostic model showed liver decompensation was an independent variable associated with increased post TACE mortality was [HR 2.0 (CI 1.28-3.12)], adjusted for performance status, and the HAP score. Pre and post-TACE model showed that the effect of liver decompensation was adjusted [HR 1.7 (CI 0.98-2.8); P=0.06], when ORR after last TACE was achieved and included in this model [HR 0.48 (CI 0.29-0.79); P=0.004], with a c-statistic index of 0.66 (95% CI 0.60-0.72).

Conclusions: Radiological response after sequential TACE might reduce the negative effect of liver decompensation on post-TACE survival. However, cautious TACE stopping rules should be considered.

Table 1. Patient and tumor characteristics immediately before transarterial chemoembolization (TACE).

VARIABLE	*TACE n=258 (41.3%)*
Age, years (± SD)	66 ± 9
Male gender, n (%)	192 (74.4)
Cirrhosis, n (%)	231 (89.5)
Median total Bilirubin, mg/dl (IQR)	1.1 (0.8-1.6)
Median Albumin, g/dl (IQR)	3.6 (3.1-4.0)
Median INR, (IQR)	1.2 (1.0-1.3)
Mild Ascites, n (%)	27 (10.5)
Child Pugh A/B/C, n (%)	162 (62.8)/54 (20.9)/42 (16.3)
Prior decompensation, n (%)	73 (28.3)
ECOG 0-1, n (%)	252 (97.7)
Median number of HCC nodules, (IQR)	2 (1-3)
Median target lesion diameter, mm (IQR)	45 (33-60)
Median serum AFP, ng/ml (IQR)	17.7 (5.0-147)
AFP ≥400 ng/ml, n (%)	34 (17.5)
BCLC before TACE, n (%)	
0	4 (1.5)
A	57 (22.1)
B	135 (52.3)
C	20 (7.7)
D	42 (16.3)
HAP score before TACE, n (%)	
A	54 (20.9)
B	98 (38.0)
C	76 (29.5)
D	30 (11.6)

Abbreviations: HCC: hepatocellular carcinoma, AFP: alpha-fetoprotein; IQR: interquartile range.

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P-44 LONG-TERM SURVIVAL IN PATIENTS WITH LIVER TRANSPLANTATION

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Conflict of interest: No

Introduction and Objectives: Background: Liver transplant is the only effective treatment for acute or chronic liver diseases in the terminal stage. With advances in the management of immunosuppression and surgical techniques, survival is high, but it can decrease for different reasons depending on the time of evolution of the transplant. *Aim:* Determine long-term survival in patients with liver transplants and the main causes of mortality.

Patients / Materials and Methods: Methods: It is a descriptive, retrospective study in patients with liver transplant from a cadaveric donor, carried out at the Medical Surgical Research Center between 1999 and 2019, 117 patients with one year or more of survival were included. The main variables were causes of mortality and survival at 5, 10, 15 and 20 years, overall and by indication of the transplant (grouped into cirrhosis due to hepatitis B and C viruses, due to alcohol, autoimmune and other etiologies), which were obtained from the Liver Transplant Database. For the statistical analysis, summary measures were used according to the type of variable and the Kaplan Meier method for survival analysis.

Results and Discussion: Results: Of the 117 patients, 69 had died as of June 2024. Overall survival was 74.4%, 58.4%. 37.5% and 27.5% at 5, 10, 15 and 20 years respectively, with an overall mean of 13 years (95% CI 11.3-14.5), in relation to survival related to the etiology of the transplant the average was 9.3 years for viral cirrhosis, 9.9 for alcoholic etiology, 14.3 for autoimmune, and 15.8 years for others. The most frequent causes of long-term mortality were recurrence of the primary disease (20.5%) with a predominance of hepatitis C virus and de novo tumors (11.1%).

Conclusions: The mean long-term overall survival in patients with liver transplantation was greater than 10 years, with a negative impact of cirrhosis due to viruses and alcohol as an indication for transplant.

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P-45 ANALYSIS OF SURVIVAL RATE AND FACTORS ASSOCIATED WITH LIVER RETRANSPLANTATION: 18-YEAR EXPERIENCE IN BOGOTÁ - COLOMBIA

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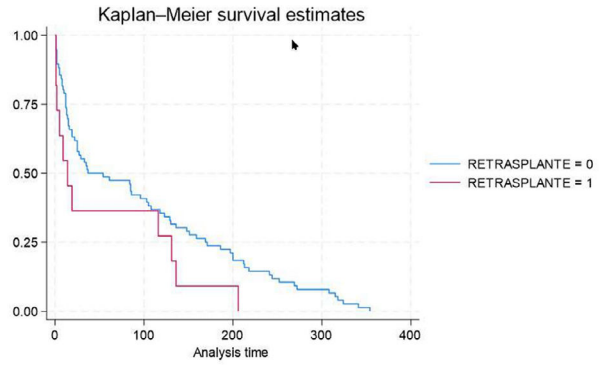
Conflict of interest: No

Introduction and Objectives: Liver retransplantation is the only therapeutic option for irreversible hepatic graft failure, this situation raises ethical and practical issues, due to the diminished survival of the second graft and the disparity between the number of liver donors and potential recipients in Colombia. To compare first and third year survival between patients with a single liver transplant and those who have undergone liver retransplantation

Patients / Materials and Methods: Analytical observational study of a retrospective cohort patients with liver transplant and retransplant (over 18 years old) at the Cardioinfantil Foundation between December 2005 and December 2023. The associated factors that together explain liver retransplantation, the Cox regression model with constant time and the negative log binomial model will be used. The analysis will be performed using R software. The survival analysis of patients with liver transplant and retransplantation will be performed using the Kaplan Meier method. All statistical tests will be evaluated with a significance level of 5% ($p < 0.05$).

Results and Discussion: Between 2005 and 2023, 689 liver transplants were performed in adult patients at our hospital, 39 of which (5.6%) were liver retransplantation. The first year retransplant survival was 83.3% and the third year 72.2%, compared with the first year transplant survival 86.1% and the third year 82%. Of the 39 retransplant cases 21 cases (53.8%) were early (< 6 months) while 18 cases (46.1%) were late (> 6 months). Regarding the causes that led to early liver retransplantation, the most frequent was arterial thrombosis 13 (33.3%) cases, followed by primary graft dysfunction 6 cases (15.3%). For late retransplantation the most frequent cause was chronic cellular rejection 7 cases (17.9%) followed by recurrence of the primary disease 3 cases (7.6%).

Conclusions: the present study, liver retransplantation is a safe treatment option with mortality compared to liver transplantation and our results do not differ from the global epidemiology.



Kapplan Meier supervivencia trasplante vs retrasplante

https://doi.org/10.1016/j.aohep.2024.101659

P-46 IMMUNOSUPPRESSION IN POST LIVER TRANSPLANTATION: REVIEW OF THE EXPERIENCE IN A CHILEAN UNIVERSITY HOSPITAL

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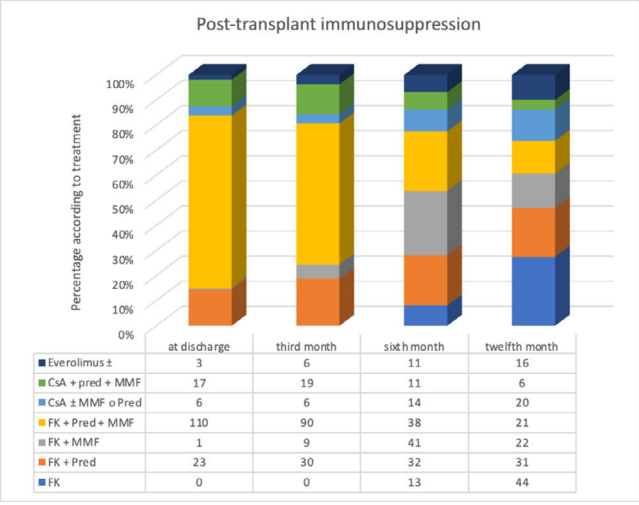
Conflict of interest: No

Introduction and Objectives: Liver transplantation is currently a cost-effective therapy for the treatment of advanced liver diseases. Immunosuppression plays a key role in the prevention of organ rejection. Corticosteroids and anti-CD-25 antibodies are used in the induction phase, while calcineurin inhibitors, mycophenolate, corticosteroids and mTOR inhibitors are used in the maintenance phase. *Objectives:* To describe the type of immunosuppression regimen used in the management of liver transplant patients during the first post-transplant year.

Patients / Materials and Methods: Observational, retrospective cohort study of adult patients undergoing liver transplantation at the Hospital Clínico UC (Santiago, Chile), between January 2020 and June 2023. Demographic and clinical data were included. Immunosuppression regimens used in four periods during the first year of follow-up (at discharge, third, sixth and twelfth month) were evaluated. Pediatric patients, combined transplants and cases with post-transplant follow-up in centers not associated with our hospital were excluded.

Results and Discussion: A total of 160 patients were analyzed, of whom 149 (93.1%) were cirrhotic. The predominant etiology was MASLD (34.3%). The average age was 54 years, with a predominance of females (53.7%). The active immunosuppression regimen at discharge and at the third month of follow-up was the combination of tacrolimus, mycophenolate, and prednisone, representing 68% and 56%, respectively. The dual tacrolimus-mycophenolate mofetil regimen was the most prevalent at month 6 (26%), while at one year of follow-up, tacrolimus monotherapy was the most commonly used (27%). Only 34% of cases were able to maintain monotherapy at one year after transplant (43 pacients with tacrolimus, 6 with cyclosporine and 6 with everolimus).

Conclusions: Tacrolimus is the most frequently used immunosuppressant in the maintenance phase. The use of mycofenate mofetil and prednisone decreases as time progresses post-transplant. Only one third of cases achieved monotherapy at one year of follow-up.



	at discharge	third month	sixth month	twelfth month
Everolimus ±	3	6	11	16
CsA + pred + MMF	17	19	11	6
CsA ± MMF o Pred	6	6	14	20
FK + Pred + MMF	110	90	38	21
FK + MMF	1	9	41	22
FK + Pred	23	30	32	31
FK	0	0	13	44

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P-47 DEGREES OF LIVER STIFFNESS AND STEATOSIS AS PREDICTORS OF PREECLAMPSIA COMPLICATIONS

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Conflict of interest: No

Introduction and Objectives: Liver damage in preeclampsia is caused by antiangiogenic factors such as soluble tyrosine kinase, placental growth factor, and soluble endoglin. These induce endothelial injury and fibrin deposits in the hepatic microcirculation, thus modifying the physical characteristics of the liver parenchyma and therefore its stiffness. *Objectives:* To evaluate the correlation between the degree of liver stiffness and the severity of patients with preeclampsia.

Patients / Materials and Methods: This study was observational, analytical, cross-sectional, and prospective. It included pregnant women from the 20th week of gestation, dividing them into three groups: those with a normal pregnancy, those with pre-eclampsia, and those with severe features of pre-eclampsia. Transient elastography was conducted on all participants. Pregnant women with chronic systemic arterial hypertension or pre-existing liver diseases were excluded. Descriptive statistics for measures of central tendency were utilized, and a univariate analysis was performed, considering kilopascals as the dependent variable, the three groups as fixed factors, and BMI as a covariate.

Results and Discussion: 34 patients were included, 9 in the control group, 12 in the preeclampsia group and 13 in the preeclampsia with severity features group. The mean gestational age was 32 ± 5.8 weeks. The mean age was 27.26 ± 7.73 years. The mean BMI was 28.88 ± 4.83. The mean kPa in the control group was 4.35 ± 0.98, in the preeclampsia without severity features group 5.05 ± 0.87, and in the preeclampsia with severity features group 6.67 ± 1.84. The mean control group CAP was 202.82 ± 21.26 db/m2, in the preeclampsia without severity features group was 227.81 ± 47.81 db/m2, and in the preeclampsia with severity features group was 215.28 ± 37.41 db/m2. Univariate contrasts were significant for preeclampsia with severity criteria features versus preeclampsia F (2 of 23) = 7.679, p = 0.011. Preeclampsia with severity features versus control F (2 of 22) = 11.134, p = 0.003

Conclusions: Liver stiffness significantly increases in patients with preeclampsia and preeclampsia with severity features measured by transient elastography. This increase is due to intrahepatic fibrin deposition, but not by fibrosis (collagen) itself. Transient elastography could be useful as a predictor of severity in patients with preeclampsia.

Ethical statement: Study approved by the research ethics committee of the General Hospital of Mexico registration key DI/23/310-E/03/37.

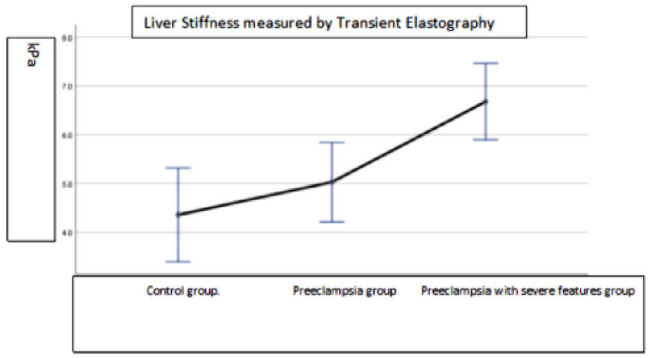

figure 1

https://doi.org/10.1016/j.aohep.2024.101661

P-48 COMPARISON OF THE ALBI MODEL (ALBUMIN/BILIRUBIN INDEX) WITH ESTABLISHED SCALES AS PREDICTOR OF RESPONSE TO STEROID TREATMENT IN PATIENTS WITH SEVERE ALCOHOLIC HEPATITIS

CLAUDIA LETICIA DORANTES NAVA[1], Maria de Fatima Higuera de la Tijera[1], Juan Carlos Silis Cravioto[1], Julio Cesar Zavala Castillo[1], Miguel Yael Carmona Castillo[1], Ernesto Javier Medina Avalos[1], Sandra Teutli Carrion[1], Raquel Yazmin Lopez Perez[1]

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Conflict of interest: No

Introduction and Objectives: Alcoholic hepatitis (AH) is acute liver inflammation associated with excessive alcohol consumption. Due to its high mortality rate, various predictive models have been studied. The ALBI model (serum albumin/bilirubin index) predicts patient mortality without the need for subjective data in patients with chronic liver disease, achieving significantly better performance than Child Pugh and MELD models.

Evaluate the prognostic utility of the ALBI model for determining the response to steroid treatment in patients diagnosed with severe alcoholic hepatitis.

Patients / Materials and Methods: Retrospective cohort study from October 2019 to September 2023. We evaluated severity criteria, demographic characteristics, and endoscopic features. Maddrey, MELD, MELDNa, ABIC, Glasgow, and ALBI models were compared at the time of admission, and the Lille score was calculated 7 days after steroid treatment. Statistical analysis was performed using SPSS 26 software, with a p-value of <0.005 considered statistically significant.

Results and Discussion: We included 170 patients, 21 women (12.4%) and 149 men(87.6%), average age of 45 ± 13.5 years. Of these, 30.6% were classified as Child-Pugh B and 69.4% as Child-Pugh C. Concomitant infection was documented in 15.3%, with urinary tract infections being the most prevalent, and the most frequent endoscopic finding was portal hypertensive gastropathy in 98% of patients, of which 65.5% were mild and 34.4% were severe. The 90-day follow-up mortality rate was reported at 34.7%. Comparing the different scales, we found good diagnostic accuracy for ALBI(AUC:0.64 [95%CI:0.57−0.73];p=0.002),MELD 3.0(AUC:0.62[95%CI:0.53−0.70]; p=0.009),MELDNa(AUC:0.61[95%CI:0.52−0.69];p=0.01),and ABIC (AUC:0.60[95%CI:0.51−0.69];p=0.02).

Conclusions: The ALBI model, due to its objective and straightforward nature, is increasingly employed in the evaluation of hepatic dysfunction. It provided prognostic assessment comparable to MELD, MELDNa, and MELD3.0 for predicting the response to steroid treatment in patients with severe alcoholic hepatitis.

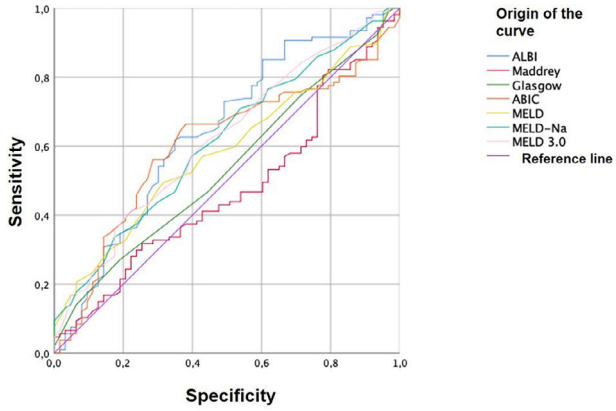

Figure 1. Area Under the Curve (AUC) of Prognostic Scales

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P-49 EFFECT OF STATINS IN REVERSING CELL GROWTH DYSREGULATION IN THE EARLY STAGES OF HEPATOCARCINOGENESIS

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Conflict of interest: No

Introduction and Objectives: Hepatocellular carcinoma (HCC) is the most common primary liver tumor and the fifth leading cause of cancer death. Hexachlorobenzene (HCB) is an environmental pollutant and endocrine disruptor. It plays a role in hepatocarcinogenesis by promoting angiogenesis and cell proliferation, partly by altering thyroid hormones, regulators of the cell cycle.

We previously demonstrated that HCB deregulates liver growth, involving TGF-β1 and triiodothyronine (T_3); and that Atorvastatin (AT) prevents these effects.

Objective: To evaluate the capacity of AT to reverse the effects generated by HCB in the early stages of HCC development.

Patients / Materials and Methods: We analyzed the effect of HCB (5μM) with/without AT (20μM) in Huh-7 cell line on 1-(PCNA), 2-(caspase-3 and cytochrome-c), 3-(TGF-β1), 4-(Cox-2); by western blot; 5- T_3-generating enzyme (Deiodinase I); RT-PCR; 6-cell migration, wound technique; 7-number of colonies. We evaluated the reversal effect of AT on the previously mentioned parameters.

Results and Discussion: HCB increased cell proliferation and migration (PCNA levels 38%, p <0.01), cell migration (47%, p <0.05) and number of colonies (44%, p <0.05); induced apoptosis (Cytochrome-c 30%, p <0.01, and caspase-3 27%, p <0.05); induced inflammation (TGF-β1 41%, p <0.01, and Cox-2 28%, p <0.05) when

compared to the control. In addition, decreased T_3 levels by decreasing DI (28%, p <0.05). Atorvastatin reversed these effects on every parameter studied, reaching control values.

Conclusions: Atorvastatin administration, in addition to prevention, can reverse proliferation, migration, inflammation, and apoptosis in our model, potentially reversing the deregulation of cell growth in the early stages of hepatocarcinogenesis. In addition, AT restores DI activity, potentially balancing thyroid metabolism.

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P-50 CLINICAL AND DEMOGRAPHIC CHARACTERISTICS OF PATIENTS WITH ACUTE HEPATITIS B VIRUS IN A PUBLICAL HOSPITAL IN CHILE FROM 2015 TO 2022.

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Conflict of interest: No

Introduction and Objectives: Since Chile is a low endemic Hepatitis B virus (HBV) country, most cases present as acute infection that resolves spontaneously (95%). There is scarce literature describing the demographic characteristics and serological follow-up of patients with acute HBV infection in Chile.

The objective is to describe demographic, clinical, laboratory and serological characteristics of patients evaluated in the viral hepatitis polyclinic of a Chilean public hospital. To evaluate indication criteria, received treatments, and surrogate markers of therapeutic objectives.

Patients / Materials and Methods: Observational, retrospective study including adults with acute HBV infection, without immunodeficiency, controlled in hepatology policlinic between 2015 and 2022 at Hospital del Salvador. Descriptive statistics were used to determine the demographic characteristics of this population, criteria for indication of antiviral therapy and surrogate markers of therapeutic targets.

Results and Discussion: 180 clinical records were reviewed. 147 were excluded: poor treatment adherence and follow-up (30), deceased (59), chronic HBV infection (39) and immunodeficiency (19). 33 patients were included in the analysis, with mean age of 32.3 years and 69.6% being men. Sexual transmission was the most frequent transmission mechanism (48%). There were no cases with cirrhosis at the time of diagnosis. 6 patients (18.1%) required antiviral treatment due to severity, being entecavir the antiviral most frequently prescribed. 36.3% achieved ALT normal levels, most of them at the third month. 39.3% achieved loss of the HBV surface antigen (HBsAg).

Conclusions: Most patients achieved loss of HBsAg, however, many had no follow-up HBsAg studies or did not adhere to medical controls. Only 1 patient was diagnosed as chronic infection during follow-up. Follow-up and adherence to medical controls in patients with acute HBV infection need to be improved.

TREATMENT N: 33 PATIENTS WITH HBV ACUTE INFECTION	
Treatment indication criteria	N (%)
HVB chronic hepatitis with persistent ALT >1.1 above normal level and viral load HVB >2.000 UI/mL	1 (3.03)
No treatment indication	27 (81.81)
Severe acute hepatitis with or without liver failure	5 (15.15)
Antiviral prescription n= 6	
1. ENTECAVIR	6 (100%)
TREATMENT AND FOLLOW-UP RESULTS	
ALT level normalization (< 55 UI/mL)	
1. Yes	12 (36,36)
2. Normal baseline level	6 (18,18)
3. No follow-up	13 (39,39)
4. No ALT baseline levels	2 (6,06)
Time to ALT normalization	
1. Month 3	7 (21,21)
2. Month 6	2 (6,06)
3. Month 12	1 (3,03)
4. Month 18	2 (6,06)
5. Normal prior to first control	3 (9,09)
6. No follow-up	18 (54,54)
HBsAg loss	
1. Yes	13 (39,39)
2. No	1 (3,03)
3. No follow-up	19 (57,57)
Time to HBsAg loss	
1. Month 3	6 (18,18)
2. Month 6	5 (15,15)
3. Month 12	1 (3,03)
4. Month 18	1 (3,03)
5. No follow-up	19 (57,57)
6. Persistent positive HBsAg	1 (3,03)

Clinical and serological characteristics of patients with acute HBV infection.

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P-51 TRANSJUGULAR INTRAHEPATIC PORTOSYSTEMIC SHUNT (TIPS), EXPERIENCE IN A UNIVERSITY CENTER

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Conflict of interest: No

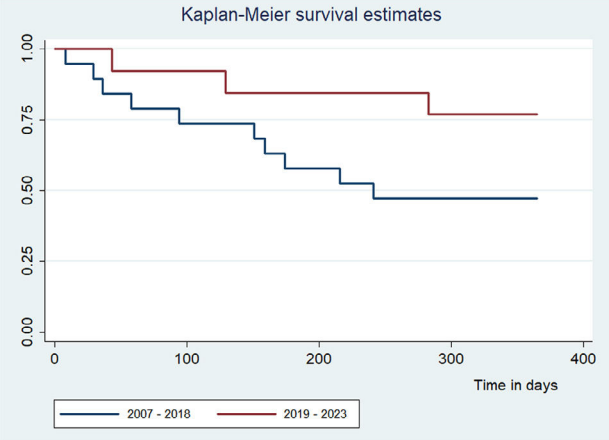
Introduction and Objectives: Transjugular intrahepatic portosystemic shunt (TIPS) is a procedure that diverts portal blood flow to the hepatic vein with the aim of reducing portal hypertension, being an alternative for managing its complications, such as variceal gastrointestinal bleeding and ascites, in both cirrhotic and non-cirrhotic patients. *Objetives:* To characterize patients who underwent TIPS between January 2007 and July 2024 at the Hospital Clínico De la Universidad de Chile

Patients / Materials and Methods: Observational, retrospective cohort study. 39 patients medical records who underwent the procedure during the specified period were reviewed.

Results and Discussion: 39 patients were analyzed, 53.8% of whom were men, with an average age of 60.7 years. The procedure was performed in 51% (20/39) of the patients within a period of just 4 years (2019 to 2024). The main indication was secondary to variceal

gastrointestinal bleeding (59%), followed by refractory ascites (36%). Additionally, 33.3% presented some degree of portal vein thrombosis, and 33.3% had reported hepatic encephalopathy episodes before the procedure. The average MELD Na score was 15.4. Only three patients experienced hemorrhagic complications related to the procedure, with one resulting in death. 53.8% reported some degree of hepatic encephalopathy after the procedure. One-year survival was analyzed, showing 47.4% in patients whose procedure was performed before 2019 versus 76.9% in the period between 2020 and 2023 (p 0.095). Four patients underwent transplants after TIPS, without complications.

Conclusions: We have observed a progressive increase in the indication for TIPS over time at our center, with half of the cases concentrated in the last four years. In addition, survival outcomes appear to be better, probably due to improved patient selection and more timely indications. The procedure was safe, with a low rate of acute complications and an incidence of encephalopathy similar to that reported in the literature. Longer-term follow-up will allow us to verify its effectiveness in our population



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P-52 CHARACTERIZATION OF SERUM METABOLOMIC PROFILE BY NMR IN PATIENTS WITH VARIOUS DEGREES OF HEPATIC ENCEPHALOPATHY.

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Conflict of interest: No

Introduction and Objectives: Hepatic encephalopathy (HE) is a complication of liver failure whose clinical identification is commonly delayed. Measurement of parameters reflecting HE would be desirable in clinical practice. Metabolomic study using nuclear magnetic resonance (NMR) represents a strategy in this regard, with advantages such as detecting numerous types of metabolites. *Objetive:* To characterize the serum metabolomic profile (SMP) of various clinical stages of HE severity using NMR.

Patients / Materials and Methods: Observational, cross-sectional, analytical, prospective study. Anthropometric, hematologic, and biochemical parameters were evaluated in patients >18 years: 15 controls (C), 18 hepatopathy without HE (HSHE), 11 minimal HE (HEM), 9 West Haven (WH) I, 12 WHII, 9 WHIII, and 8 WHIV. SMP was analyzed by NMR, characterizing the profile per patient, study group, and analyzed by PLS-DA using MetaboAnalyst 5.0 platform.

Results and Discussion: Signals from 45 metabolites were assigned, quantifying 43. PLS-DA showed differences in SMP between groups, with metabolite concentrations decreasing as HE severity increased, except for 3-methylhistidine, which increased with HE severity. Acetone, lysine, glycerol, and serine were higher in C compared to HSHE and HEM; proline, cysteine, threonine, alanine, 3-hydroxybutyrate, and isoleucine were higher in HEM or HSHE compared to WHI and WHII. The metabolite/creatinine index identified 14 metabolites that differentiated the groups (3-methylhistidine, acetone, proline, 3-hydroxybutyrate, lysine, cysteine, threonine, glycerol, glycine, lactate, alanine, serine, valine, and isoleucine).

Conclusions: SMP differed among the groups, with metabolites implicated in severe HE including arginine, isoleucine, valine, alanine, histidine, threonine, glycerol, serine, tyrosine, glutamine, phenylalanine, formate, ornithine, tau-methylhistidine, and methionine. Implicated metabolic pathways were phenylalanine, tyrosine, and tryptophan; phenylalanine; histidine; glycine, serine, and threonine; glutathione. WH has an objective and measurable explanation using metabolomics.

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P-53 IMMUNE-MEDIATED ADVERSE EVENTS FOLLOWING ATEZOLIZUMAB PLUS BEVACIZUMAB IS ASSOCIATED WITH DECREASED SURVIVAL IN PATIENTS WITH CIRRHOSIS

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Conflict of interest: No

Introduction and Objectives: Clinical trials evaluating the efficacy of first line systemic immune therapies for patients with advanced hepatocellular carcinoma (HCC) have recruited a lower proportion of patients with cirrhosis. In this group of patients, immune related adverse events (irAEs) may lead to decreased prognostic outcomes. The aim of this study was describe the incidence rate of irAEs and its impact on survival.

Patients / Materials and Methods: A multicenter prospective Latin-American cohort study was conducted including HCC patients who received A+B since its regional approval, either as first or subsequent systemic lines, to March 15, 2024. Overall survival since A+B, and survival since date of irAE was compared between patients developing and not developing irAEs (date since A+B), through Cox proportional hazard analysis (Harrell's c-index).

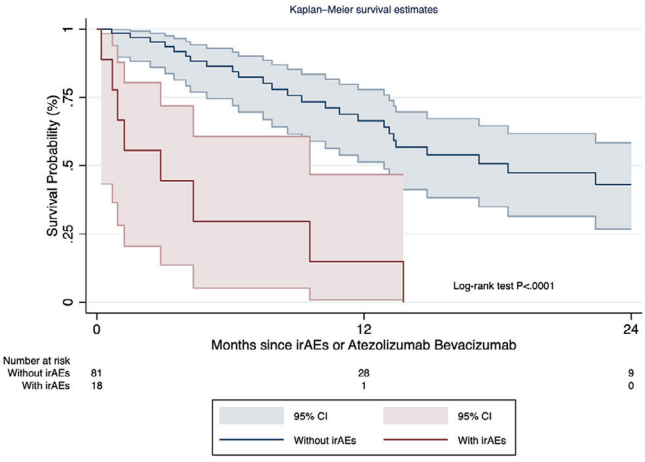
Results and Discussion: Overall, 99 patients treated with A+B were included (n=8 received it as second line post sorafenib), 82.3% presented cirrhosis. The median treatment duration was 6 months [number of cycles 5 (range 3-11.5)], with a median overall survival of 17.0 months (range 12.6-19.8). Over a median follow-up of 7.7 months (range 4.5-17.2), the irAE incidence rate was 2.1 cases per 100 persons-months [cumulative incidence 18.1% (95% CI 11.1-27.2%); n=18]. Median time to irAE was 2.3 months (range 1.4-4.8), most frequently hepatitis (n=6), thyroiditis (n=5), and 8/18 required steroids (Table). Follow-up and treatment duration times were similar regardless irAEs occurrence. On multivariable Cox regression model, AFP values before A+B >400ng/ml [HR 2.9 (95% CI 1.1-7.6)], adjusted for HCC diffuse intrahepatic pattern was associated with irAE development (c-statistic 0.66). Patients developing irAEs presented decreased overall and post-irAE survival [median 2.9 months vs 18.5 months; HR 6.2 (95% CI 2.7-14.2); P<.0001] (Figure).

Conclusions: Cautions management in patients with irAEs is of relevant importance in our region, highlighting the role of onco-hepatologists in the clinical-decision making process of these patients.

VARIABLE	*irAEs* *n=18 (18.1%)*	*Without irAEs* *n=81 (81.2%)*	*P values*
Age, years (± SD)	68 ± 8	67 ± 9	0.62
Gender, Male, n (%)	15 (83.3)	63 (77.8)	0.44
Obesity, n (%)	4 (23.5)	14 (17.9)	0.41
Comorbidities, n (%)	10 (55.6)	48 (59.3)	0.48
Cirrhosis, n (%)	16 (88.9)	66 (81.5)	0.35
Etiology of liver disease, n (%)			
Viral/non-viral	9 (50.0)/9 (50.0)	29 (35.8)/52 (64.2)	0.20
Hepatitis C	8 (44.4)	22 (27.2)	0.12
Metabolic associated steatotic liver disease	4 (22.2)	27 (33.3)	0.27
Alcoholic liver disease	-	9 (11.1)	0.10
Child Pugh A/B, n (%)	14 (77.8)/4 (22.2)	67 (82.7)/14 (17.3)	0.42
Prior decompensation, n (%)	-	16 (24.2)	0.02
ECOG 0-1, n (%)	18 (100)	77 (95.1)	0.44
Median total Bilirubin, mg/dl (IQR)	0.8 (0.7-1.6)	0.9 (0.6-1.3)	0.66
Median Albumin, g/dl (IQR)	3.8 (3.6-4.2)	3.8 (3.3-4.1)	0.51
Median INR, (IQR)	1.1 (1.0-1.2)	1.0 (1.0-1.2)	0.82
Median serum AFP, ng/ml (IQR)	150.7 (5.4-1624.9)	28.5 (4.9-487.7)	0.30
AFP ≥100 ng/ml, n (%)	9 (50.0)	22 (27.2)	0.06
AFP ≥400 ng/ml, n (%)	7 (38.9)	16 (19.7)	0.08
Macrovascular tumor invasion, n (%)	6 (33.3)	32 (39.5)	0.42
Metastatic disease, n (%)	8 (44.4)	25 (30.9)	0.20
BCLC before atezolizumab + bevacizumab, n (%)			
B	5 (27.8)	24 (29.6)	0.56
C	13 (72.2)	57 (70.4)	

Abbreviations: HCC: hepatocellular carcinoma, AFP: alpha-fetoprotein; IQR: interquartile range.

Comparison between patients with and without immune related adverse events



Comparative survival between patients with or without irAEs.

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P-54 ANALYSIS OF FACTORS ASSOCIATED WITH STEATOTIC LIVER DISEASE IN SUBJECTS WITH INFLAMMATORY BOWEL DISEASE: A RETROSPECTIVE CROSS-SECTIONAL STUDY IN THE CHILEAN POPULATION

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Conflict of interest: No

Introduction and Objectives: Inflammatory bowel disease (IBD) is a globally increasing condition. There is growing interest in the comorbidities associated with IBD, including steatotic liver disease (SLD). SLD has been demonstrated in individuals with IBD, even in the absence of other metabolic factors. Few studies have evaluated this association in the Latin American population. *Objectives:* The study aims to evaluate the frequency of SLD in Chilean subjects with IBD and its association with clinical and metabolic variables.

Patients / Materials and Methods: We conducted a retrospective cross-sectional study of 148 adults with IBD (Crohn's disease: 89, ulcerative colitis: 46, and unclassified colitis: 13) who had abdominal imaging such as ultrasound, CT, or MRI in the last 15 years. Patients were considered to have SLD if this diagnosis was reported in the imaging report. Differences between groups were evaluated using chi-square and non-parametric tests.

Results and Discussion: The median age of this cohort was 48 years (Q1: 37, Q3: 63 years), and 85 (57.4%) were female. Thirty patients (20.2%) had SLD. Subjects with SLD had significantly higher weight (75.8 vs 66kg, p<0.001) and body mass index (27.6 vs 22.6kg/m^2, p<0.001) compared with subjects without SLD. In multivariate analysis, this association remained significant independently of age, sex, and IBD disease activity (p<0.001). The use of corticosteroids showed a 100% association with SLD (p<0.001). No significant association was observed between SLD and other treatments or variables such as age, sex, type or activity of IBD, gallstones, triglyceridemia, glucose, or smoking.

Conclusions: The frequency of SLD in Chilean patients with IBD is within the lower range of previous reports in other series. In our sample, the variables associated with SLD in subjects with IBD were elevated BMI and corticosteroid therapy.

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P-55 FIRST EVALUATION ALBI SCORE COULD BE A TOOL FOR RISK STRATIFICATION OF HCC DEVELOPMENT IN PATIENTS WITH CHRONIC HEPATITIS C AND CIRRHOSIS

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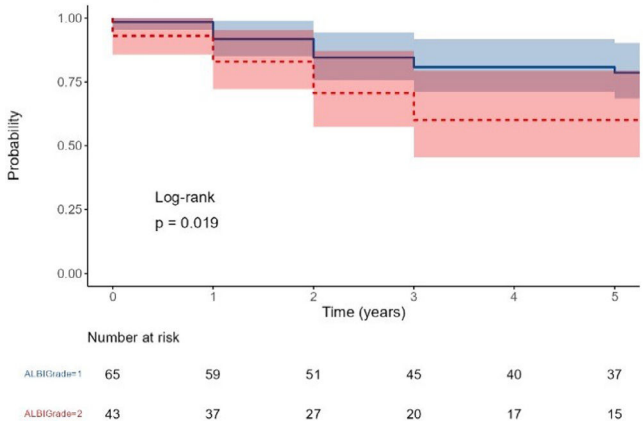
Conflict of interest: No

Introduction and Objectives: Hepatitis C virus (HCV) still is the leading cause of hepatocellular carcinoma (HCC) in Brazil, even after the new treatments with DAAs. HCC surveillance is recommended based on liver fibrosis, whereby patients with advanced fibrosis are suitable for screening. Therefore, there is a need for tools to improve risk stratification in this population. Our aim was to assess whether the ALBI score performed at first evaluation of patients with HCV-related cirrhosis could stratify the risk of developing HCC.

Patients / Materials and Methods: This study included 108 patients with HCV-related cirrhosis evaluated in the outpatient units in Hospital de Clínicas da Faculdade de Medicina da Universidade de São Paulo, Brazil. Clinical data from the first evaluation and ALBI score with first the laboratory tests were used for the statistical analysis. The last follow-up was at the last HCC screening image in patients who did not develop HCC and at HCC diagnosis in those who did. The statistical analyses were performed using Jamovi software version 2.3.23.

Results and Discussion: During follow-up, with a mean duration of 5.28 ± 4.72 years, 32 patients developed HCC. Patients who developed HCC had significantly lower albumin values (p=0.039) and a higher proportion of ALBI grade 2 (p=0.036) at the first outpatient assessment. Evaluating HCC risk over time by Kaplan-Meier, patients with ALBI grade 2 had a significantly higher risk of developing HCC than patients with ALBI grade 1 (p=0.019) when assessed at 1 year (17% vs. 8.2%), 2 years (29.3% vs. 15.4%), 5 years (40.9% vs. 21.4%) and 10 years (47.4% vs. 23.9%). Patients with ALBI grade 2 had a two-fold higher risk of developing HCC during follow-up (OR 2.27, 95%CI 1.12-4.59, p=0.023).

Conclusions: Assessment of baseline ALBI score can improve HCC risk stratification in patients with HCV-related cirrhosis.



Kaplan-Meier plot for hepatocellular carcinoma risk in HCV-related cirrhosis with ALBI grade 1 and 2 at baseline

https://doi.org/10.1016/j.aohep.2024.101669

P-56 EXPERIENCE WITH DEXMEDETOMIDINE IN THE MANAGEMENT OF ALCOHOL WITHDRAWAL SYNDROME FOR PATIENTS WITH CIRRHOSIS

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Conflict of interest: No

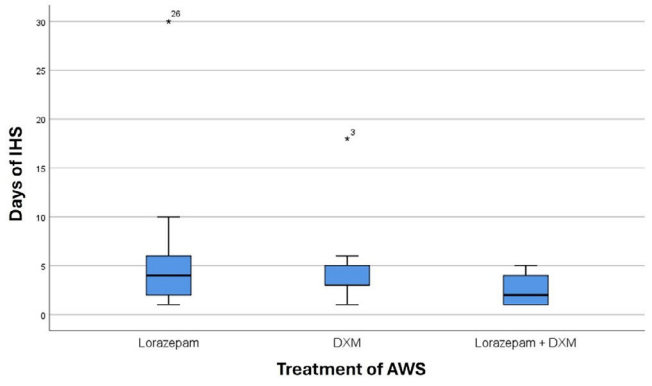
Introduction and Objectives: Lorazepam is the first-line treatment in patients with alcohol withdrawal syndrome (AWS). In patients with cirrhosis and AWS, the use of dexmedetomidine (DXM) has been poorly studied. The objective of this study is to report the effect of DXM in patients with cirrhosis and AWS.

Patients / Materials and Methods: Observational, retrospective, descriptive and analytical study. Patients with cirrhosis and AWS, treated with lorazepam, DXM, or both, were included. The Clinical Institute Withdrawal Assessment of Alcohol Scale (CIWA-Ar) data was collected before and after treatment; as well as the days of in-hospital stay (IHS). The quantitative variables were summarized using non-parametric descriptive statistics according to the distribution of the variables (average and range); as well as frequencies and percentages in the case of qualitative variables. To compare between three independent groups, the Kruskal-Wallis (KW) and Jonckheere-Terpstra (JT) tests were used. A significant difference was considered one with a value of p<0.05.

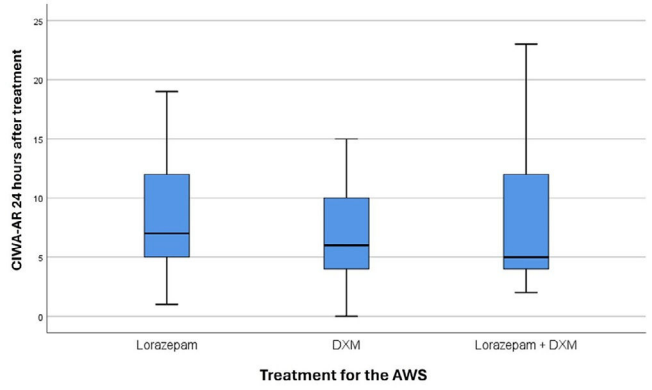
Results and Discussion: 39 patients were included, 37 (94.9%) men, average age 41 (27-66) years, alcohol consumption 287 (64-

960) g/day, CIWA-Ar at admission 20 (10-46) points, Child -Pugh 10 (5-14) points, MELD-Na 16 (8-40) points. Regarding the AWS treatment: 17 (43.6%) received lorazepam, 13 (33.3%) DXM, and 9 (23.1%) lorazepam + DXM. When compared between groups there were no differences in terms of days of IHS [4 (1-30) vs. 3 (1-18) vs. 2 (1-5) respectively for lorazepam, DXM, lorazepam + DXM; KW p=0.86, JT p=0.82], nor in terms of CIWA-Ar at 24 hours post-treatment [7 (1-19) vs. 6 (0-15) vs. 5 (2-23) respectively for lorazepam, DXM, lorazepam + DXM; KW p=0.19, JT p=0.45]. No serious adverse effects were reported with any of the three strategies.

Conclusions: DXM appears to be an effective and safe option for the treatment of AWS in patients with cirrhosis. However, clinical trials are required to validate our findings.



Days of in-hospital stay



CIWA-Ar at 24 hours post-treatment

https://doi.org/10.1016/j.aohep.2024.101670

P-57 SUSCEPTIBILITY PATTERNS AND EMPIRICAL ANTIBIOTIC GUIDANCE FOR URINARY TRACT INFECTIONS IN PATIENTS WITH CIRRHOSIS

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Conflict of interest: No

Introduction and Objectives: The lack of data on bacterial susceptibility in urinary tract infections (UTI) among patients complicates empirical antibiotic selection. Aims: To assess the antibiotic susceptibility of UTI-causing bacteria in patients with cirrhosis and recommend appropriate antibiotic therapy.

Patients / Materials and Methods: Cross-sectional study using data from the prospective registry of bacterial infections in adult patients with cirrhosis in Argentina and Uruguay. We included episodes of culture-positive UTI in patients hospitalized for this condition or who developed a UTI during their stay. Antibiotic susceptibility patterns and recommendations are presented according to the site of acquisition. According to our definition, empirical antibiotic treatment should aim to cover roughly 80% of anticipated bacteria in stable patients and 90% in critically-ill patients.

Results and Discussion: A total of 278 episodes were included, involving 227 patients recruited from 20 centers between Dec/2020 and July/2024. Of these, 97% (n=269) were monobacterial, and 3% (n=9) involved infections with two bacteria, resulting in 287 isolates. The most frequent isolates were enterobacteria, especially E. coli (43%), notably in community-acquired (CA) UTI (60%); K. pneumoniae accounted for 28% of the isolates, rising to 40% in nosocomial UTI. The most frequent Gram-positive cocci was enterococcus (14%). The table displays the susceptibility patterns for various antibiotics and highlights those suitable for empirical treatment according to the observed coverage. Multidrug resistance was observed in 52% (CI95: 46-58) of episodes: 40% (CI95: 32-50) in community-acquired and 68% (CI95: 57-77) in nosocomial infections. It is concerning that half

of UTI are caused by multidrug-resistant organisms, and that only combinations of broad-spectrum antibiotics offer adequate coverage for nosocomial infections.

Conclusions: For the first time in Latin America, we provide high-quality data to guide empirical antibiotic recommendations for UTI in patients with cirrhosis.

Table: Proportion (95% CI) of UTI Episodes with Susceptibility to Different Antibiotic Regimens by Site of Infection Acquisition (n=278). Adequate options for stable patients are highlighted in light gray, and those for critically ill patients are highlighted in dark gray

Antibiotic Regimen	Community-acquired n= 119	Healthcare-associated n= 69	Nosocomial n= 90
Nitrofurantoin*	82 (73-89)	66 (51-78)	55 (43-67)
Quinolones	36 (28-46)	26 (17-38)	23 (16-33)
TMP-SMX (Trimethoprim-Sulfamethoxazole)	43 (34-52)	36 (25-48)	26 (18-36)
Ceftriaxone	51 (42-60)	29 (20-41)	21 (14-31)
Cefepime	53 (44-62)	31 (21-43)	27 (18-37)
Ceftazidime	47 (38-56)	29 (20-42)	22 (15-32)
Aminoglycoside	82 (74-88)	70 (58-80)	63 (52-73)
Piperacillin-tazobactam	61 (51-69)	46 (34-58)	29 (21-40)
Ertapenem	79 (71-86)	60 (48-71)	46 (37-57)
Colistin	80 (71-87)	63 (50-75)	69 (57-79)
Piperacillin-tazobactam + Vancomycin	61 (52-70)	52 (39-63)	32 (23-43)
Meropenem or Imipenem	90 (83-94)	77 (65-85)	56 (45-66)
Carbapenem + Vancomycin	91 (84-95)	82 (71-90)	58 (47-68)
Carbapenem + Linezolid	92 (85-96)	90 (80-95)	64 (54-74)
Aminoglycoside + Colistin	85 (77-90)	71 (59-81)	80 (69-87)
Ceftazidime-avibactam	83 (75-89)	68 (55-78)	68 (58-77)
Ceftazidime-avibactam + Aztreonam	68 (59-76)	54 (42-66)	72 (61-80)
Ceftolozane-tazobactam	85 (78-91)	70 (57-80)	73 (62-81)
Ceftazidime-avibactam + Vancomycin	95 (89-98)	88 (78-94)	76 (66-84)

The data from the 278 episodes with complete information are presented. For episodes with two isolations, susceptibility was assessed considering the coverage of both. * Nitrofurantoin was tested in 91 Community-acquired, 47 Health-associated and 65 nosocomial infections. Nitrofurantoin achieves good concentrations in urine but does not concentrate well in plasma and kidney parenchyma.

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P-58 PILOT STUDY OF HEPATITIS E VIRUS SEROPREVALENCE IN HEPATITIS B AND DELTA CARRIERS IN THE WESTERN AMAZON

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Conflict of interest: No

Introduction and Objectives: Hepatitis E virus (HEV) is a zoonotic virus transmitted via the fecal-oral route with a generally favorable prognosis. However, higher risks exist for pregnant or immunocompromised patients. Infection occurs through contaminated food, water, or direct contact with infected blood. Its asymptomatic nature and favorable prognosis likely contribute to underreporting in Brazil, especially in peri-urban and rural areas with limited healthcare access. *Objective:* To evaluate the seroprevalence of HEV in patients with mono-infection of Hepatitis B and co-infection with Delta virus in Rondônia.

Patients / Materials and Methods: An exploratory cross-sectional study using the Dia.Pro HEV Ab total ELISA kit for serological evaluation of 177 samples from the serum bank of the Molecular Virology Laboratory at Fiocruz-RO of patients with viral hepatitis from the Tropical Medicine Center (CEMETRON) in Rondônia. The samples were stratified into 74 VHD co-infected and 103 HBV mono-infected groups. The diagnosis of the Delta virus was performed using molecular biology on samples collected between 2018 and 2022. The results were analyzed using T-test and chi-square test.

Results and Discussion: The total sample consisted of 177 participants, including 95 men, 54 women, and 28 without information. The average age of participants was 41 years (M = 41), with the Delta group averaging 40 years and the HBV mono-infected group averaging 42 years. Of the 74 VHB-VHD sera, 9 (12.16%) were HEV IgG positive, 58 (78.40%) were non-reactive, and 7 (9.45%) were indeterminate. Among the 103 HBV sera, 9 (8.73%) were HEV IgG positive, 86 (83.50%) were non-reactive, and 8 (7.76%) were indeterminate.

Conclusions: The findings of HEV in HBV and VHD patients in Rondônia showed results similar to those found in studies with other populations. This is the first study on HEV in HBV and VHD patients.

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P-59 SOCIAL DETERMINANTS OF HEALTH AND INEQUITIES IN CHRONIC DISEASES: THE CASE OF LIVER DISEASES

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Conflict of interest: No

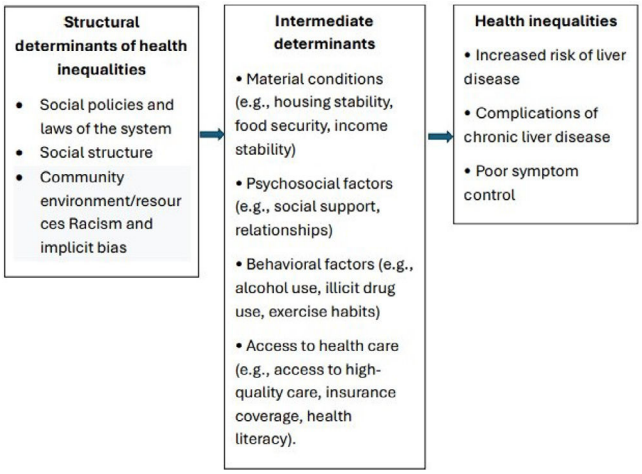
Introduction and Objectives: Cirrhosis is the leading cause of liver-related deaths worldwide. However, it should be highlighted that not only biology determines the disease, since ancient times it has been described that health is socially determined, however, today the same underlying problems continue to arise since its causes remain unresolved. It is clear that the mechanisms of society have a direct influence on the disease and only by taking these aspects into account can we understand social inequities in the field of health and intervene to correct them.

Patients / Materials and Methods: Retrospective descriptive ecological study using data from secondary sources, coming from mortality databases, morbidity databases of the National Public Health Surveillance System, Transplant Network, National Institute of Health and Liver and Transplant Associations.

Results and Discussion: Although vaccination, screening, and antiviral treatment campaigns for hepatitis B and C have reduced the disease burden in some parts of the world, concomitant increases in injection drug use, alcohol abuse, and metabolic syndrome threaten these trends, moreoveer, we can estimate that the affected population is much larger.

Alcohol-related liver diseases are a public health problem and remain underestimated. Within alcoholic beverages, those of artisanal production such as chicha and guarapo are so cheap and easy to manufacture while they meet basic needs such as quenching thirst and hunger, and their production is not controlled, alcohol content exceeds regulatory levels, translating into high health care expenditures, and requires culturally accepted interventions.

Conclusions: The global burden of cirrhosis is substantial, therefore, ongoing efforts to address it require accurate estimates of epidemiology, study of its social determinants, and establishing public health interventions to decrease the burden of the disease and thus the pressure on the health system.



Conceptual framework of the contribution of social determinants of health inequities, adapted to liver disease. Structural determinants lead to differential exposures to intermediate factors, which in turn generate differential vulnerabilities and create health inequities

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P-60 CAN A DOPPLER ULTRASOUND PREDICT VARICEAL HEMORRHAGE AND CORRELATE WITH THE MELD 3.0 SCORE IN LIVER CIRRHOSIS PATIENTS? A RETROSPECTIVE STUDY

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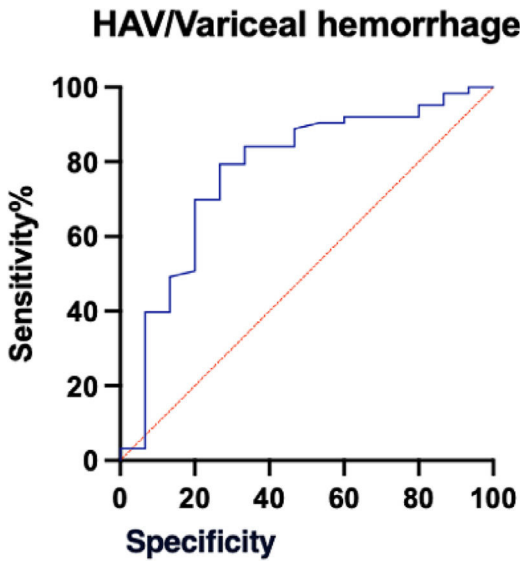
Conflict of interest: No

Introduction and Objectives: Liver cirrhosis, a major global health issue, causes blood flow resistance and portal hypertension. This study uses Doppler ultrasound to correlate hemodynamic changes with MELD 3.0 scores and variceal hemorrhage. Portal vein velocity, hepatic artery velocity, and hepatic artery resistance index were retrospectively evaluated in 2023 patients.

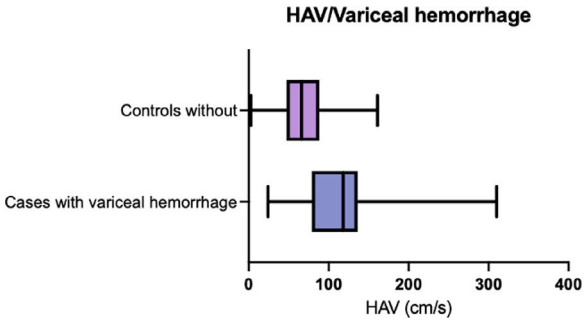
Patients / Materials and Methods: Data analysis was performed at the end of the study using GraphPad Prism version 10.2.3 and Microsoft Excel software. Individual correlation analysis was conducted between the hemodynamic variables and the MELD 3.0 score using Spearman's correlation coefficient. A Mann-Whitney test was performed to determine the association between HAV and variceal hemorrhage based on non-normal distribution data. The cut-off point was established with a ROC curve according to the Youden Value.

Results and Discussion: Seventy-nine cirrhotic patients (56% men, 54% women; mean age 58.8 years) had varied etiologies: 44 alcohol-related, 10 metabolic, and 25 other. Average MELD 3.0 score was 15 (range: 6-70). Fifteen patients had variceal hemorrhage within 6 months (mean 76.8 days; 6-178). HAV correlated significantly with hemorrhage (mean 188 cm/s vs. 66.0 cm/s; p = 0.0007), with a cut-off of 115 cm/s (88% sensitivity, 53% specificity). HAV moderately correlated with MELD 3.0 (r = 0.3942, p = 0.0003); HARI-MELD 3.0 showed a weak inverse correlation (r = -0.02190); PVV-MELD 3.0 had no significant correlation.

Conclusions: HAV correlates positively with the MELD 3.0 score and is positively associated with variceal hemorrhage in patients with liver cirrhosis. Given its non-invasive nature and greater accessibility compared to endoscopic studies, HAV could be considered a tool for screening variceal hemorrhage.



ROC CURVE



HAV/variceal hemorrhage correlation.

Table 1. Association with MELD 3.0.

Variable	Spearman correlation coefficient	P
Hepatic artery velocity (HAV)	*0.3942*	*0.0003*
Hepatic artery resistance index (HARI)	*-0.02190*	*0.8490*
Portal vein velocity (PVV)	*0.08253*	*0.4725*

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P-61 CLINICAL APPLICATION OF NAFLD FIBROSIS SCORE AND HEPAMET FIBROSIS SCORE IN CORONARY ARTERY DISEASE AND MASLD: A CROSS-SECTIONAL STUDY IN WESTERN MEXICAN POPULATION

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Conflict of interest: No

Introduction and Objectives: Coronary artery disease (CAD) is a leading cause of morbidity and mortality worldwide. Reliable knowledge of the prevalence of occult CAD, particularly anatomically confirmed CAD is limited and cardiovascular risk (CVR) models only predict the risk of an acute coronary event within a set period. It has been described that a FIB-4 score is associated with a higher CVR. *Objective:* to determine the utility of noninvasive markers of liver fibrosis in CAD.

Patients / Materials and Methods: A cross-sectional study in western Mexican population was conducted in two tertiary centers in central and western Mexico from March 2019 to April 2023. Patients with MASLD according to the latest recommendations (hepatic steatosis demonstrated by imaging study and at least one cardiometabolic criteria) who required percutaneous coronary angiography were included, demographic data and coronary angiographic were recorded. Noninvasive fibrosis indexes were calculated. Continuous variables were subjected to a distribution analysis and equality of variances to subsequently perform a mean comparison analysis with U-Mann-Whitney test between patients with monovascular, bivascular and trivascular involvement. A correlation analysis was also performed between the invasive markers and the Syntax index.

Results and Discussion: A total of 168 patients were included with a mean age of 66 ± 12 years with a predominance of male sex with 75.6% (n= 127). Angiographic findings included 37.5%, monovascular, 32.7%, bivascular and 29.8% trivascular involvement. Comparison of means of noninvasive markers of fibrosis demonstrated a significant difference in HFS between patients with monovascular (0.17 ± 0.18), bivascular (0.27 ± 0.18) and trivascular (0.30 ± 0.25) coronary artery disease, p≤ 0.001. A correlation was also demonstrated between non-invasive markers and Syntax score: FIB-4 (r=: 820, p≤0.001), APRI (r=: 766, p≤0.001), HFS (r= 869, p≤0.001), (r= 820, p≤0.001), NFS (r= 807 p≤0.001).

Conclusions: The score of noninvasive tools to assess liver fibrosis correlates positively with the complexity of CAD and could be considered as noninvasive tools to be used in the CVR assessment in MASLD patients.

Mean comparative analysis of noninvasive fibrosis scores in coronary arterial disease

	Monovascular (n=63)	Bivascular (n=55)	Trivascular (n=50)	p
NFS	0.27 ± 1.6	0.95 ± 1.6	0.42 ± 1.74	0.004
HFS	0.17 ± 0.18	0.27 ± 0.18	0.30 ± 0.25	<0.001
FIB4	3.84 ± 2.71	4.61 ± 3.08	4.03 ± 3.46	0.82
APRI	1.46 ± 1.11	2.16 ± 3.30	1.29 ± 1.03	0.36

Table 1_Mean comparative analysis of noninvasive fibrosis scores in coronary arterial disease

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P-62 SARCOPENIA AND PSOAS MUSCLE DENSITY ARE INDEPENDENT PREDICTORS OF SURVIVAL OF LIVER TRANSPLANT RECIPIENTS

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Conflict of interest: No

Introduction and Objectives: Studies have suggested an association between sarcopenia and mortality in liver transplant (LT) recipients. However, sole measurement of the area of skeletal muscle employing Psoas Muscle Index (PMI) does not estimate the muscle composition and degree of adipose atrophy of the muscle. We evaluated to association of PMI and Psoas Muscle Density (PMD) and post-LT survival in hispanic population

Patients / Materials and Methods: Retrospective review of a cohort of LT recipients at UC-Christus Clinical Hospital between 2016 and 2022. Two observers measured PMI and PMD on CT using NIH ImageJ software (version 13.0.6). Sarcopenia was defined as PMI <4.9 cm2/m2 in men and <3.9 cm2/m2 in women. Low psoas muscle density was defined as PMD <38 HU in men and PMD <34 HU in women. We used univariable and multivariable Cox proportional regression models to predict post-LT mortality

Results and Discussion: 112 patients with cirrhosis were included in the analysis (58 ±10 years, 55% men). Etiologies: MASLD 50%, ALD 17%, MetALD 3.2%, autoimmune hepatitis 10%, HCV 6.4%, PBC 1.3%, others 12.1%. Child-Pugh A/B/C (5%/40%/55%), MELD Na 28±7, 27 (25%) patients presented sarcopenia. During the 72-week follow-up, 19 (17%) patients died. Sarcopenia was associated with a higher risk of post-LT mortality (HR = 3.9, 95% CI [1.6- 9.6], p = 0.003). Low PMD is associated with a higher risk of post-LT mortality (HR = 3.7, 95% CI [1.5-9.2], p = 0.004) (figure). Patients with sarcopenia and low PMD had a higher risk of post-LT mortality (HR = 10, 95% CI [2.8-38], p < 0.001).

Conclusions: Sarcopenia and low psoas muscle density are independently associated with a higher risk of post-LT mortality, and in combination they are a strong indicator of a higher risk of post-LT mortality.

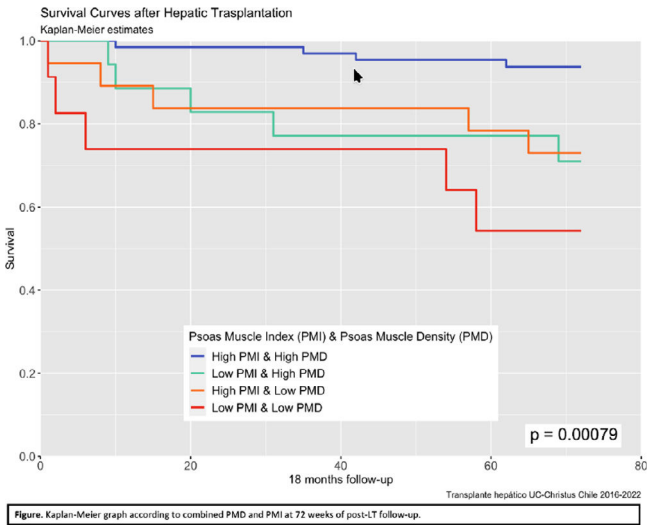

Figure. Kaplan-Meier graph according to combined PMD and PMI at 72 weeks of post-LT follow-up.

Figura

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P-63 CHARACTERISTICS AND CLINICAL OUTCOMES IN CIRRHOTIC PATIENTS TREATED IN ICU BETWEEN 2018-2023

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Conflict of interest: No

Introduction and Objectives: Cirrhosis is a chronic disease with a variable clinical course ranging from compensated stage to acute-on-chronic liver failure. The management of such patients focuses on multiorgan support in the intensive care unit (ICU). However, the criteria for defining the futility of management or even potential candidates for transplantation in our setting are not clearly established. *Objectives:* To describe the sociodemographic and clinical characteristics and outcomes of adult patients with liver cirrhosis treated in the ICU between 2018 and 2023 at the Cardioinfantil Foundation.

Patients / Materials and Methods: A retrospective observational cohort study was conducted. Quantitative variables were described as mean and standard deviation or median and interquartile range, depending on their distribution. Qualitative variables were expressed as frequencies and percentages. To compare variables between groups, Student's t tests were used for continuous variables and chi-square tests or Fisher's exact test for categorical variables. Logistic regression models were applied to identify risk factors associated with mortality, adjusting for possible confounders.

Results and Discussion: Statistically significant differences ($p<0.001$) were found associated with higher mortality in patients with higher CHILD, MELD and CLIF-C AD scores. Higher mortality was also found in patients with associated renal dysfunction, who developed any type of infection or who required IMV. No differences in survival were found in patients who underwent transplantation.

Conclusions: Patients with cirrhosis treated in the ICU have a higher mortality rate in relation to greater renal dysfunction, need for IVM, impaired hepatic synthesis or the presence of any type of infection. Respiratory and urinary tract infection where the most common. No association was found with systemic inflammatory response and mortality. The proportion of suitable patients eligible for transplant was low. Prospective studies are required to identify the patient population that may benefit from early transplantation and thereby improve their survival.

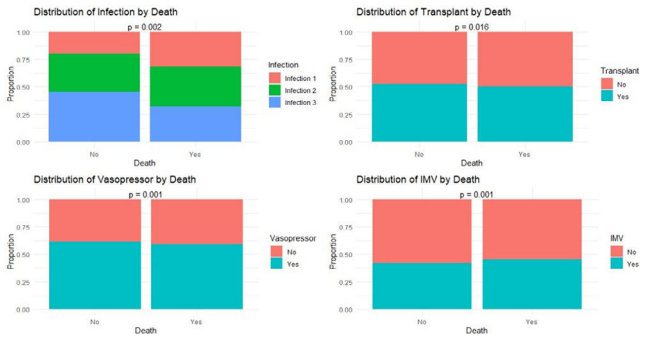

Table 1. Demographic and clinical characteristics and risk markers

	Total population n= 121	Dead n= 35	p Value
Age, median (IQR)	60.00 [52.00, 64.00]	61.00 [52.25, 65.00]	0,054
CHILD, median (IQR)	11.00 [9.00, 12.00]	11.00 [10.00, 12.00]	<0.001
MELD, median (IQR)	20.00 [16.00, 26.00]	22.00 [18.25, 28.00]	<0.001
MELD_Na, median (IQR)	23.00 [18.00, 30.00]	18.00 [13.00, 23.00]	<0.001
CLIF_C_AD (median [IQR])	56.00 [50.75, 66.00]	52.00 [46.00, 56.00]	0.001
Creatinine, median(IQR)	1.20 [0.80, 2.00]	1.30 [0.90, 2.18]	<0.001
Infection (%)	85 (70.2)	17 (48.6)	0.002
Trasplant (%)	11 (9.1%)	7 (20%)	0.016
HRS, n (%)	66 (54.5)	4 (11.4)	<0.001
IMV, n (%)	29 (24.0)	25 (29.1)	<0.001

IQR: Interquartile range, HRS: Hepatorenal Syndrome, IMV: Invasive Mechanical Ventilation

Table 1. Patient Characteristics

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P-64 DOWNSTAGING STRATEGY FOR LIVER TRANSPLANTATION IN HEPATOCELLULAR CARCINOMA. A COHORT STUDY IN A COLOMBIAN HOSPITAL

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Conflict of interest: No

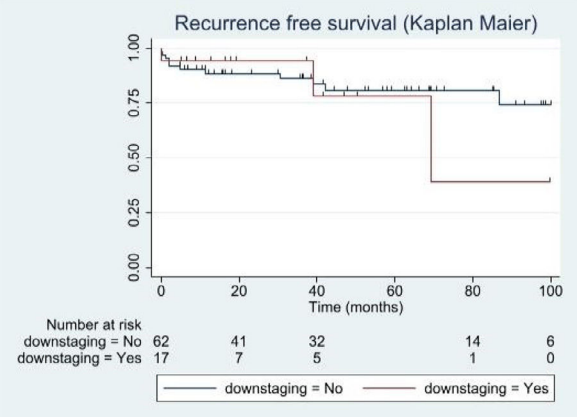
Introduction and Objectives: Hepatocellular carcinoma (HCC) with low tumor burden can be treated by liver transplantation (LT). Downstaging is a strategy to reduce tumor burden and allow transplantation. *Objectives:* To present the features and outcomes of patients undergoing LT with a downstaging and to compare them with patients transplanted according to Milan criteria

Patients / Materials and Methods: Retrospective cohort study of transplanted patients from July 2012 to January 2024 in a Colombian hospital. Downstaging was carried out in accordance with UNOS criteria. Death and recurrence of HCC were the primary outcomes. Cox proportional hazards model was adjusted for age and Child-Pugh score.

Results and Discussion: 79 patients, 17 in downstaging group (DG) and 62 in Milan Group (MG). All patients had cirrhosis. Median age was 60 years and 71% were men. DG has less diabetes mellitus than MG (24% vs. 48%), less comorbidities (82% vs. 92%), better Child-Pugh, less ascites (6% vs. 50%), less encephalopathy (18% vs. 45%) and less variceal bleeding (17% vs. 32%). In DG, the median number of tumors was 2 (IQR: 1-3, 29% with just one) and in MG it was 1 (IQR: 1-1, 79% with just one). Dowstaging was performed using either TACE alone (88%) or in combination with radiofrequency ablation (22%). Liver specimens showed a high sum of tumor diameters in DG

(4.8 cm vs. 3.0 cm), however, DG had less microvascular invasion (18% vs. 37%) and a better profile of tumor differentiation. Recurrence was 11.8% in DG and 8.2% in MG (p-value = 0.926, figure). In DG, there was a death rate of 6% while in MG it was 18% (p-value = 0.285).

Conclusions: Downstaging appeared to be a successful strategy for LT that could be used to expand the Milan Criteria in Colombia. Less sick patients in DG (necessary for locoregional therapy), could have favored survival.



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P-65 NEOPORTA WITH OR WITHOUT TRANSJUGULAR INTRAHEPATIC PORTOSYSTEMIC SHUNT AS A VIABLE TREATMENT OF CHRONIC PORTAL VEIN THROMBOSIS IN PATIENTS WITH DECOMPENSATED CIRRHOSIS

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Conflict of interest: No

Introduction and Objectives: Thrombosis of the portal venous (PVT) system is a frequent and potentially life-threatening condition in patients with liver disease. Percutaneous interventional procedures have gained worldwide acceptance for alleviating the symptoms of portal hypertension.

The objective of this study is to evaluate the impact of portal plasty on patients with decompensated cirrhosis and to analyze the correlations between different prognostic scales, laboratory and imaging results to determine the postoperative prognosis in these patients.

Patients / Materials and Methods: We included 13 patients with liver cirrhosis and chronic portal thrombosis with portal plasty ± TIPS. Data collection tools involved reviewing the clinical histories of the patients to obtain necessary data such as platelets, sodium, liver function tests, and findings via tomography to evaluate ascites and splenomegaly. Calculation tools from Stanford University were used to determine MELD, MELD Na, and MELD 3.0 scores. Finally, a descriptive analysis was performed for all collected variables. Descriptive statistics were analyzed using means for continuous variables.

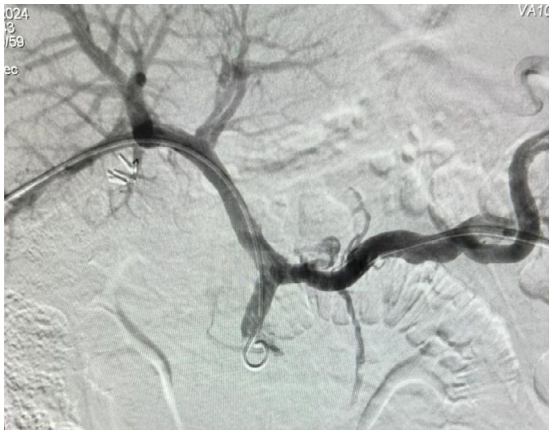
Results and Discussion: Patients with portal plasty had the following outcomes at 3 months: delta MELD-Sodium -1.2 points, which paralleled an improvement in sodium levels with a delta +2.4 meq/L. This could be due to the improvement of the hypervolemic state, 100% of the patients presented some degree of improvement in ascites as assessed by abdominal tomography.

The platelet count presented a delta of +16,000 platelets, reflecting an improvement of portal hypertension and splenomegaly.

The small decrease in MELD 3.0 can be explained by the improvement in serum albumin levels by 0.8 g/dL, which could reflect less inflammation in patients with chronic thrombosis. There was no significant difference in Child Pugh, hemoglobin, creatinine, bilirubin and coagulation tests.

Two patients were included in the transplant list and were transplanted successfully.

Conclusions: Portal plasty ± TIPS in patients with cirrhosis and chronic thrombosis is a viable treatment with clinical and biochemical benefits, with minimal adverse effects, which can be used as a bridging therapy for liver transplantation.



Portal Plasty

Outcome	Mean 3 months delta
MELD-Na	-1.2 points
MELD 3.0	-0.9 points
Sodium	+2.4 meq/L
Platelets	+16,000 /L
Albumin	+0.8 gr/dl
Hemoglobin	+0.7 mg/dl
Creatinine	-0.1 mg/dl
INR	-0.2
Total Bilirubin	-0.3 mg/dl
Child Pugh	-0.2 points

Clinical and biochemical outcomes

https://doi.org/10.1016/j.aohep.2024.101679

P-66 INCIDENCE AND FACTORS ASSOCIATED WITH ONE-YEAR POST-LIVER TRANSPLANT REJECTION AND MORTALITY, A COHORT STUDY

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Conflict of interest: No

Introduction and Objectives: Liver transplantation is the only curative procedure for liver cirrhosis, where pharmacotherapeutic factors are crucial to avoid complications. Transplant rejection is an adverse event that endangers the transplanted organ and the patient's life. *Objective:* To determine the clinical, pharmacotherapeutic, and morbid factors associated with rejection and mortality in patients during the first year after orthotopic liver transplantation.

Patients / Materials and Methods: Retrospective cohort study in patients who underwent liver transplantation at the Clinical Hospital of the University of Chile from August 2019 to August 2022, with at least one year of post-transplant follow-up. The days until rejection (confirmed by biopsy) and death were recorded to perform a survival analysis using Cox Proportional Hazards Regression. The effect magnitude of each associated factor was evaluated using Hazard Ratio (HR) and its 95% Confidence Interval (95% CI).

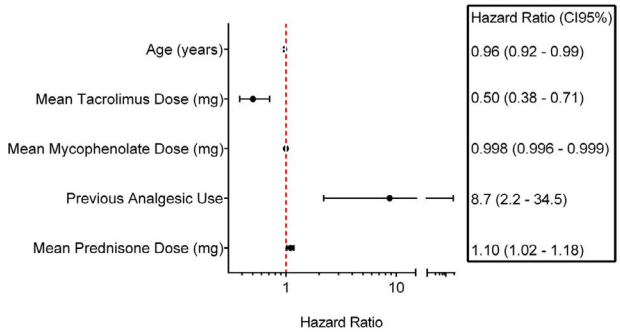
Results and Discussion: During the study period, 63 patients underwent transplantation; 60% (38) were men, and the median age was 60 (IQR 52-63) years. The incidence of rejection was 43% (27), of which 11 (17%) were biopsy-confirmed, and 6% (4) of the patients died during the first year.

Risk factors for biopsy-confirmed rejection included using analgesics before transplantation (HR: 8.7, 95% CI: 2.2 – 34.5) and the average prednisone dose in the first month (HR: 1.1, 95% CI: 1.02 – 1.18). Protective factors included age (HR: 0.96, 95% CI: 0.92 – 0.99), average tacrolimus dose (HR: 0.5, 95% CI: 0.38 – 0.71), and average mycophenolate dose (HR: 0.998, 95% CI: 0.996 – 0.999).

Regarding mortality, the risk factor identified was the occurrence of re-transplantation (HR: 11.3, 95% CI: 1.16 – 109.3).

Conclusions: Higher doses of tacrolimus and mycophenolate were associated with a lower risk of rejection, while higher doses of prednisone were associated with a higher risk of the event. Considering the factors that can predict the event would help optimize therapy and improve clinical outcomes.

Figure 1. Associated factors to biopse-confirmed rejection of hepatic trasplant. Cox Proportional hazards Regression Analysis.



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P-67 FREQUENCY OF MASLD IN INFLAMMATORY BOWEL DISEASE

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Conflict of interest: No

Introduction and Objectives: Hepatic involvement as an extra-intestinal manifestation of inflammatory bowel disease (IBD) has been widely described; however, there is limited information on the presence of non-alcoholic steatosis and hepatic fibrosis, as well as the recent definition of metabolic dysfunction-associated steatotic liver disease (MASLD). The aim of our study is to describe the frequency of non-alcoholic hepatic fibrosis and steatosis, as well as MASLD, and to describe the associated factors for these conditions.

Patients / Materials and Methods: This is a cross-sectional and analytical study. Patients diagnosed with IBD were included, and transient hepatic elastography (THE) with iLivTouchFT100® /UAP was performed to obtain values of steatosis and hepatic fibrosis. Additionally, the presence of metabolic syndrome criteria was evaluated to diagnose MASLD. Demographic and clinical variables of the disease were recorded. For the statistical analysis, R Commander software and R Studio Desktop application were used.

Results and Discussion: A total of 136 patients diagnosed with IBD were included, of which 80 (58.82%) were women and 56 (41.18%) were men. The mean age was 44.83 years (SD ±15.78). Regarding the type of IBD, 106 (77.9%) patients were diagnosed with UC, while CD was diagnosed in 30 (22.1%) patients; the majority, 90 participants (66.18%), presented some degree of hepatic steatosis, with mild being the most common in 34 patients (25%). Regarding fibrosis, 33 (24.26%) patients presented some degree of fibrosis. 76 (55.8%) patients were diagnosed with MASLD, while 14 (10.29%) patients with hepatic steatosis did not meet any criteria for metabolic syndrome. No significant differences were observed regarding disease activity, but differences were seen in nutritional variables such as BMI, weight, and waist circumference.

Conclusions: In patients with IBD, the presence of non-alcoholic hepatic steatosis is significant, with 66.18% (n=90) of patients showing some degree of steatosis. More than half of the patients [n=76 (55.8%)] met the criteria for MASLD.

Nutritional Assessment Variables by absence/presence of hepatic steatosis

Variables	Patients without steatosis	Patients with steatosis	p-value	General group
Weight	60.31 (±11.51)	65.79 (±15.80)	<0.05	63.92 (±14.67)
Height	1.62 (±0.09)	1.59 (±0.10)	0.2362	1.60 (±1.10)
	81.96 (±9.14)	92.05 (±12.99)	<0.05	88.64 (±12.72)

(*continued*)

(*Continued*)

Nutritional Assessment Variables by absence/presence of hepatic steatosis				
Waist circunference				
BMI	22.78 (±3.13)	25.60 (±4.23)	<0.05	24.61 (±4.10)
Fat	16.09 (±7.99)	22.18 (±7.89)	< 0.05	20.05 (±8.41)
% Fat	25.99 (±11.00)	33.10 (±8.85)	<0.05	30.61 (±10.20)
Bone mass Kg	2.42 (±0.44)	2.37 (±0.54)	0.302	2.39 (±0.51)
Muscle mass Kg	19.64 (±5.18)	19.72 (±6.60)	0.6419	19.69 (±6.12)

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P-68 LIVGUARD, A DEEP NEURAL NETWORK FOR CIRRHOSIS DETECTION IN LIVER ULTRASOUND (USD) IMAGES

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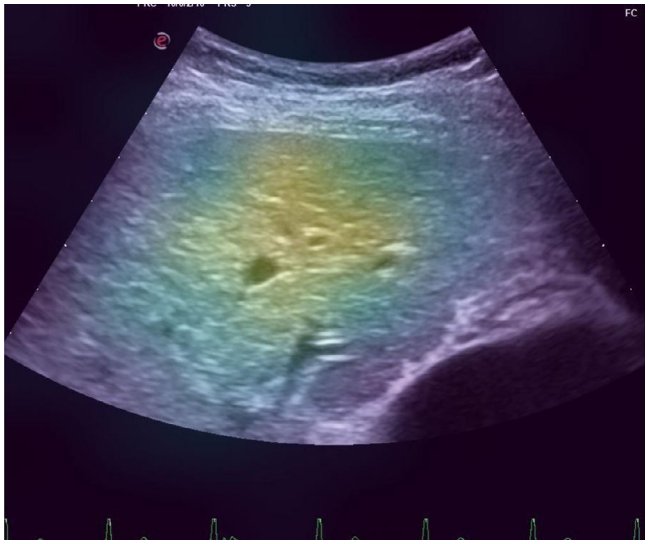
Conflict of interest: No

Introduction and Objectives: Differents ultrasound (USD) signs have been described for the diagnosis of cirrhosis. Among them, the irregularity of the liver shape and the liver echostructure are the most specific and sensitive findings. The echostructure of the liver parenchyma can be classified by the operator as smooth or coarse, the latter being suggestive of chronic liver disease. This classification is not free of subjectivity. The objective of our study was to diagnose cirrhosis by analyzing the liver echostructure through artificial inteligence (AI). We here propose LivGuard, a deep learning binary classifier for cirrhosis detection from a single ultrasound image from general and point-of-care pocket-handheld USD (POCUS).

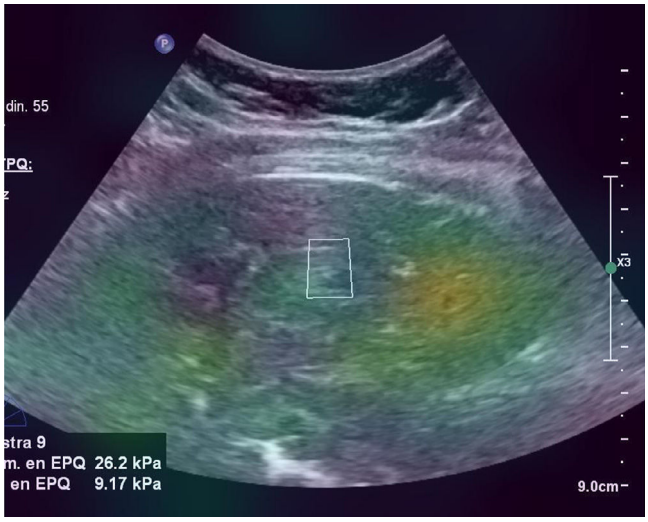
Patients / Materials and Methods: The dataset was composed of 1625 two-dimensional, ultrasound liver images annotated as cirrhotic (N=677) or not (N=948) captured from 165 individuals at Sanatorio Sagrado Corazon and Sanatorio de los Arcos, Buenos Aires, Argentina. We stochastically split the master set into training (N=1297; 79.8%), validation (N=159; 9.7%), and test (N=169; 10.2%) sets that were completely disjointed. The output of the efficientNetv2 convolutional neural network (CNN) was a score between 0 and 1 to exhibit the probability of cirrhosis.

Results and Discussion: The Artificial Intelligence (AI) System achieved accuracy in the test set of 88.7%. Sensitivity, specificity, positive (P) and negative (N) predictive values (PV) were 88.8%, 88.5%, 85.5% and 92.2%, respectively. The system was additionally evaluated in a test set of images (N=180; positive for cirrhosis=64) obtained through Butterfly POCUS. The AI system achieved an overall detection rate of 88.8%. Sensitivity, specificity, positive (P) and negative (N) predictive values (PV) were 100%, 82.7%, 76.1% and 100%, respectively.

Conclusions: LivGuard is proven to be a high performer as cirrhosis classifier in ultrasound images. Further work is required to validate this algorithmic framework in prospective cohorts of patients in additional clinical trials and/or real-world datasets.



Heat MAP Normal



Heat MAP cirrhosis

https://doi.org/10.1016/j.aohep.2024.101682

P-69 EFFECTS OF POPULATIONAL-RELEVANT DOSES OF CARBOXYMETHYLCELLULOSE AND POLYSORBATE 80 EMULSIFIERS ON MASLD-ASSOCIATED HEPATOCARCINOGENESIS

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Conflict of interest: No

Introduction and Objectives: Hepatocellular carcinoma is the 3rd deadliest type of cancer worldwide and metabolic dysfunction-associated steatotic liver disease is the fast-growing cause of liver disease. Ultra-processed foods are consumed in Westernized-style diets (WD) and emulsifiers, especially carboxymethylcellulose (CMC) and polysorbate 80 (P80), feature among the most consumed food additives globally. Nevertheless, the effects of these additives on hepatocarcinogenesis still elusive. Thus, we assessed the effects of populational-based doses of CMC/P80 in a murine model of MASLD-associated hepatocarcinogenesis.

Patients / Materials and Methods: Male C57BL/6J mice were allocated into 8 groups and received intraperitoneal doses of diethylnitrosamine (25 mg/Kg of b.w., 1 × /week, G1-G8) for 4 weeks. By the 6th week, mice were fed a WD (G2-G8) or a basal diet (G1) for 24 weeks. At the 10th week, mice received intragastric doses of CMC (370.0/740.0 mg/Kg of b.w., G3/G4), P80 (100.0/200.0 mg/Kg of b.w., G5/G6), or their combination (370.0+100.0/740.0+200.0 mg/Kg of b. w., G7/G8) or vehicle (G1/G2) for 20 weeks (5 × /week). A glucose tolerance test was performed and hepatic tumoral/non-tumoral and serum samples were collected. Data were analyzed by one/two-way ANOVA or Kruskal-Wallis and Tukey's/Dunn's *post hoc* tests.

Results and Discussion: Pronounced final body weight/adiposity index ($p<0.0001$) were observed in G5-G7. Tumor incidence/multiplicity were not altered by emulsifiers, but G6/G8 showed a higher proportion of larger tumors (>50mm^3, $p<0.0001$). Hepatocellular adenoma occurrence was frequent in all groups. WD-fed mice showed a glucose intolerance profile ($p<0.0001$). G2/G5-G7 shared a similar macro/microvesicular steatosis ($p<0.0001$) aspect, whereas hepatocellular hypertrophy was pronounced in G5-G7 ($p<0.0001$). No differences were observed in lobular inflammation or alanine aminotransferase, total cholesterol, and triglycerides levels.

Conclusions: Our findings revealed that populational-based doses of emulsifiers promotes MASLD-associated hepatocarcinogenesis by pronouncing hepatic steatosis and the adiposity index.

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P-70 ALCOHOL CONSUMPTION RECURRENCE IN LIVER TRANSPLANT PATIENTS WITH ALCOHOLIC CIRRHOSIS: HEALTH AND SOCIAL IMPACT

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Conflict of interest: No

Introduction and Objectives: Alcoholic cirrhosis is a leading cause of liver transplantation. However, post-transplant alcohol recurrence remains a significant challenge, affecting graft survival and patient outcomes. Identifying predictive factors for relapse is crucial for optimizing the allocation of scarce donor organs. *Objetives*: To evaluate the recurrence rate of alcohol consumption in patients who have undergone liver transplantation due to alcoholic cirrhosis and identify clinical and psychosocial variables predicting relapse risk.

Patients / Materials and Methods: A retrospective observational study was conducted on 167 consecutive patients who underwent liver transplantation for alcoholic cirrhosis between January 2013 and July 2023. Pre-transplant data, including demographics, alcohol consumption history, and psychosocial variables, were collected from medical records. Post-transplant alcohol consumption was assessed using the AUDIT questionnaire. Statistical analyses included chi-square tests, Fisher's exact tests, t-tests, and Mann-Whitney U tests.

Results and Discussion: Among the 167 patients, a 5% (9/167) recurrence rate of alcohol consumption was observed. The recurrence group showed significantly lower adherence to post-transplant treatment ($p=0.021$) and higher rates of graft dysfunction ($p<0.001$) compared to the non-recurrence group. No significant differences were found in demographic variables, pre-transplant alcohol consumption, or psychological awareness of disease. The education level was lower in the recurrence group ($p=0.05$). The average AUDIT score in the recurrence group was 8, indicating intermediate risk. Recurrence was associated with a longer post-transplant follow-up period ($p<0.001$) and higher alcohol intake (median 40g/day).

Conclusions: Predicting post-transplant alcohol relapse based solely on pre-transplant indicators is complex. Lower adherence to post-transplant treatment and higher graft dysfunction rates were significant in the recurrence group. The AUDIT questionnaire was useful in assessing post-transplant alcohol consumption risk. Comprehensive pre- and post-transplant evaluations incorporating medical and psychosocial factors are needed to enhance patient long term outcomes and optimize the use of limited transplant resources.

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P-71 BARIATRIC SURGERY AND THE IMPACT ON THE LIVER. COHORT STUDY OF ONE CENTER IN ARGENTINA

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Conflict of interest: No

Introduction and Objectives: Losing weight and lifestyle modifications are still pillars of treatment for metabolic associated steatotic liver disease (MASLD) and steatohepatitis (MASH), despite the emerging therapies. Bariatric surgery (BS) has been reported to improve degeneration, inflammation, and fibrosis. *Aim*: To describe liver histological patterns and biochemical parameters in patients undergoing BS.

Patients / Materials and Methods: Observational retrospective study including 93 patients who underwent BS in one center in Argentina, between 2017-2023. A liver biopsy (LB) was performed during the surgery to all patients. Anthropometric and biochemical parameters, including fibrosis-4 index (FIB-4), were assessed intraoperatively and 6 months after surgery.

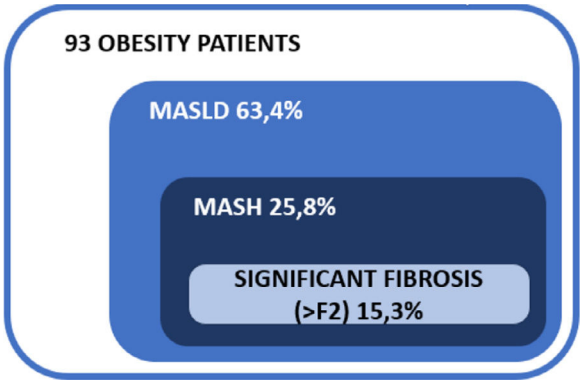
Results and Discussion: The mean age was 44.1 (±9.4), women 92.5%. Mean BMI before surgery, 42.7 (±7.1) kg/m2. We studied 25 patients who presented type II diabetes mellitus and 72 who were insulin resistance (77.4%). Other comorbidities like high blood pressure and hypothyroidism were found in 43% and 25.8% of this sample. LB showed MASLD in 63.4%, and MASH in 25.8% of cases. Liver fibrosis was present in 65% of patients, being significant (≥F2) in only 14 patients (15.3%) (F2: 10, F3: 3, F4: 1;). Strikingly, FIB-4 <1.3 was observed in 10/14 (71%) patients with fibrosis stage ≥F2. Patients with significant fibrosis had lower platelets and higher glycemia, AST, triglycerides, HOMA and FIB-4 compared with those who did not present these disorders ($p<0.05$). Six months after surgery, a reduction of BMI was observed compared to the preoperative BMI (42.7 vs 39.4 kg/m2; $p=0.034$). After six month of surgery, also a significant

improvement of AST, glycemia, triglycerides and HOMA were shown in patients with significant fibrosis (p<0.05).

Conclusions: Despite the high prevalence of MASLD in this cohort, significant fibrosis was found in only 15%. FIB-4 was not effective to predict liver fibrosis ≥F2. Bariatric surgery can induce long-term improvement of cardiometabolic risk factors.

Comparison of biochemical parameters according to the presence of fibrosis intra bariatric surgery

Variable	No significant fibrosis (F0-F1)	Significant fibrosis (≥F2)	*P* value
Platelets	263 (231-319)	222 (178-271)	**0.042**
Glycemia (mg/dL)	93 (85-102)	113 (100.2-141.2)	**0.003**
AST (IU/L)	18 (15-25)	26 (19.2-36.5)	**0.043**
ALT (IU/L)	21 (14-29)	27 (17-38.8)	0.132
Cholesterol (mg/dL)	176.5 (152-200)	178 (146-203)	0.996
Triglycerides (mg/dL)	104 (78.5-144.8)	136.5 (118-166)	**0.012**
HDL (mg/dL)	48 (40.2-54)	40.5 (32.2-53.5)	0.232
LDL (mg/dL)	104.5 (88.2-123)	99 (76.8-53.5)	0.387
TSH	2.4 (1.6-3)	2.85 (2.2-3.8)	0.159
HOMA	3 (2.1-5.1)	4.6 (3.6-9.9)	**0.027**
FIB-4	0.72 (0.5-0.9)	1.08 (0.8-1.4)	**0.009**



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P-72 HEPATITIS B AND C VIRUS PREVALENCE USING RAPID TEST IN A CHILEAN COHORT

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Conflict of interest: Yes, Laboratorio Gador financió los tests rápidos.

Introduction and Objectives: Hepatitis B (HBV) and C (HCV) viruses are one of the main causes of morbidity and mortality worldwide. Their epidemiology in Chile is not completely known, with an estimated prevalence of 0.034-0.15% for HBV and 0.1-0.19% for HCV. Although, in Chile, there is a wide coverage and availability of antiviral treatments, the main barrier to achieve the elimination of these viruses is the lack of knowledge of the serological condition. *Objectives:* To stablish the prevalence of HBV and HCV infection in the population at risk in Chile.

Patients / Materials and Methods: Cross-sectional, multicenter study, with participation of 8 Chilean health centers. HBV/HCV rapid tests (CTK-BIOTECH) were applied in people aged 18 years-old or older with at least 1 risk factor. Demographic and clinical data were collected using REDCap®. Statistical analysis was performed using Stata 16.0 software.

Results and Discussion: A total of 806 patients were included in the analysis, mean age was 44.6 ± 15.1 years and 53.6% were women. The main risk factors were: being in prison (22.5%), exposed health care personnel (16.9%) and obesity with steatotic liver disease (16.6%). Three patients tested positive for HBV and one patient had HBV/HCV coinfection. Seroprevalence of HBV and HCV infection was 0.49% and 0.12%, respectively. Two of the patients had coinfection with HIV. Serological confirmation to date was done in 3 of the 5 positive tests and confirmed the diagnosis in 3 of them (2 HBV and 1 HCV).

Conclusions: In this preliminary study, the prevalence of HBV and HCV infection in the population at risk is low. Further patient recruitment is required to identify the population on which to focus screening efforts and other preventive public health measures.

Table 1. Clinical and demographic characteristics.

	Total N = 806 (%)
Age, years (mean ± SD)	44.6 ± 15.1
Sex, n (%)	
Female	432 (53.6)
Male	367 (45.5)
No binary	5 (0.6)
Non informed	2 (0.2)
Residency region, n (%)	
Metropolitana de Santiago	387 (48.0)
Los Ríos	119 (14.8)
Arica y Parinacota	101 (12.5)
Araucanía	55 (6.8)
Atacama	53 (6.6)
Biobío	47 (5.8)
Maule	13 (1.6)
Los Lagos	9 (1.1)
Valparaíso	8 (1.0)
Ñuble	3 (0.4)
Coquimbo	2 (0.2)
Libertador General Bernardo O'Higgins	2 (0.2)
Magallanes y Antártica	2 (0.2)
Tarapacá	1 (0.1)
Antofagasta	1 (0.1)
Aysén	1 (0.1)
Native people, n (%)	78 (9.7)
Alcohol consumption, n (%)	
Yes	180 (22.3)
No	503 (62.4)

(*continued*)

(*Continued*)

	Total N = 806 (%)
Comorbidities, n (%)	
Steatotic liver disease	165 (20.5)
Hypertension	164 (20.3)
Insuline resistance	97 (12.0)
Diabetes Mellitus	69 (8.6)
Hypothyroidism	44 (5.5)
Cirrhosis	36 (4.5)
Chronic kidney disease	7 (0.9)
Other	147 (18.2)
HVB/HVC risk factors, n (%)	
Being in prison	181 (22.5)
Exposed health-care personnel	136 (16.9)
Obesity with steatotic liver disease	134 (16.6)
Transaminase elevation	120 (14.9)
HIV coinfection	49 (6.1)
Alcoholic cirrhosis	23 (2.9)
Pregnancy	18 (2.2)
Blood donor	17 (2.1)
Men who have sex with men	14 (1.7)
Blood transfusion before 1996	10 (1.2)
Other	380 (47.2)

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P-73 NORADRENALINE IN THE TREATMENT OF HEPATORENAL SYNDROME TYPE AKI: RESULTS IN NON-ICU HOSPITAL SETTING

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Conflict of interest: No

Introduction and Objectives: Hepatorenal syndrome acute kidney injury (HRS-AKI) is a phenotype of acute kidney injury that occurs in patients with decompensated liver cirrhosis owing to circulatory dysfunction and systemic inflammation. To describe the clinical characteristics, treatment responses, and outcomes of patients who developed HRS-AKI in a non-ICU hospital setting.

Patients / Materials and Methods: Case series analysis. The electronic medical records were reviewed. Stata v18.0 was used for descriptive analysis.

Results and Discussion: Sixteen patients with cirrhosis admitted to a non-ICU hospital area who developed HRS-AKI were identified. The median age was 64.5 years (interquartile range [IQR]: 57-66.5). Sixty-eight percent had MASLD etiology. Seventy-five percent of patients were classified as CHILD C, with a median MELD-Na score of 26 points (IQR: 19-31). At the time of HRS-AKI diagnosis, the mean duration of prior intravenous albumin administration was 2.9 days.

All patients underwent central venous catheterization and hemodynamic monitoring. Eighty-eight percent (14) of the patients had resolved HRS-AKI, although two patients developed acute respiratory failure as a complication. The overall hospital mortality rate was 43.8% (n=7), HRS-AKI recurrence at 30 days was 35.7% (5/14), and time to recurrence was approximately 17 days.

Conclusions: HRS-AKI is a critical condition in patients with cirrhosis treated with vasopressors and intravenous albumin. In this case series, the use of norepinephrine outside the ICU proved to be effective and safe; however, the high recurrence and mortality rates suggest that it should be considered as a bridge therapy to liver transplantation.

Characteristics at the diagnosis of HRS-AKI	n (%)
Associated infection	UTI 3 (37) SBP 2 (25) SB 2 (25)
ACLF grade	
I	6 (46.2)
II	2 (15.4)
III	5 (38.4)
HRS-AKI stage	
Ib	6 (37.5)
II	7 (43.7)
III	3 (18.8)
Serum creatinine, median (IQR)	2.3 (1.7-2.6)
Oliguric	2 (12.5)
Initial MAP, mean (SD)	70.5 (± 8.6)
Dose of noradrenaline [mcg/kg/min] (range)	0.15 (0.08-0.33)

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P-74 GLYCOSYLATED HEMOGLOBIN LEVELS AS A PREDICTOR OF HEPATIC FIBROSIS DUE TO MASLD

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Conflict of interest: No

Introduction and Objectives: Hepatic steatosis associated with metabolic dysfunction (MASLD) has a prevalence of 30% worldwide, and 80% of these patients do not present alterations in liver biochemistry. One of the cardiometabolic criteria is having glycosylated hemoglobin ≥5.6%, so an analysis was carried out using the ADA criteria for the diagnosis of prediabetes with HbA1C levels 5.7% - 6.4% and the degree of liver fibrosis.

Objectives: Compare the values of glycosylated hemoglobin and fibrosis determined by Transient Elastography.

Patients / Materials and Methods: Patients with MASLD criteria were included who underwent Transient Liver Elastography (Fibroscan ® 630 Expert v10720), APRI, FIB4, NAFLD score, blood count, liver biochemistry, lipid profile, glucose, glycosylated hemoglobin, clotting times. (TP, INR). It was compared with a control of healthy people. For statistical analysis, SPSS V24 was used for continuous quantitative variables expressed as mean and percentage, with moderate Spearman's Rho correlation.

Results and Discussion: Seventy-five patients with steatosis determined by CAP ≥ 232 were included. The age of the patients was 45 (40, 50).

Patients were classified as healthy (HbA1C <5.7%), prediabetic (HbA1C 5.7%-6.4%), diabetic (HbA1C >6.5%), and patients with a previous diagnosis of diabetes were classified as diabetic controlled (HbA1C <7%). and uncontrolled diabetics (HbA1C >7%), HbA1C levels were 5.7% (5.4%-5.9%). According to the MASLD criteria, 25 patients had HbA1C < 5.6% and 50 with HbA1C > 5.6% or with treatments for T2D.

Sixty-five patiens (86.7%) had no fibrosis, and 10 (13.3%) had fibrosis, with 5.1 kPa (4.3 kPa, 6.5 kPa).

Although no association was found between the degree of steatosis and the degree of fibrosis, the patient with the highest level of fibrosis presented the highest degree of steatosis. X^2= 8.916, p=0.178

No association was found between the degree of steatosis and diabetes.

X^2= 11.723,p=0.068

However, the degree of diabetes is associated with the presence of fibrosis and the degree of fibrosis, with a weak positive correlation existing between HbA1C levels and CAP levels, Spearman's rho 0.280 p=0.015. Tables 1 and 2

Although no assessment was found between BMI and kPa to determine if there is an association between the degree of fibrosis and the nutritional level, curiously, it can be observed that a healthy patient with grade 3 fibrosis has uncontrolled diabetes. Table 3

Conclusions: Prediabetes may be a predictor of the presence of liver fibrosis associated with MASLD.

Table 1 Association between the degree of diabetes and the presence of fibrosis

Fibrosis /Diabetes degree	Healthy n (%)	Prediabetes n (%)	Controlled Diabetes n (%)	Uncontrolled Diabetes n (%)
Healthy	32 (49.2)	25 (38.5)	7 (10.8)	1 (1.5)
Fibrosis	3 (30)	2 (20)	4 (40)	1 (10)
X^2= 8.883, p=0.031				

Table 2 Association between the degree of diabetes and the presence of fibrosis

Fibrosis /Diabetes degree	Healthy n (%)	Prediabetes n (%)	Controlled Diabetes n (%)	Uncontrolled Diabetes n (%)
F0-F1	32 (49.2)	25 (38.5)	7 (10.8)	1 (1.5)
F2	1 (16.7)	2 (33.3)	3 (50)	0 (0)
F3	2 (66.7)	0 (0)	0 (0)	1 (33.3)
F4	0 (0)	0 (0)	1 (100)	0 (0)
X^2= 25.796, p=0.002				

Table 3 Association between the degree of fibrosis and nutritional status

Degree of fibrosis/ Nutritional status	Healthy n (%)	Overweight n (%)	Obesity I n (%)	Obesity II n (%)	Obesity III n (%)
F0-F1	3 (4.6)	22 (33.8)	35 (53.8)	4 (6.2)	1 (1.5)
F2	0 (0)	2 (33.3)	1 (16.7)	3 (50)	0 (0)
F3	1 (33.3)	2 (66.7)	0 (0)	0 (0)	0 (0)
F4	0 (0)	0 (0)	1 (100)	0 (0)	0 (0)
X^2= 21.524 p=0.043					

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P-75 INFLUENCE OF THE ARTERIAL HEPATIC FLOW IN ELASTOGRAPHY (2D SHEARWAVE) LIVER VALUES

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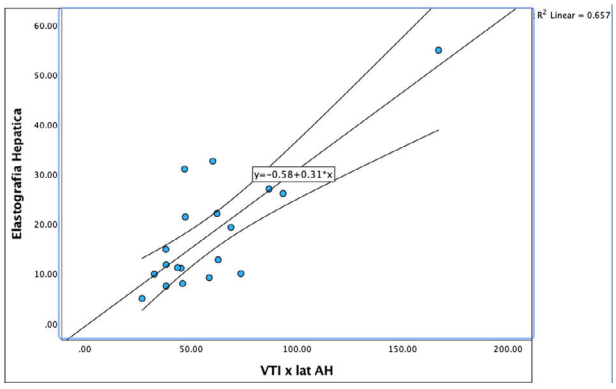
Conflict of interest: No

Introduction and Objectives: The liver receives blood at low pressure through the portal vein (80%). Distortion of hepatic histoarchitecture, reduces portal flow and increases hepatic arterial flow (HAF). Liver elastography (LE) non-invasively measures liver stiffness (LS), but intrahepatic and extrahepatic factors also influence LS. The velocity-time integral of the hepatic artery (HAVTI) estimates the area under the spectral Doppler curve. This study investigates the correlation between LS and HAVTI in cirrhosis patients, aiming to explain dynamic LS changes in cirrhosis and portal hypertension.

Patients / Materials and Methods: Elastography and spleno-portal Doppler were performed on cirrhosis patients under follow-up at Sanatorio Sagrado Corazón. The median of five LS measurements was determined, and the HAVTI was measured in the same study. Spearman's correlation method was used to establish the correlation between LE values and HAVTI

Results and Discussion: Twenty cirrhosis patients were evaluated (65% men), with a median age of 58 years. The most common etiology was HCV (35%), followed by alcohol use disorders (30%). Seventy percent were CHILD A (median MELD-Na 10). At the time of the study, 68.4% had experienced at least one decompensation event. We found a correlation of r = 0.65 (p = 0.004) between hepatic elastography values and HAVTI.

Conclusions: Our study demonstrates a significant correlation between LS and HAVTI in cirrhosis patients. This suggests that non-invasive HAVTI assessment may provide valuable insights into dynamic LS changes associated with cirrhosis and portal hypertension.



Correlación Elastografia hepatica / VTI art Hepatica

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P-76 MANIFESTATIONS OF PORTAL HYPERTENSION IN PATIENTS WITH COMMON VARIABLE IMMUNODEFICIENCY: PRELIMINARY DATA

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Conflict of interest: No

Introduction and Objectives: Liver involvement in common variable immunodeficiency (CVID) can be found in 9% to 79% of cases and may lead to reduced survival. Anicteric cholestasis and portal hypertension (PH) were the main hepatic manifestations. We aimed to establish the prevalence and characteristics of PH in patients with

CVID under treatment at a primary immunodeficiency clinic of a tertiary-level hospital.

Patients / Materials and Methods: A retrospective and descriptive study examined the medical records of patients with confirmed CVID.

Results and Discussion: out of the eleven patients with CVID, eight were women, and the median age was 34 years (range 23-72). PH was suspected in five (45.4%), with three patients experiencing clinically significant PH and one case complicated by variceal bleeding. Table 1 compares both groups (with and without PH). Thrombocytopenia was found in most patients, consistent with the higher incidence of splenomegaly. Liver biopsies performed only in two patients with suspected PH excluded cirrhosis but identified regenerative nodular hyperplasia in one case. Both cases had liver stiffness measurements by shear wave elastography, showing a median of 14.2 kPa. No association was identified with other non-infectious complications of CVID (gastrointestinal and pulmonary disease).

Conclusions: Liver disease is often underdiagnosed in patients with CVID, with portal hypertension appearing to be frequent. Early screening is essential to avoid severe complications.

	With portal hypertension (n=5)	Without portal hypertension (n=6)
Years from CVID diagnosis	11,4 (7-14)	7,6 (4-17)
Female	4	4
Age at PH diagnosis	45,6 (22-70)	-
Pulmonary disease	4	4
Gastrointestinal disease	1	1
Cholestasis	2	0
Splenomegaly	4	0
Thrombocytopenia	4	0
Gastro-esophageal varices/Upper bleeding	2 (3 no data)/1	0
Ascites	1	0

Table: comparison between patients with and without evidence of portal hypertension.

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P-77 TRIPLE THERAPY FOR DIFFICULT-TO-TREAT PRIMARY BILIARY CHOLANGITIS: A SYSTEMATIC REVIEW AND SINGLE-ARM META-ANALYSIS

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Conflict of interest: No

Introduction and Objectives: High-risk patients with primary biliary cholangitis (PBC) who respond incompletely to ursodeoxycholic acid (UDCA) require additional treatment with fibrates or obeticholic acid (OCA). Despite this, 30-50% of these patients continue to exhibit elevated alkaline phosphatase (ALP) and bilirubin levels, classifying them as difficult-to-treat PBC. This study aims to evaluate the effects of triple therapy (UDCA + OCA + fibrates) on liver biochemistry in patients with difficult-to-treat PBC.

Patients / Materials and Methods: We systematically reviewed EMBASE, PubMed, and Cochrane databases to identify eligible studies. Pooled analyses were performed for change-from-baseline data. We also conducted subgroup analyses based on the sequencing of the specific add-on drug used as third-line therapy. Statistical analyses were performed using RStudio (2023.12.1+402).

Results and Discussion: Two studies provided change-from-baseline data, encompassing 95 patients under triple therapy, of whom 68.4% (n=65) had fibrates added to UDCA+OCA dual therapy. Overall, patients under triple therapy presented with decreased ALP [-0.82 x upper limit of normal (ULN), 95%CI -0.96 to -0.68], bilirubin (-0.06 x ULN; 95%CI -0.11 to -0.01), and GGT (-3.18 x ULN; 95%CI -4.57 to -1.79) levels compared to the last available result on dual therapy. No significant change was noted for AST (-0.08 x ULN; 95%CI -0.44 to 0.28) and ALT (-0.21 x ULN; 95%CI -0.61 to 0.20) concentrations. However, the addition of OCA to UDCA+fibrates dual therapy significantly reduced AST (-0.53 x ULN; 95%CI -0.73 to -0.33; p-value for subgroup differences < 0.001) and ALT (-0.69 x ULN; -0.97 to -0.40; p<0.001) levels. On the other hand, adding fibrates to the UDCA+OCA scheme was superior in reducing ALP levels (p=0.049).

Conclusions: Triple therapy appears to reduce liver enzyme levels in patients with difficult-to-treat PBC. Further studies are warranted to clarify the optimal sequencing and to identify the subgroups that benefit the most from this combination therapy.

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P-78 DECOMPENSATED CIRRHOSIS IN A LARGE MULTINATIONAL COHORT IN LATIN AMERICA: MORTALITY IS TOO HIGH IN THE REGION REGARDLESS OF ETIOLOGY AND COUNTRY

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Conflict of interest: No

Introduction and Objectives: Decompensated cirrhosis (DC) is an important cause of death worldwide, including in Latin America. This study aimed to evaluate in-hospital and 30-day post-discharge mortality in a multinational cohort in Latin America.

Patients / Materials and Methods: Non-elective cirrhosis admissions from Nov 2021 to Aug 2022 in sites from Mexico, Brazil, Argentina and Chile were included. Demographics, admission medications, prior conditions, etiology, and other data around admission were collected from patients and their medical records. Continuous variables were summarized using mean (± SD), and categorical variables as counts (%). Main outcomes were inpatient mortality/hospice and 30-day post-discharge mortality. Univariable comparisons were compared between outcomes using two-sample *t*-tests or chi-squared tests as appropriate. Multivariable models controlling for all variables significantly associated with outcomes at the $p < 0.05$ level were fit.

Results and Discussion: Of 651 patients with valid inpatient outcomes, 158 died in-hospital or were moved to hospice (24.3%). At 30-days, 139 were lost to follow-up, leaving 512 patients. Of these, 172 died by 30 days (33.6%). In-hospital and 30-days mortality were not affected by etiology (HBV, HCV, MASLD, crypto). Variables significantly associated with mortality at both timepoints were prior LVP/HE, admission medications, prior infection, liver-related admission, and higher MELD-Na (Table 1). On multivariable analysis, admission betablockers and lactulose were associated with high mortality; MELD-Na and infection on admission were associated to death at both timepoints (Table 2)

Conclusions: DC is associated with significant in-patient and 30-day mortality in the region, regardless of etiology and country, especially in patients with higher MELD-Na and/or infected on admission.

Table 1.

Variable	Inpatient Outcomes (n = 651)			30-Day Outcomes* (n = 512)		
	Survived/LT (n = 493, 75.7%)	Death/ Hospice (n = 158, 24.3%)	*p*-value	Survived/LT (n = 340, 66.4%)	Death (n = 172, 33.6%)	*p*-value
Age (years)	57.96 (±13.11)	56.59 (±12.73)	0.24	56.50 (±12.93)	56.34 (±12.82)	0.89
Male Sex	273 (55.4%)	88 (55.7%)	>0.99	200 (58.9%)	97 (56.4%)	0.67
Cirrhosis Etiology						
Hepatitis C	81 (16.4%)	20 (12.7%)	0.31	55 (16.2%)	22 (12.8%)	0.38
NAFLD/MASLD	123 (24.9%)	36 (22.8%)	0.66	72 (21.2%)	37 (21.5%)	>0.99
Hepatitis B	5 (1.0%)	2 (1.3%)	>0.99	4 (1.2%)	2 (1.2%)	>0.99
Cryptogenic	46 (9.3%)	18 (11.4%)	0.55	33 (9.7%)	19 (11.0%)	0.75
Others	12 (2.4%)	1 (<1.0%)	0.28	8 (2.4%)	2 (1.2%)	0.56
Prior AKI	79 (16.0%)	27 (17.1%)	0.85	60 (17.6%)	35 (20.3%)	0.53
Prior Hydrothorax	24 (4.9%)	15 (9.5%)	0.05	18 (5.3%)	17 (9.9%)	0.08
Cirrhosis History						
Prior LVP (6mo)	36 (7.3%)	29 (18.4%)	<0.001	32 (9.4%)	24 (14.0%)	0.16
Hospitalized (6mo)	174 (35.3%)	62 (39.2%)	0.42	130 (38.2%)	71 (41.3%)	0.57
Prior HE (6mo)	180 (36.5%)	77 (48.7%)	0.008	123 (36.2%)	89 (51.7%)	0.001
Variceal Bleed (6mo)	189 (38.3%)	55 (34.8%)	0.48	120 (35.3%)	62 (36.0%)	0.94
Transplant Listed?	75 (15.2%)	37 (23.4%)	0.02	69 (20.3%)	30 (17.4%)	0.51
Infected in Past 6mo	78 (15.8%)	32 (20.3%)	0.24	63 (18.5%)	36 (20.9%)	0.60
Prior HCC (6mo)	36 (7.3%)	16 (10.1%)	0.33	25 (7.4%)	18 (10.5%)	0.30
Admission Details						
Beta-Blocker	237 (48.1%)	51 (32.3%)	<0.001	150 (44.1%)	63 (36.6%)	0.13
Lactulose	180 (36.5%)	89 (56.3%)	<0.001	119 (35.0%)	93 (54.1%)	<0.001
Rifaximin	97 (19.7%)	44 (27.8%)	0.04	68 (20.0%)	52 (30.2%)	0.01
Diuretics	225 (45.6%)	83 (52.5%)	0.16	152 (44.7%)	92 (53.5%)	0.07
PPI	167 (33.9%)	56 (35.4%)	0.79	104 (30.6%)	58 (33.7%)	0.54
Statins	57 (11.6%)	14 (8.9%)	0.42	29 (8.5%)	17 (9.9%)	0.73
SBP Prophylaxis	68 (13.8%)	29 (18.4%)	0.20	46 (13.5%)	30 (17.4%)	0.30
HBV antivirals	7 (1.4%)	2 (1.3%)	>0.99	2 (<1.0%)	3 (1.7%)	0.44
Infection Admission	122 (24.7%)	68 (43.0%)	<0.001	80 (23.5%)	81 (47.1%)	<0.001
Liver Related Admission	439 (89.0%)	154 (97.5%)	0.002	306 (90.0%)	166 (96.5%)	0.02
MELD-Na	19.76 (±7.69)	26.76 (±6.86)	<0.001	20.29 (±7.65)	27.22 (±7.27)	<0.001

Table 2.

Variable	Inpatient Death/Hospice		30-Day Death	
	OR (95% CI)	*p*-value	OR (95% CI)	*p*-value
Admission Beta-Blocker	0.54 [0.34-0.85]	0.003	–	–
Admission Lactulose	3.08 [1.68-5.72]	<0.001	1.54 [0.88-2.69]	0.13
Infection on Admission	1.81 [1.16-2.82]	0.009	2.32 [1.59-3.62]	<0.001
MELD-Na	1.12 [1.08-1.15]	<0.001	1.11 [1.08-1.15]	<0.001

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P-79 CHARACTERISTICS AND OUTCOMES OF TRANSJUGULAR INTRAHEPATIC PORTOSYSTEMIC SHUNT (TIPS) RECIPIENTS IN A TERTIARY HOSPITAL. LIMA - PERU (JANUARY 2019 - MARCH 2024)

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Conflict of interest: No

Introduction and Objectives: Portal Hypertension (PHT) is the determining event of decompensations in liver cirrhosis, increasing its mortality. TIPS is an effective strategy for the management of PHT; however, in Latin America there are few studies on this topic. *Objective:* To describe characteristics and results of TIPS recipients in a tertiary hospital in Lima (Peru) from January 2019 to March 2024.

Patients / Materials and Methods: This observational, retrospective and cross-sectional study reviewed all medical records of patients ≥ 18 years old undergoing TIPS between January 2019 and March 2024, performed by Interventional Radiology Service. For statistical analysis, SPSS 29 software was used.

Results and Discussion: A total of 43 patients (46,5% male) were included, with a mean age of 52.3 years (SD14.9), most of them cirrhotic (93%), being MASLD the main etiology (45%). The mean Child Pugh score was B9, and the Model for End-stage Liver Disease (MELD) score was 12.45 (SD4.6).

TIPS was mainly indicated for refractory/resistant ascites 39.5% (17/43) and variceal hemorrhage 27.9% (12/43), and there was more than one indication in 18.6% (8/43). The mean shunt diameter was 10mm with a pre-procedure pressure gradient of 23.5mmHg (range 12-40) and post-procedure pressure gradient of 7.44 (range 4-13).

Technical success was achieved in 95.3% (shunt creation), hemodynamic success (GHPVH < 12mmHg or decrease ≥50%) in 100% and favorable clinical success (Table 1).

It was found that 55.8% (24/43) had at least one complication, the main one being hepatic encephalopathy in 32.6% (14/43) and the most serious being hemoperitoneum in 9.3% (4/43).

The average follow-up time was 11 months (1−56 months), showing that 16.27% of patients had access to liver transplantation.

Conclusions: The main indication for TIPS in our setting was refractory ascites, followed by variceal hemorrhage, with high technical and hemodynamic success and favorable clinical response; the most common complication being hepatic encephalopathy.

TABLE 1: INDICATIONS AND CLINICAL SUCCESS OF TIPS

TIPS INDICATION (N = 43)	N	%
- VARICEAL HEMORRHAGE (VH)	12	27.9
- REFRACTORY / RESISTANT ASCITES	17	39.5
- HEPATIC HYDROTHORAX	2	4.7
- BUDD CHIARI SYNDROME	3	7.0
- PORTAL THROMBOSIS	1	2.3
- TWO OR MORE INDICATIONS	8	18.6
CLINICAL SUCCESS (N = 41) *		
- CONTROL OF VH WITHOUT RECURRENCE	10/11	90.9
- ASCITES RESOLUTION [a]	2/24	8.3
- PARTIAL RESOLUTION OF ASCITES [b]	22/24	91.7
- PARTIAL RESOLUTION OF HYDROTHORAX [c]	4/4	100

*Patients who achieved technical and hemodynamic success were included in the analysis.

[a]Ascites controlled without paracentesis or diuretics.

[b]Ascites controlled without paracentesis with diuretics

[c]Hydrothorax controlled without thoracentesis with diuretics

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P-80 RECURRENCE OF PRIMARY SCLEROSING CHOLANGITIS AFTER LIVER TRANSPLANTATION: RESULTS FROM THE BRAZILIAN CHOLESTASIS CONSORTIUM

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Introduction and Objectives: Previous studies have identified risk factors associated with recurrent primary sclerosing cholangitis (rPSC) after liver transplantation (LT) in Caucasians. There is paucity of data regarding rPSC in multiethnic Latin patients. *Objectives:* To investigate rPSC frequency and its associated risk factors in a highly admixed population from Brazil.

Patients / Materials and Methods: The Brazilian Cholestasis Study Group database was retrospectively reviewed for including primary sclerosing cholangitis (PSC) patients who underwent LT. Primary outcome was rPSC.

Results and Discussion: A total of 96 patients were included, 60% males, mean age 32 ± 13 years. After a follow-up of 90 months (interquartile range 39-154), rPSC occurred in 29 (30%) of the participants. There were no statistically significant associations between rPSC and age, gender, concurrent or *de novo* inflammatory bowel disease, MELD score at the time of LT or allograft rejection. The only factor associated with an increased risk of disease recurrence was time after LT.

Conclusions: In Brazilian PSC patients who underwent LT, one-third had rPSC. Longer time after LT was associated with rPSC diagnosis.

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P-81 LIVER TRANSPLANTATION FOR PRIMARY BILIARY CHOLANGITIS (PBC): 25-YEAR EXPERIENCE.

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Conflict of interest: No

Introduction and Objectives: Ten-year survival after liver transplantation (LT) in PBC is around 80%; disease recurrence (DR) occurs in 17-46%, with patient and graft survival impact. OBJECTIVES: To evaluate the epidemiological profile of patients transplanted due to PBC and recurrence risk factors.

Patients / Materials and Methods: Retrospective cohort analysis from 1997 to 2022. Until 2002, standard immunosuppression (IS) was with cyclosporine (CYA); later tacrolimus (TAC). From 2019, preemptive ursodeoxycholic acid (UDCA) was started in the first 3 months of LT to prevent DR (46.2%).

Results and Discussion: 28 patients were evaluated, 96.4% female with 52.4±9.7years at LT (2 living donor). The pre-LT data are shown in Table 1. Five patients were transplanted due to exception points (3 pruritus, 1 refractory ascites, 1 encephalopathy). After LT, 11 presented acute cellular rejection (ACR) (2 cases during the switch of TAC to CYA to prevent DR) and 4 CMV infection (14.3%). The DR rate was 46.4% in 6.34±5.5 years post-LT, most of them stage I. At relapse, 53.9% were using CYA. Four patients (14.3%) died. The preemptive use of UDCA was associated with a lower risk of recurrence (25 × 71.4%, p=0.047). There was no impact of recurrence on patient survival.

Conclusions: In literature CYA is associated with a lower risk of DR and greater survival, however, in our cohort, > 50% were using the medication at relapse. Some cases of ACR occurred at the shift of TAC to CYA. It's important to discuss the ideal time to IS conversion, particularly during the first 6 months and to use preemptive UDCA to reduce DR. Although almost 50% of patients relapsed, deaths were not related to recurrence. The preemptive use of UDCA post-LT appears to be associated with lower DR, with no impact on survival, probably due to the short follow-up period.

Table 1: Pre-LT data

Gender n(%)	
Male	1 (3.57 %)
Female	27 (96.42%)
Age (mean ± SD) (years)	
At diagnosis of PBC	46.6±10
At Liver transplant	52,45±9.7
Pré LT complications n (%)	
Ascites	9 (35.7)
Upper Gastrointestinal Bleeding	7 (25)
Encephalopathy	4 (14.3)
Spontaneous bacterial peritonitis	2 (7.1)
LT indications n (%)	
Loss of function	23 (82.1%)
Exception points	5 (17,8%)
Donor age (mean ± SD) (years)	39.42±15
Donor/recipient sex disparity n (%)	11 (39.6 %)

Table 2: Post-LT data

Preemptive UDCA n (%)	12 (46.2)
Acute cellular rejection n (%)	11 (39.3)
Exchange of TAC for CYA	2 (7.1)
Cytomegalovirus	4 (14.3)
PBC recurrence n (%)	13 (46.4)
Use of CYA	7/13 (5.9)
Deaths n (%)	4 (14.3)
Early complications	2 (7.14)
HBV de novo	1 (3.5)
Pancreatic neoplasm	1 (3.5)
10-year survival	85%

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P-82 IMPACT OF HEPATITIS C VIRUS ERADICATION WITH DIRECT ANTIVIRAL DRUGS ON GLYCEMIC CONTROL AFTER LIVER TRANSPLANTATION

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Conflict of interest: No

Introduction and Objectives: Liver transplant patients have increased risk of type 2 diabetes (T2DM). Although hepatitis C virus (HCV) is an independent risk factor for insulin resistance and T2DM, there is no consensus on the impact of antiviral treatment on sustained glycemic control, particularly in liver transplant patients with HCV (HCV-LT). *Objective:* Evaluate the impact of viral HCV eradication with direct antiviral drugs on long term glycemic control of HCV-liver transplanted (HCV-LT) patients.

Patients / Materials and Methods: A retrospective cohort of HCV-LT recipients with sustained virological response (SVR) after direct-antiviral treatment (DAA) was included in this longitudinal study. Clinical and laboratory data were collected before antiviral treatment and sequentially after SVR. A Cox Regression analysis was performed to evaluate the variables associated with glycated hemoglobin (A1C) on target (≤ 7% and ≤ 5.6% with and without T2DM) at the end of the follow-up period.

Results and Discussion: Overall, 140 eligible HCV-LT patients were included (64% male, 63 ± 9 yrs, 15% with BMI ≥ 30 kg/m2, 64% with T2DM) and followed for 43 (19-70) months. After LT, 79% used tacrolimus, 34% Sirolimus and 14% prednisone. Before treatment 71% had A1C on target. At follow up this rate increased to 77%, with add-on insulin/increased doses in 14%, withdraw/reduced doses in 12% and diet/oral treatment in 76% of HCV-LT patients.

On multivariate Cox analysis, A1C on target at follow-up were independently associated with diet/oral treatment (HR:2.77; 95%CI,1.33-5.78;p=0.006) and time between LT and end of DAA treatment (HR:0.996; 95%CI,0.992-1.000;p=0.045), adjusted for age, gender, weight gain and immunosuppressants.

Conclusions: Over 70% of HCV-LT patients with SVR remained in good glycemic control over time, which was associated with initial and long-lasting non-insulin treatment. Of note, A1C on target was

inversely associated with time from transplant to the end of DAA and subsequent HCV eradication, despite other important factors for long-term glycemic control.

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P-83 REDUCTION OF LIVER STIFFNESS AFTER ANTICOPPER THERAPY IN WILSON'S DISEASE

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Conflict of interest: No

Introduction and Objectives: Liver stiffness (LS) is increased in fibrosis related to chronic liver diseases. Nevertheless, other factors such as liver inflammation, congestion and intrahepatic deposits may also affect hepatic elasticity. We hypothesized that Wilson's disease (WD) intrahepatic copper accumulation can lead to an increase in LS. The aim of this study is to assess the changes in LS during treatment of patients with different presentations of WD.

Patients / Materials and Methods: We included patients with confirmed diagnosis of WD (Leipzig score ≥4) under regular use of chelating agents or zinc salts, between 2014 and 2024. Patients who have undergone at least two transient hepatic elastography (THE; Fibroscan, ECHOSENS) during clinical follow-up, were included. The minimum interval between each elastography was one year. Patients submitted to liver transplantation were excluded. Variations in liver stiffness between the last and first THE, the anticopper therapy used, and the main WD manifestations, were evaluated.

Results and Discussion: Thirteen patients were included: mean age of 28.8 ± 9.9 years; 54% female. Seven (54%) patients presented predominantly neurologic manifestation and six (46%) hepatic manifestations; 92% used chelating agents. The mean initial LS was 12.2 ± 14.8 kPa (median 7.5 kPa; ranging from 3.8 to 59.3), decreasing during treatment to 7.7 ± 4.6 kPa (median 6.3 kPa; ranging from 3.9 to 18.9) at a mean follow-up interval of 4.9 ± 2.8 years (ranging from 1 to 10) ($p < 0.0001$). Eight (61%) patients observed a median reduction of 2.3 kPa and five presented a median elevation of 0.3 kPa. There was no difference in LS variations according to clinical presentation of WD (p=0.387).

Conclusions: In patients with WD, LS decreased in most patients during chelating therapy. Intrahepatic copper deposit might influence higher values of LS before anticopper therapy, suggesting the possibility of using THE to evaluate hepatic copper accumulation and to monitor WD treatment.

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P-84 HAVE CFTR MODULATORS CHANGED THE NEED FOR LIVER TRANSPLANTATION AMONG PATIENTS WITH CYSTIC FIBROSIS? AN ANALYSIS OF THE UNOS DATABASE

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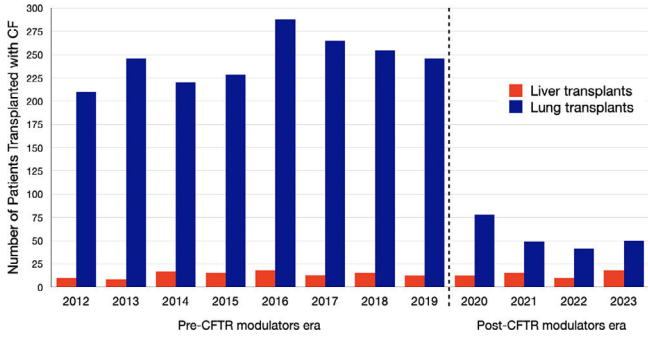
Conflict of interest: No

Introduction and Objectives: The impact of cystic fibrosis (CF) transmembrane conductance regulator (CFTR) modulators on the natural history of liver disease is unknown. The objective of this study is to assess changes in the rates of liver transplantation compared to lung transplantation since the approval of the new CFTR modulators in October 2019.

Patients / Materials and Methods: Patients with CF (PwCF) who were listed for liver or lung transplantation were identified in the OPTN/UNOS database. We compared outcomes between the pre- and post-CFTR modulators eras, 2012-2019 and 2020-2022, respectively.

Results and Discussion: Between 2012-2023, 95,254 liver and 28,715 lung transplants were performed, including 138 (0.09%) and 2,129 (7.4%) transplants in PwCF, respectively. The rate of death on the waitlist was not significantly different between eras in either group. For liver transplantation, the median percentage of CF-related listings per year was similar between the two eras 0.13% (0.11-0.17%) in 2012-2019 vs. 0.12% (0.11-0.13%, p=0.18) in 2020-2023. Similarly, the median percentage of CF-related liver transplants per year was 0.14% (0.12-0.20%) vs. 0.14% (0.11-0.16%, p=0.450) (see figure). For lung transplantation waitlist additions per year decreased from 7.58% (6.72-8.17%) to 1.11% (0.95-1.52%) per year from the pre- to the post-modulator era ($p<0.001$). The median percentage of CF-related transplants per year was 11.18% (10.42-11.94%) in pre-modulator era vs 1.64% (1.56-2.23%) in the post-modulator era ($p<0.001$).

Conclusions: We describe stable liver transplant activity for PwCF in the post-modulator era compared to the pre-modulator era, while the need for lung transplantation declined after the introduction of highly-active CFTR modulators. Long-term data is required to determine the role of CFTR modulators on modifying the need of liver transplantation in PwCF.



Number of liver and lung transplants per year in the pre- and post- highly active CFTR modulators eras.

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P-85 IMPACT OF TECHNICAL NOTE No 32/2021 ON THE RATE OF LIVER TRANSPLANTS FOR REFRACTORY ASCITIS IN A TERTIARY HOSPITAL

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Conflict of interest: No

Introduction and Objectives: Liver transplantation (LT) is the definitive treatment for decompensated cirrhosis and liver failure. Patients with ascites refractory to the use of diuretics fit the criteria for a special situation, according to technical note No. 32/2021, issued in 2021 by the Ministry of Health (MS). Cases with refractory ascites now directly and immediately receive 29 points on the MELD score. Thus, changes in the waiting time for LT are expected after the aforementioned technical standard, but the real impact on morbidity and mortality is unknown.

This study aims to compare the waiting time for LT for refractory ascites before and after technical note No. 32/2021. In addition, the study will also evaluate the proportion of those transplanted for refractory ascites after the 2021 resolution.

Patients / Materials and Methods: The electronic medical records of patients undergoing LT in a tertiary service during the years before (2018 and 2019) and after (2022 and 2023) technical note No. 32/2021 were evaluated. Patients undergoing LT of both sexes and aged 18 or over were included. The data was stored in a spreadsheet and compared.

Results and Discussion: There was a 59-day reduction in the median waiting time, considering the interval between the special situation being granted and the actual LT being performed. In addition, there was a 5.85% increase in the number of LT for refractory ascites, considering the years 2018 and 2019 *versus* 2022 and 2023.

Conclusions: The implementation of technical note No. 32/2021 correlated with a reduction in the waiting time for LT for patients with refractory ascites. In addition, the implementation of this resolution was also correlated with a small increase in the number of transplants for refractory ascites. Despite the initial results, a longer observation period is needed for more in-depth analyses of survival and morbidity.

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P-86 SHORT TERM RESULTS OF TRANSPLANTED ACLF PATIENTS IN A YOUNG TRANSPLANT PROGRAM IN CHILE

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Conflict of interest: No

Introduction and Objectives: Pts with ACLF should be assessed for liver transplant (LT) due to the high mortality without LT (28-day mortality: grade 1 = 14.6%, 2 = 32%, 3 = 78.6%). There is a survival benefit for ACLF grades 2-3 with LT (85-89% at 3-months and 70-80% at 3-years). Grade 2, and specially grade 3 ACLF pts remain a challenge for LT teams. New scoring systems (eg. SALT-M) have been developed to assist decision-making. There is limited data on this topic in Chile and Latin America. *Aim:* To characterize ACLF pts who underwent LT in our center between January 2020 and March 2024.

Patients / Materials and Methods: Observational retrospective study. Clinical and laboratory data were collected. The cohort was divided into 3 groups based on ACLF grade. We calculated ACLF scores and assessed outcomes at 28-days and 3-months after LT.

Results and Discussion: A total of 100 LT were performed between January 2020 and March 2024. 31 pts (31%) had ACLF before LT. Table 1 shows general data of ACLF LT pts. Alcohol and autoimmune were the most frequent etiologies. Infection was the most frequent extrahepatic comorbidity before and after LT (80.7% and 93.6% respectively). Length of stay (LOS) was influenced by the grade of ACLF, with grade 3 patients having the longest ICU stay (20.92 days). 28-day and 3-month survival rates were 90.3% and 87.1%, respectively. Only grade 3 ACLF LT pts showed a difference between 28-day and 3-month survival. Multi organ dysfunction syndrome (MODS) was the main reported cause of death (75%).

Conclusions: Short term outcomes were consistent with national and international data. Infections were the main complication before and after LT. SALT-M score correlates with ACLF severity but would not have changed the decision to perform LT. A prolonged LOS is expected in ACLF LT pts.

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P-87 TRANSCULTURAL ADAPTATION OF THE MEDITERRANEAN DIET TO THE DIETARY HABITS OF EACH GEOGRAPHICAL REGION OF ARGENTINA FOR THE TREATMENT OF METABOLIC DYSFUNCTION-ASSOCIATED STEATOTIC LIVER DISEASE (MASLD)

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Conflict of interest: No

Introduction and Objectives: The progressive increase in the prevalence of MASLD and its impact on morbidity and mortality require dietary options for its prevention and treatment, with the Mediterranean diet (MD) being the most scientifically supported. This study analyzes the similarities and differences of this diet with respect to the dietary habits of the different regions of Argentina,

focusing on the content of flavonoids, carotenoids, and Omega 3, 6 and 9 fatty acids. *Objective:* To compare the content of flavonoids, carotenoids, and omegas 3, 6 and 9 between the MD and the usual consumption according to regions of Argentina, for a transcultural adaptation.

Patients / Materials and Methods: Observational, cross-sectional, and descriptive study. A survey was conducted with 225 individuals to evaluate dietary habits. The primary data were quantitatively transformed for the calculation of the aforementioned nutrient content, in selected foods from both diets. Chi2 was used to establish correlations between variables.

Results and Discussion: The comparison of both diets shows that the nutrients analyzed were found to be below that suggested, with a high Omega6/Omega3 ratio. (Table1) To meet the recommendations, it is only necessary to increase the consumption of the analyzed food sources. Significant relationships were found (chi2, P between 0.0001 and 0.04) in the comparison of olive/fish consumption vs geographical region, vegetables/sex/pathologies vs BMI, and physical activity vs referred pathology.

Conclusions: Adaptation would be possible in all regions of the Argentine Republic through the substitution of non-locally produced foods with regional products that allow reaching the nutrient amounts, considering cost and culinary traditions. Some adaptation suggestions are the inclusion of chocolate, chia, amaranth, quinoa, and the replacement of olive oil with canola, chia, flax, grape or soybean oil. The proposed adapted Mediterranean diet provides the recommended amount of nutrients and its cost is similar to that of the usual Argentine diet.

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P-88 rs641738 MBOAT7 POLYMORPHISM AS A PREDICTOR OF FIBROSIS IN METABOLIC DYSFUNCTION-ASSOCIATED STEATOTIC LIVER DISEASE (MASLD)

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Conflict of interest: No

Introduction and Objectives: Recent studies have indicated that certain polymorphisms may be associated with the progression of metabolic dysfunction-associated steatotic liver disease (MASLD).

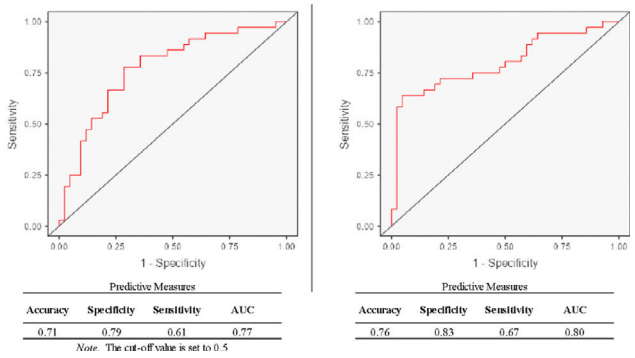
To construct a predictive fibrosis score and evaluate the association of the risk genetic polymorphisms rs738409 PNPLA3, rs58542926 TM6SF2, rs641738 MBOAT7, rs1260326 and rs780094 GCKR, rs72613567 HSD17B13 and rs2642438 MARC1 in MASLD.

Patients / Materials and Methods: This cross-sectional and retrospective study analyzed 212 biopsy-proven MASLD patient samples from the Hospital das Clínicas, Faculty of Medicine, University of São Paulo. Samples were divided into two groups: Group 1: absent and mild fibrosis (F0-1, n=113) and Group 2: significant and advanced fibrosis (F2-4, n=99). Demographic, laboratory, and histological data were compared, along with their association and frequency with the polymorphisms. Genotyping was performed by real-time PCR allele discrimination, and statistical analysis was conducted using Jasp® and Jamovi® software. The significance level adopted was 5%.

Results and Discussion: Most patients were female (146; 68.9%) with an average age of 56 years and were obese (BMI of 30.7). Group 1 had a higher frequency of dyslipidemia and NAS score 0-4 (71%), higher total cholesterol levels, and lower levels of AST, ALT, GGT, and alpha-fetoprotein compared to Group 2 ($p < 0.05$). The regression model (ROC Curve) used the TT genotype of the MBOAT7 gene associated with age, ALT, AST, GGT, TG, HDL, LDL, and total cholesterol to predict fibrosis (AUC: 0.77; Sen: 0.61; Spe: 0.79; Acc: 0.71; R^2: 0.14) (Fig. 1A). Another model with AFP (n = 76) showed (AUC: 0.80; Sen: 0.67; Spe: 0.83; Acc: 0.76; R^2: 0.24) (Fig. 1B). The polymorphisms of the PNPLA3, TM6SF2, GCKR, HSD17B13, and MARC1 genes did not demonstrate risk or protection in this cohort.

Conclusions: This study underscores the rs641738 MBOAT7 polymorphism as a potential predictor of fibrosis in MASLD, highlighting its value in clinical assessment and management.

Figure – ROC Curve



Predictive Measures

Accuracy	Specificity	Sensitivity	AUC
0.71	0.79	0.61	0.77

Note. The cut-off value is set to 0.5

Predictive Measures

Accuracy	Specificity	Sensitivity	AUC
0.76	0.83	0.67	0.80

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P-89 ADHERENCE TO IMMUNOSUPPRESSIVE THERAPY IN LIVER TRANSPLANT PATIENTS: FACTORS ASSOCIATED TO COMPLIANCE AND IMPACT ON QUALITY OF LIFE

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Conflict of interest: No

Introduction and Objectives: One of the primary challenges following liver transplantation is preventing graft rejection, for which immunosuppressive therapy is essential. The success of this therapy depends, among other factors, on patient adherence to the prescribed medication regimen. The aim was to evaluate adherence to immunosuppressive therapy and the possible factors associated to adherence in liver transplant patients.

Patients / Materials and Methods: This is an analytical, observational, cross-sectional study conducted with liver transplant patients between 2004 and 2023 at Hospital Clínico Universidad de Chile. Participants were required to complete two self-administered questionnaires: the "Simplified Medication Adherence Questionnaire" (SMAQ) to assess adherence (classified as adherent or non-adherent) and the "European Quality of Life-5 Dimensions" (EQ-5D) to assess quality of life. Additionally, a form was used to collect sociodemographic and clinical data, supplemented with information from the hospital's medical records. All data were recorded using the REDCap® platform.

Results and Discussion: The study included 29 patients with a median post-transplant follow-up of 37 months (range: 1 – 237 months). Of these patients, 41% (12 patients) were identified as non-adherent to immunosuppressive therapy, with occasional forgetfulness being the primary cause. Analysis revealed that younger patients, those with less comorbidity, and those with a longer time since transplantation were less adherent to the therapy. Tacrolimus was the most commonly used drug, and no significant differences in adherence were found based on the type of immunosuppressant used. Adherent patients reported a better quality of life compared to non-adherent patients.

Conclusions: A significant proportion of liver transplant patients exhibit non-adherence to immunosuppressive therapy. Factors such as medication forgetfulness, time since transplantation, and the presence of chronic illnesses impact adherence. It is recommended to enhance patient-provider relationships, regularly assess adherence, and provide patient education to improve quality of life and minimize the risk of graft rejection.

Table. Comparison of sociodemographic and clinical variables according to immunosuppressive therapy adherence in liver transplant patients

	Adherent N = 17 (59%)	Non-Adherent N = 12 (41)	Total N = 29 (%)	P value
Sociodemographic information				
Age in years (median;IQR)	65 (58 – 67)	58.5 (45 – 66.5)	64 (54 – 67)	0.297
Male gender	10 (59)	6 (50)	16 (55)	0.716
Health insurance Public (Fonasa) Private	 8 (47) 9 (53)	 4 (33) 8 (67)	 12 (41) 17 (59)	0.683
Education Media Superior	 8 (47) 9 (53)	 5 (42) 7 (58)	 13 (45) 16 (55)	0.537
Monthly income allocated to medicines < 3% 3 – 10% > 10%	 7 (41) 6 (35) 4 (24)	 4 (33) 2 (17) 6 (50)	 11 (38) 8 (28) 10 (34)	0.364
Clinical information				
N° of chronic diseases	1 (2 – 3)	0.5 (1 – 2)	1 (2 – 2)	**0.047**
N° of medicines used daily ≤ 5 > 5	 8 (47) 9 (53)	 6 (50) 6 (50)	 14 (48) 15 (52)	1
Time since transplantation in months (median;IQR)	23 (15 – 40)	80 (32 – 95)	37 (16 – 84)	**0.033**
Immunosuppressive therapy				
Glucocorticoids Prednisone	 7 (41)	 5 (42)	 12 (41)	1
Calcineurin inhibitors Cyclosporine Tacrolimus	15 (88) 1 (6) 14 (82)	12 (100) 3 (25) 9 (75)	27 (93) 4 (14) 23 (79)	0.323
Antiproliferatives Mycophenolate mofetil	 11 (65)	 6 (50)	 17 (56)	0.471
mTOR inhibitors Everolimus Rapamycin	5 (29) 5 (29) 0 (0)	4 (33) 2 (17) 2 (17)	9 (31) 7 (24) 2 (7)	0.264
Quality of Life				
Visual analogue scale (0 – 100) (median;IQR)	92 (50 – 100)	72.5 (70 – 80)	80 (70 – 95)	0.126

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P-90 COMPARISON BETWEEN MILAN CRITERIA, FRENCH ALPHA-FETOPROTEIN MODEL, AND METROTICKET 2.0 FOR LIVER TRANSPLANTATION IN PATIENTS WITH HEPATOCELLULAR CARCINOMA.

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Conflict of interest: No

Introduction and Objectives: Milan criteria (MC) have been the standard for selecting candidates for liver transplantation (LT) for hepatocellular carcinoma (HCC). New strategies including alpha-fetoprotein with tumor number and diameter, such as the French alpha-fetoprotein model (FM) and Metroticket2.0 (MT), improve prediction of recurrence and prognosis. *Objectives:*

To compare these three tools in terms of survival and tumor recurrence.

Patients / Materials and Methods: A cohort study of 79 LT patients with HCC (2006-2020). Patients were divided by MC: within (WMC) and outside (OMC). They were reclassified using FM into low risk (LRFM) and high risk (HRFM), and with Metroticket2.0: ≥75% 5 year survival (MT≥75) and <75% (MT<75). Clinical, histological characteristics and 5-year survival were analyzed.

Results and Discussion: Follow-up was 100% with a median of 65.7 months. 86% received therapy before LT. Median age was 62 years. Overall survival (OS) was 57%, and 7 (9%) patients had recurrence at an average of 10.2 months post-transplant. (range: (5.7-14.8);(2.1 - 38.9)). All recurrences resulted in death. In the WMC cohort (n=67), OS was 66.5 months, with 4 (6%) recurrences. In the OMC cohort (n=12), OS was 58.3 months, with 3 (25%) recurrences. For FM, LRFM patients (n=70) had an OS of 66.2 months, with 4 (6%) recurrences, while HRFM (n=9) had an OS of 41.8 months, with 3 (33%) recurrences. With MT, MT≥75 (n=70) had an OS of 66.9 months, with 4 (6%) recurrences, and MT<75 (n=9) had an OS of 41.8 months, with 3 (33%) recurrences.

Conclusions: LT in HCC has had a 5-year OS above 70% and a recurrence rate of 8%. There is a significant difference in 5-year survival and recurrence for OMC patients, and also with HRFM and MT<75 criteria.

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P-91 NORMALIZATION OF ALKALINE PHOSPHATASE COMPARED TO CONVENTIONAL RESPONSE CRITERIA LEADS TO LOWER LIVER RELATED EVENTS AND MORTALITY IN PATIENTS LIVING WITH PRIMARY BILIARY CHOLANGITIS, TREATED WITH UDCA: A RETROSPECTIVE, PROPENSITY SCORED-MATCHED, COHORT STUDY

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Conflict of interest: No

Introduction and Objectives: Primary biliary cholangitis (PBC) is a chronic, progressive, autoimmune liver disease characterized by the destruction of the small bile ducts within the liver. Ursodeoxycholic acid (UDCA) is the first-line treatment for PBC, shown to improve liver biochemistry and delay disease progression. All biochemical criteria for response recommend a threshold of alkaline phosphatase (ALP) that is higher than the ULN, because those scores have shown a lower disease progression, liver related events and overall mortality. The impact of achieving normalization of ALP, compared to conventional biochemical scores is unknown, but it's relevance, particularly in countries without universal access to liver transplantation could be significant.

Patients / Materials and Methods: This is a single center, retrospective, propensity score-matched cohort study, which included all patients with PBC and chronic liver disease, confirmed by liver biopsy that were followed by the hepatology clinic from January 1st, 2015 to March 1st 2024 under treatment with UDCA. All demographic, clinical and biochemical characteristics were obtained. A biochemical response was defined according to the Toronto criterion, with an ALP <1.67 x ULN after 2 years of UDCA therapy. Patients were subdivided into two groups, either by fulfilling these criteria or by achieving normalization of ALP <120 IU/L). The primary outcome was mortality due to a liver related event (LRE) a composite that included variceal hemorrhage (VH), spontaneous bacterial peritonitis (SBP), hepatic encephalopathy (HE), ascites, acute kidney injury (AKI), hepatorenal syndrome-AKI (HRS-AKI), and ACLF. the secondary outcomes were development of each independent variable of the definition of LRE.

Results and Discussion: Out of a total pool of 132 patients, 32 fulfilled conventional Toronto criteria without achieving normalization of ALP, and 30 had a ALP level below 120 IU/L. The predominant gender was female in both groups (95% and 96%) with a median of 57 years for both groups. The prevalence of systemic autoimmune disease was similar between both groups, (55 and 57%, respectively). Mortality due to LRE in the Toronto criteria group was 14/32 (43%), compared to 4/30 (13%) in the normalization group, a difference which was statistically significant (OR 5.05, 95% CI [1.429, 17.882], p=0.005.). The development of HE (OR 5.47, 95% CI [1.075, 27.916], p=0.02) and VH (OR 4.71, 95% CI [1.165, 19.083], p=0.01), was greater in the Toronto criteria group, compared to the normalization group. These variables remained statistically significant after multivariate regression analysis (adjusted for age, gender and autoimmune systemic diseases).

No statistically significant differences were found for AKI, HRS-AKI, ACLF, ascites or SBP.

Conclusions: Among patients with PBC that receive initial therapy with UDCA, a normalization of ALP after two years, compared to conventional biochemical response criteria (Toronto criteria), leads to lower liver related mortality and development of VH and EH. More prospective studies are needed.

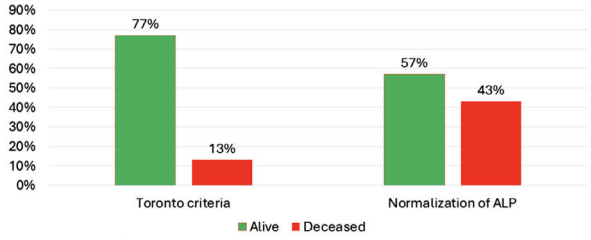

Figure 1. *Mortality during follow up among patients with PBC that fulfilled Toronto criteria vs those that achieved a normal ALP.* Mortality due to LRE in the Toronto criteria group was 14/32 (43%), compared to 4/30 (13%) in the normalization group, a difference which was **statistically significant (OR 5.05, 95% CI [1.429 , 17.882], p=0.005.)**

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P-92 CAN HONEY AND APICULTURAL DERIVATIVES HELP IN FATTY LIVER DISEASE?

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Conflict of interest: No

Introduction and Objectives: The increase in caloric intake has led to an obesity epidemic both in Chile and worldwide. This trend has contributed to a rise in the prevalence of metabolic diseases, such as insulin resistance, type 2 diabetes mellitus, and non-alcoholic fatty liver disease (NAFLD). NAFLD affects approximately 25% of the global population and can progress to severe stages such as non-alcoholic steatohepatitis (NASH), fibrosis, cirrhosis, and hepatocellular carcinoma. Currently, there is no formal protocol for the pharmacological treatment of NAFLD, making prevention and reversal crucial for improving quality of life and reducing public health costs. Honey and bee pollen, rich in antioxidants and known for their therapeutic properties, could offer a non-pharmaceutic alternative to manage this condition. *Objective:* This study aims to evaluate Chilean endemic honeys and bee pollens form Ulmo and Quillay, to determine their hepatoprotective effect in an in vitro cellular model.

Patients / Materials and Methods: For the cell assays, the HUH7 cell line was used. The compound AAPH (2,2′-azobis(2-amidinopropane) dihydrochloride) was employed as a peroxyl radical generator to induce cellular damage. The hepatoprotective effect was evaluated by inducing cellular damage with AAPH (0.2 mM for 24 hours), followed by the addition of phenolic extracts from honeys or bee pollens at various concentrations. To isolate the effect of glucose, present in the honeys, artificial honey, created from a combination of different sugars, was used. Cell viability was determined using the Alamar Blue assay after 24 hours of incubation with the different treatments.

Results and Discussion: Hepatoprotective results were obtained by evaluating cell viability in the presence of Ulmo honey, Quillay honey, and bee pollen. Treatment of cells with AAPH resulted in cellular damage, significantly decreasing cell viability. However, the addition of Ulmo honey, Quillay honey, and bee pollen in co-treatment with AAPH reversed this effect, significantly increasing cell viability. These findings indicate a hepatoprotective effect of Ulmo and Quillay honeys, as well as bee pollen on cell viability compromised by AAPH. The presence of bioactive compounds, such as antioxidants and flavonoids, in these apicultural derivatives may explain their ability to protect liver cells from AAPH-induced oxidative damage.

Conclusions: In conclusion, Ulmo and Quillay honeys, as well as bee pollen, demonstrated to be effective hepatoprotective agents, suggesting their therapeutic potential in protecting liver health.

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P-93 DEMOGRAPHIC AND CLINICAL CHARACTERISTICS OF PATIENTS WITH CHRONIC HEPATITIS B VIRUS INFECTION IN A PUBLIC HOSPITAL IN CHILE BETWEEN YEARS 2015 AND 2022

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Conflict of interest: No

Introduction and Objectives: The prevalence of hepatitis B virus (HBV) in Chile is 0.54%. Antiviral treatment is guaranteed by a ministerial program for infected people who meet treatment criteria. To date, the serological response rate in Chile has not been reported. *Objectives:* To determine the frequency of normalization of alanine aminotrasferasa (ALT), HBV Deoxyribonucleic Acid (DNA), loss of e (HBeAg) and superficial (HBsAg) antigens in adult patients with chronic HBV infection treated with antivirals in a public hospital in Chile.

Patients / Materials and Methods: Observational, retrospective study including adults with chronic HBV infection, without immunodeficiency, controlled in hepatology policlinic between 2015 and 2022 at Hospital del Salvador. Descriptive statistics were used to determine the demographic characteristics of this population, criteria for indication of antiviral therapy and surrogate markers of therapeutic targets.

Results and Discussion: 180 clinical records were reviewed. 141 were excluded: poor treatment adherence and follow-up (30), deceased (59), acute HBV infection (33) and immunodeficiency (19). 39 patients were included in the analysis, being 61.5% men and 25.6% with evidence of cirrhosis at diagnosis. 21 patients (53.8%) received antiviral therapy, 14 of them (66.6%) receiving entecavir. The most frequent treatment criteria was viral load > 2000 plus ALT > 1.1 times above normal, followed by evidence of cirrhosis. 88.8% of treated patients achieved normal ALT at follow-up. 51.2% achieved undetectable HBV DNA. 23% (9) were HBeAg positive with 4 of them achieving negative HBeAg. None achieved loss of HBsAg.

Conclusions: Most patients achieved normal ALT and HVB DNA levels with treatment. There is a significant number of patients who did not adhere to medical controls and there is no protocol for serological follow-up, making it difficult to select candidates for antiviral suspension.

TREATMENT N: 39 PATIENTS WITH CHRONIC HVB INFECTION	
Treatment indication criteria	
HVB chronic hepatitis with persistent ALT >1.1 above normal level and viral load HVB >2.000 UI/mL	13 (33.33)
Necroinflammation and/or significant fibrosis on liver biopsy and HBV viral load >2000 UI/mL	1 (2.56)
Cirrhosis diagnosed by biopsy or images, regardless of viral load	7 (17.94)
No treatment indication	18 (46.15)
Prescribed antiviral	
1. Entecavir	14 (66.66)
2. TDF	5 (23.80)
3. TAF	1 (4.76)
4. Other	1 (4.76)
5. No treatment indication	18
TREATMENT RESULTS	
ALT level normalization (<55) (n=39)	
1. Yes	8 (20.5)
2. No	1 (2.56)
3. Normal baseline level	25 (64.10)
4. No follow-up	4 (10.25)
5. No baseline level	1 (2.56)
HBsAg loss (n=39)	
1. Yes	0
2. No	7 (17.94)
3. No follow-up	32 (82.05)
Virologic response (n=39)	
1. Virological breaktrough (viral load >1 log above nadir)	1 (2.56)
2. Undetectable viral load	20 (51.28)
3. No baseline viral load	1 (2.56)
4. No follow-up	5 (12.82)
5. No treatment indication	12 (30.76)
Time to undetectable viral load (n=39)	
1. Month 3	3 (7.69)
2. Month 6	5 (12.82)
3. Month 12	4 (10.25)
4. Month 18	2 (5.12)
5. Month 24	3 (7.69)
6. No follow-up	12 (30.76)
7. Not achieved TND	1 (2.56)
8. No treatment indication	6 (15.38)
9. TND at baseline	3 (7.69)
HBeAg loss (n HBeAg + = 9 patients)	
1. Yes	4 (44.44)
2. No	1 (11.11)
3. No follow-up	4 (44.44)
antiHBeAg seroconversión during follow-up (n HBeAg + = 9 patients)	
1. Yes	2 (22.22)
2. No	1 (1.38)
3. No follow-up	4 (44.44)
4. No baseline level, negative during follow-up	1 (11.11)
5. No baseline level, positive during follow-up	1 (11.11)

Clinical and serological characteristics of patients with chronic HBV infection.

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P-94 MICROBIOLOGY OF INFECTIONS IN PATIENTS WITH LIVER CIRRHOSIS HOSPITALIZED AT THE CLINICAL HOSPITAL OF THE UNIVERSITY OF CHILE

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Conflict of interest: No

Introduction and Objectives: Infections are a frequent cause of decompensation in patients with liver cirrhosis (LC). Understanding

local microbiology is important for the correct choice of antibiotics and achieving good clinical outcomes. *Objective*: To evaluate the microbiology of infections in patients with cirrhosis who were hospitalized in our institution between 2015 and 2022.

Patients / Materials and Methods: A retrospective, observational, and analytical study of LC patients hospitalized for any reason between 2015 and 2022. Positive cultures in LC patients (1036 in total) were reviewed, focusing on blood cultures, ascitic fluid cultures, and other types (bronchial secretions, devices and pleural fluid). Urine cultures, non-infection-related episodes, and contamination cases were excluded. Clinical characteristics of patients in each episode, as well as antimicrobial resistance of each organism, were analyzed. STATA 13.0 was used for data analysis with significance set at < 0.05.

Results and Discussion: A total of 494 episodes of positive cultures from 187 LC patients were included; median age was 61 years (20-81), with 62% male. In 41% of episodes, the patient was immunosuppressed, and 47% were on prophylactic antibiotics. Forty percent of cultures were blood cultures, 20% ascitic fluid, and 40% other types of cultures. The most frequently isolated microorganisms were Enterobacteriaceae and Gram-positive bacteria. Resistance to extended-spectrum beta-lactamases, Vancomycin, and carbapenemases was evaluated, with Vancomycin resistance being the most frequent, only evaluated in enterococci. Immunosuppression was significantly associated with antibiotic resistance (56% vs 25%; p=0.001), whereas prior use of prophylactic antibiotics did not show a significant association (40% in both groups).

Conclusions: The results suggest the need for empirical therapies for our patients and emphasize the importance of rational antibiotic use.

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P-95 SARCOPENIA: RISK FACTOR FOR MORTALITY IN CIRRHOTIC PATIENTS ON WAITING LIST FOR LIVER TRANSPLANTATION IN A REFERENCE CENTER, COLOMBIA

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Conflict of interest: No

Introduction and Objectives: Sarcopenia is an independent predictor of mortality in patients with chronic liver disease pre- and post-transplant. Measurement of muscle strength by dynamometry can serve as a surrogate marker of frailty in patients with chronic liver disease, especially in those in whom it is not possible to assess sarcopenia through imaging.

Patients / Materials and Methods: To determine the association between sarcopenia, complications of cirrhosis and mortality in cirrhotic patients on the waiting list for liver transplant in a liver transplant reference center in Colombia. *Methods*: An observational, analytical and retrospective study was carried out with a cohort of patients with cirrhosis on the waiting list for liver transplant between 2020 and 2022, in a liver transplant reference center in Colombia.

Results and Discussion: We included 310 patients with a diagnosis of cirrhosis who were on the liver transplant waiting list and had dynamometry and anthropometry records to calculate the SARC-F index. A bivariate analysis was carried out which shows that a high score in CHILDA, MELD, ICU stay, complications such as SBP, dynamometry measurement and sarcopenia generate an estimate of significant association, taking into account a p <0.05. Subsequently, a multinomial logistic regression model was carried out, chronic kidney disease and sarcopenia stand out as influential factors in mortality with P <0.05.

Conclusions: Sarcopenia and chronic kidney disease are factors that have a significant association with higher mortality.

Table 1. Demographic characteristics

	Total population n= 310	Dead n=73	Value of P
Age, middle (IQR)	42.00 [32.00, 48.00]	45.00 [38.00, 49.00]	0.015
Female sex, n (%)	127 (41.0)	32 (43.8)	0.816
Diabetes Yes, n (%)	95 (30.6)	26 (35.6)	0.467
Hypertension Yes, n (%)	76 (24.5)	21 (28.8)	0.424
Hypothyroidism Yes, n (%)	54 (17.4)	16 (21.9)	0.228
CKD(chronic kidney disease), Yes n (%)	29 (9.4)	8 (11.0)	<0.001
non-hepatocellular carcinoma yes, n (%)	26 (8.4)	3 (4.1)	0.003
Osteoporosis Yes, n (%)	83 (26.8)	16 (21.9)	0.442
Osteopenia Yes, n (%)	106 (34.2)	22 (30.1)	0.641
Dementia Yes, n (%)	1 (0.3)	1 (1.4)	0.196
Child quantitative, median (IQR)	8.00 [4.00, 10.00]	5.00 [3.00, 9.00]	0.024
Child qualitative, n (%)			0.004
CHILD A	82 (26.5)	12 (16.4)	
CHILD B	135 (43.5)	25 (34.2)	
CHILD C	89 (28.7)	35 (47.9)	
MELD quantitative, median (IQR)	10.00 [5.00, 19.75]	16.00 [8.00, 23.00]	0.002
ICU Yes, n (%)	144 (46.5)	58 (79.5)	<0.001
hepatocellular carcinoma yes, n (%)	69 (22.3)	17 (23.3)	0.734
Bleeding Yes , n(%)	117 (37.7)	30 (41.1)	0.446
Ascites, n(%)	199 (64.2)	57 (78.1)	0.009
Encephalopathy, n(%)	165 (53.2)	45 (61.6)	0.096
Peritonitis, n(%)	19 (6.1)	11 (15.1)	0.001
Thrombosis, n(%)	67 (21.6)	22 (30.1)	0.003
Sarcf, n (%)	91 (29.4)	32 (43.8)	0.003
RFH_NPT, n (%)	113 (36.5)	44 (60.3)	<0.001

IQR: interquartile range, SARCF: Sarcopenia: RFH, ICU:Intensive care unit, RFH_NPT: Royal Free Hospital Nutritional Prioritizing Tool, CHILD: Child Pugh Turcotte scale, MELD: Model for End-stage Liver Disease.

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P-96 LONG-TERM PIOGLITAZONE TREATMENT AND LIVER STIFFNESS IN MASLD PATIENTS: INSIGHTS FROM A MULTICENTRIC STUDY

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Conflict of interest: No

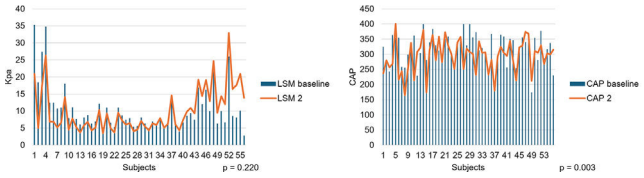
Introduction and Objectives: Pioglitazone, an agonist of peroxisome proliferator-activated receptor gamma, has shown efficacy in

improving indirect markers of liver steatosis, inflammation, and fibrosis. It also addresses systemic and adipose tissue insulin resistance in patients with type 2 diabetes and metabolic dysfunction-associated fatty liver disease (MASLD). This study aims to evaluate whether sustained consumption of pioglitazone over 12-24 months can improve liver stiffness in individuals diagnosed with biopsy-proven metabolic dysfunction-associated steatohepatitis (MASH).

Patients / Materials and Methods: Retrospective data from 56 MASLD patients who received pioglitazone treatment for 12-24 months (15-30 mg daily) were gathered from three public hospitals in Brazil. Vibration-controlled transient elastography [VCTE (Fibroscan^{TM})] was performed before and after pioglitazone treatment as a non-invasive method to monitor disease progression. Additionally, a thorough analysis of both laboratory and clinical data was conducted.

Results and Discussion: Most participants were female (63%, n = 35) and obese (BMI 31.1 ± 5.2) with a mean age of 58.4 ± 11.4 years. Initially, participants mostly had hypertension (71%, n = 40) and type II diabetes (61%, n = 34). During the second evaluation, the number of subjects with dyslipidemia and statin use increased. Initially, the liver stiffness measurement (LSM) median was 8.1 kPa (Min: 2.8; Max: 35.3) and 7.2 kPa (Min: 3.5; Max: 32.9) at the second evaluation. Prolonged pioglitazone treatment demonstrated LSM attenuation in 63% of cases (n = 35), resulting in an absolute reduction ranging from 0.1 to 14.4 kPa and a relative reduction ranging from 1.25% to 40.8%. Further analysis comparing the group with improved versus the group with worsened liver stiffness showed a decrease in the CAP parameter, FAST score, and levels of ALT, AST, GGT, TG, and ferritin.

Conclusions: The administration of pioglitazone for 12 to 24 months effectively reduced hepatic inflammation and enhanced VCTE parameters in 63% of cases.



Comparison of the effect of long-term pioglitazone intake on VCTE parameters

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P-97 THE ROLE OF PSYCHOLOGICAL STRESS IN METABOLIC DYSFUNCTION ASSOCIATED STEATOTIC LIVER DISEASE. A PILOT STUDY

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Conflict of interest: No

Introduction and Objectives: Metabolic dysfunction associated steatotic liver disease (MASLD) pathogenesis is multifactorial. Increasing evidence highlight the role of psychosocial stress in liver disease progression. However, psychological characteristics involved in stress response in MASLD has not been investigated. *Objective:* To assess psychosocial stress and its relationship with liver damage in patients with MASLD.

Patients / Materials and Methods: A transversal, descriptive study, was performed in MASLD patients diagnosed by liver biopsy recruited from Gastroenterology Unit of HCUCH.Demographic and clinical data was recorded using RedCap platform. Psychological assessment was performed by questionnaires: Perceived Stress Scale-14 (PSS-14), Anxiety-Depression Survey (HADS), Coping Strategy Inventory (CSI), Quality of Life (QoL SF-36), and Hexaco-60. Liver function and liver damage was evaluated by blood test and imaging (echography, Fibroscan and magnetic nuclear resonance) respectively. Statistical analysis including t-test and chi-squared, were performed using GraphPad Prisma. Significance set at $p<0.05$. The study was approved by HCUCH ethics committee.

Results and Discussion: A total of 13 patients were recruited, mainly female (85%), age range from 29-73 years. Moderate stress levels were observed in 53.8% of participants. A higher PSS score was observed in patients with moderate-severe steatosis (moderate-severe steatosis 29.0 ± 9.51 vs mild steatosis 18.20 ± 6.94) p=0.047. Patients with significant fibrosis reported poorer mental health QoL (without fibrosis 53.60 ± 9.25 vs with significant fibrosis 42.40 ± 10.40) p=0.022. Moderate-severe steatosis presented a trend of increased anxiety prevalence (mild steatosis 28.57% vs moderate-severe 71,43%) p=0.113. No significant differences were found in depression scores, overall and physical QoL in relation to steatosis and fibrosis degree. *Conclusions*: This pilot study suggests that negative psychosocial factors have a pathogenic role in liver damage. Increased psychological stress and lower mQoLwere the principal components involved. These findings highlight the importance of addressing mental health in MASLD patients in clinical management.
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P-98 LACTATE/ALBUMIN RATIO AS A MARKER OF MORTALITY IN PATIENTS HOSPITALIZED WITH ACUTE ON CHRONIC LIVER FAILURE IN A MEXICAN HOSPITAL: CLINICAL ANALYSIS AND PERSPECTIVES

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Conflict of interest: No

Introduction and Objectives: Albumin and lactate are markers of systemic inflammation, which are altered by their hepatic metabolism; however, they can be useful indicators of mortality in patients with cirrhosis. This study aimed to determine the association between lactate/albumin ratio levels and mortality in patients with ACLF.

Patients / Materials and Methods: A retrospective and observational cohort study was conducted. Eighty-five patients diagnosed with ACLF according to the EASL-CLIF criteria were included from February 2022 to May 2024. Patients with hepatocellular carcinoma were excluded.

Data analysis was performed using GraphPad Prism version 10.2.3 and Microsoft Excel software. An ROC curve was performed to establish the cutoff point of the lactate/albumin ratio, as well as determine the sensitivity and specificity of the model to predict 28-day mortality.

Results and Discussion: Eighty-five patients were included, 68 (80%) men and 17 (20%) women; average age 52.4 years (39 -80). Alcohol consumption was the main cause of cirrhosis in 74 (87.05%), autoimmune diseases in 7 (8.23%), and MASLD in 4 (4.70%) (Table 1). 12 patients (14.11%) had ACLF grade 1, 29 (34.11%) grade 2 and 44 (51.76%) grade 3. With failure: kidney 61 (71.76%), liver 57 (67.05%), brain 49 (57.64%), coagulation 37 (43.52%), respiratory 15 (17.64%) and circulatory 5 (5.88%) (Table 1). 37 (43.52%) died within the first 28 days. The cutoff point of the lactate/albumin ratio was 1.74 (AUC 0.87), with a p value <0.0001, sensitivity 71.7% and specificity 58.8% (95% CI) (Figure 1). *Conclusions:* The cutoff point of the lactate/albumin ratio of 1.74 allows for the objective prediction of mortality in patients with ACLF using easily accessible laboratory tests.

Figure 1.
Lactate/albumin ratio AUC

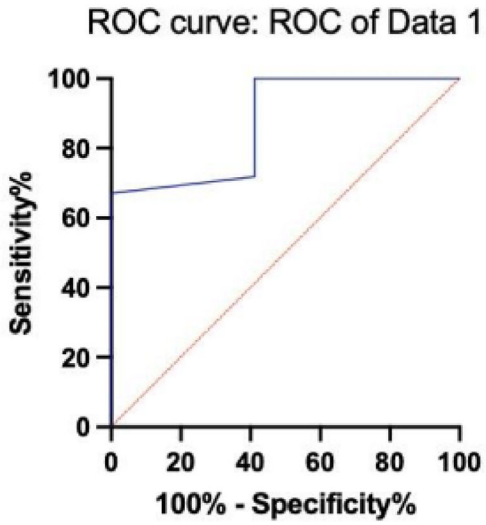

Table 1.
Descriptive statistics of study population.

Age years	39- 80
Sex:	
Male, N (%)	68 (80%)
Female, N (%)	17 (20%)
Cirrhosis etiology:	
Alcohol, N (%)	74 (87.05%)
Autoimmune, N (%)	7 (8.23%)
MAFLD, N (%)	4 (4.70%)
ACLF:	
Grade 1, N (%)	12 (14.11%)
Grade 2, N (%)	29 (34.11%)
Grade 3, N (%)	44 (51.76%)
Organ failure:	
Kidney, N (%)	61 (71.76%)
Liver, N (%)	57 (67.05%)
Brain, N (%)	49 (57.64%)
Coagulation , N (%)	37 (43.52%)
Respiratory, N (%)	15 (17.64%)
Circulatory, N (%)	5 (5.88%)

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P-99 CHARACTERIZATION OF PATIENTS WITH LIVER CIRRHOSIS, ITS COMPLICATIONS AND SURVIVAL.

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Conflict of interest: No

Introduction and Objectives: The complications of liver cirrhosis significantly influence the survival of these patients.

Objective: Characterize patients with liver cirrhosis, its complications and survival.

Patients / Materials and Methods: Longitudinal prospective study in the Gastroenterology service in a tertiary hospital of national reference. Period: December 2017 - December 2019. Sample: 52 patients who met selection criteria. Clinical variables were recorded to determine the stage of cirrhosis, the Child-−Pugh and the complications presented. Data were summarized, association between variables was evaluated, and survival was estimated.

Results and Discussion: The average age was 59 ± 11.0 years, men predominated (57.7%), alcohol consumption as the most frequent etiology (53.3%), ascites decompensation as the debut form (55.8%) and complication most incident (75%) followed by jaundice (40.4%) and encephalopathy (28.8%). F1 esophageal varices were the most confirmed endoscopic finding (26.9%), with stage 4 cirrhosis (69.2%) and Child-Pugh B (55.8%) predominating in the sample. At the end of the study, 19.2% of the patients died, overall survival was 89.0% at one year and 55.1% at two years, the association of the Child-Pugh scale as a predictor of mortality being statistically significant.

Conclusions: An association was demonstrated between the causes of cirrhosis and sex, mainly alcohol in men. One fifth of the patients died and overall survival showed a notable decrease at one year and two years, the estimate of survival according to the Child-Pugh scale being significant.

Table 1. Summary of estimated overall survival, according to clinical stages of cirrosis and Child-Pugh scale.

	Survival			Log Rank test (p value)
	6 months	1 year	2 years	
Overall	95,7 %	89,0 %	55,1 %	
Clinical stage				
Compensated	100,0 %	100,0 %		0,221
Decompensate	97,4 %	86,4 %	52,5 %	
Child-Pugh scale				
A	100,0 %	100,0 %	-	0,001
B	100,0 %	92,3 %	68,9 %	
C	83,3 %	5,0 %	0,0 %	

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P-100 CORRELATION OF TWO TRANSIENT ELASTOGRAPHY EQUIPMENT FOR ESTIMATION OF LIVER STEATOSIS AND LIVER FIBROSIS

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Conflict of interest: No

Introduction and Objectives: Transient elastography (TE) is an alternative diagnostic tool for estimating liver steatosis and fibrosis. Two ET devices, iLivTouch®/UAP and Fibroscan®/CAP, have shown similar diagnostic accuracy; however, no studies have evaluated the correlation of liver steatosis and fibrosis measurements between both devices in the Mexican population. *Aim:* To evaluate the correlation of measurement values of liver steatosis and liver fibrosis using iLivTouch®/UAP and Fibroscan®/CAP.

Patients / Materials and Methods: This prospective study included adult patients who attended a check-up unit. The evaluation of liver steatosis and liver fibrosis was performed using TE with two devices (iLivTouch® FT100 and Fibroscan® 502 Touch), meeting the reliability parameters. The correlation of measurements was evaluated with the Pearson correlation coefficient; meanwhile, a Student's t-test was performed to determine differences in dB/m and kPa means.

Results and Discussion: A total of 69 patients were included; 57% (n=40) were men, with a mean age and body mass index of 45± 10 years and 22.4±4.5 kg/m^2, respectively. The prevalence of diabetes mellitus was 7.2% (n=5). The mean dB/m and kPa were 266±42 dB/m and 5.8±1.2 kPa with iLivTouch® and 243±56 dB/m and 4.0±0.8 kPa with Fibroscan®. The prevalence of liver steatosis was 29% (n=20) by iLivTouch® and 20% (n=14) by Fibroscan® (p=0.32), while fibrosis was 49.3% (n=34) and 2.9%. (n=2), respectively, (p=0.0001). The mean difference for dB/m was -22.6, p≤0.0001, while for kPa, the difference was 1.72, p≤0.0001. According to the correlation analysis, this was r=0.73 (strong), p≤0.0001 for the estimation of liver steatosis, and r=0.35 (moderate), p=0.003 for the estimation of liver fibrosis.

Conclusions: TE devices iLivTouch® and Fibroscan® show a strong correlation for estimating liver steatosis and a moderate correlation for estimating liver fibrosis.

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P-101 PHYSICAL AND NUTRITIONAL INTERVENTION EFFECTIVELY REDUCED FRAILTY IN PATIENTS WITH CIRRHOSIS LISTED FOR LIVER TRANSPLANTATION. RANDOMIZED, CONTROLLED TRIAL.

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Conflict of interest: No

Introduction and Objectives: Frailty is associated with an increased morbidity and mortality among patients with cirrhosis. However, there is no specific strategy recommended for these patients. We evaluated the effectiveness of a strategy based on physical and nutritional intervention improving frailty in cirrhotic patients listed for transplantation.

Patients / Materials and Methods: Patients with increased Liver Frailty Index (LFI) (≥3.2) were randomized to the intervention group (guided by physical therapist and dietitian) or control group (standard counseling) for 12 weeks. Based on LFI patients were classified as frail or prefrail. The change on LFI was evaluated at the end of study. Health related quality of life was evaluated employing CLDQ.

Results and Discussion: Sixty-six patients were included (34 to the control group and 32 to the intervention group), age 59.3± 8.8, male 51.5%, main etiologies: MASLD(40.9%), ALD(15.2%), MetALD(6.1%), PBC(6.1%), autoimmune hepatitis(4.5%), overlap(AIH/PBC)(6.1%), MELD Na 17.2±5, Child Pugh A/B/C 13.6%/57.6%/28.8%, Na 137±3mEq/L, creatinine 0.8±0.3 mg/dL, bilirubin 3.3± 3 mg/dL, INR 1.5±0.4, albumin 3.3±0.5 g/dL, LFI 4.23 ±0.5, frail/prefrail (%) 34.8/65.2, CLDQ 4.2±1.1, gait speed 0.86 m/s±0.5. There was a significant improvement of LFI at the end of the study in the intervention group (ΔLFI 0.4 vs ΔLFI 0.16,p=0.02). Notably, we found a significant reduction of the proportion of frail patients in the intervention group vs control group (28.1% vs 8.8%, p=0.02) at the end of the study (Figure). There was a significant improvement in the activity domain of CLDQ in the intervention group(0.52±1.8 vs -0.25±1.5,p=0.04).

Conclusions: This is the first randomized controlled trial performed in patients with cirrhosis showing that a dual intervention can reduce frailty in patients listed for transplantation.

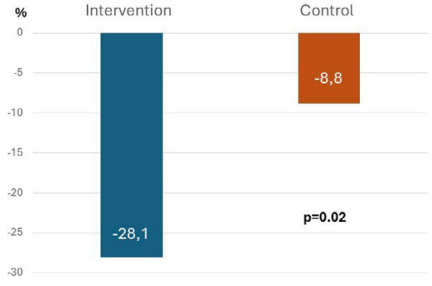

Figure 1. Reduction in the proportion of frail patients at the end of study on each arm.

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P-102 PERFORMANCE OF NONINVASIVE METHODS TO GRADUATE FIBROSIS AND INFLAMMATION IN A GROUP OF PATIENTS WITH AUTOIMMUNE HEPATITIS

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Conflict of interest: No

Introduction and Objectives: Liver biopsy is considered the gold standard to define fibrosis stage and inflammation degree in Autoimmune Hepatitis (AIH). Noninvasive methods have been utilized for these purposes, However, the respective accuracies in different populations have not been clarified. *AIMS:* Investigate the performance of TE and APRI and of serum IgG and γ-glob levels in defining liver fibrosis and inflammation degree, respectively, in a group of patients with AIH.

Patients / Materials and Methods: Prospective study involving patients with AIH who underwent liver biopsy (classified by Metavir and Ishak) and TE (FibroScan, Echosens 502), with a maximum interval of 6 months between the two procedures. Laboratory parameters for APRI, IgG and γ-glob were obtained within a maximum interval of 3 months from the biopsy. The performances were compared with liver biopsies using ROC curves.

Results and Discussion: 63 patients with AIH were included (88% female; mean age 43 $\pm$ 18 years), platelets levels: 214.524 $\pm$72.121/μL. Medians: IgG:1530, APRI: 0.4 and TE: 8.8 kPA. Liver fragments had $\geq$ 8 complete portal spaces. Thirty-four patients (54%) had advanced fibrosis (F$\geq$3 METAVIR) and 67% had inflammation A$\leq$1 by METAVIR and A<6 by ISHAK. Correlations of IgG and γ-glob with inflammation were poor (R=0.21; P=0.20 and R=0.29; P=0.09, respectively). Regarding fibrosis, the best correlation was with TE (R=0.61; P<0.001), AUROC value of 0.84 (95% IC:0.73-0.92; P<0.0001) and moderate correlation was observed with APRI (R=0.44; P<0.001), AUROC value of 0.78 (95% IC: 0.66-0.88; P<0.001). The best cutoff of TE to define advanced fibrosis was 7.9 kPA (sensitivity:84%; specificity=74%). Regarding APRI, the best cutoff for advanced fibrosis was 0.24 (sensitivity: 97%; specificity=50%).

Conclusions: Compared to APRI, TE showed the best performance in defining advanced fibrosis, with good accuracy. APRI had a moderate correlation with fibrosis. None IgG nor γ-glob showed good correlations with inflammation. Further studies are needed to confirm these findings.

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P-103 AN ELEVATED BASELINE LEVEL OF ALKALINE PHOSPHATASE, ALANINE AMINOTRANSFERASE, AND ASPARTATE AMINOTRANSFERASE PREDICT A LACK OF BIOCHEMICAL RESPONSE TO UDCA THERAPY AMONG HISPANIC PATIENTS LIVING WITH PRIMARY BILIARY CHOLANGITIS

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Conflict of interest: No

Introduction and Objectives: Primary biliary cholangitis (PBC) is a chronic, progressive, autoimmune liver disease characterized by the destruction of the small bile ducts within the liver. Ursodeoxycholic acid (UDCA) is the first-line treatment for PBC, shown to improve liver biochemistry and delay disease progression. However, the response to UDCA therapy is variable among patients, with some failing to achieve a satisfactory biochemical response. Identifying predictors of non-response is crucial for optimizing treatment strategies and improving patient outcomes. Recent evidence has shown a lower biochemical response among patients of Hispanic ethnicity, which is often underrepresented in clinical research. The findings have significant implications for clinical practice, and are of particular interest in countries that have limited access to liver transplantation.

Patients / Materials and Methods: This is a single center, retrospective, propensity score-matched cohort study, which included all patients with PBC confirmed by liver biopsy that were followed by the hepatology clinic from January 1st, 2015 to March 1st 2024 under treatment with UDCA. A biochemical response was defined according to the Toronto criteria, with an alkaline phosphatase (ALP) <1.67 x ULN after 2 years of UDCA therapy. Patients were subdivided on the presence or absence of a biochemical response. The primary outcome was mortality due to a liver related event (LRE), the secondary outcomes were variables associated with non-response.

Results and Discussion: A total of 132 patients were included, 70 were non responders and 62 fulfilled Toronto criteria of response. The predominant gender was female in both groups (96.78% and 96%) with a median of 56 years of age for the non-responders and 58 years for those who did. Mortality due to LRE in the no response vs responders group was 41% vs 6.2%, respectively, a difference which was statistically significant (OR 3.67, 95% CI [1.608, 8.411], p<0.001). Factors associated with incomplete response were statistically significant for a baseline level of ALP > 2 x ULN (OR 5.3, 95% CI [2.433, 11.649], p<0.001), a baseline level of ALT > ULN (OR 5.3, 95% CI [2.429, 11.845], p<0.001) and a baseline level of AST > ULN (OR 7.8, 95% CI [3.554, 17.159] p<0.001). All of these variables remained ss after multivariate regression analysis.

Conclusions: Among patients with PBC that receive initial therapy with UDCA, a baseline increased ALP, AST and ALT are associated with an incomplete biochemical response, identifying patients that might benefit from early initiation of additional therapies. Prospective studies are needed.

Variables	Toronto criteria(n=62)	No response(n= 70)
Age mean(years)	58	56
Gender= Female –no. (%)	96.7 %	96 %
T2D	12%	14%
HBP	8%	6%
Previous diuretic therapy	11%	9%
Cirrhosis	63%	60%
CTP mean	A (6)	A (6)
Liver related events	27%	35%

Table 1. *Baseline patient characteristics.*

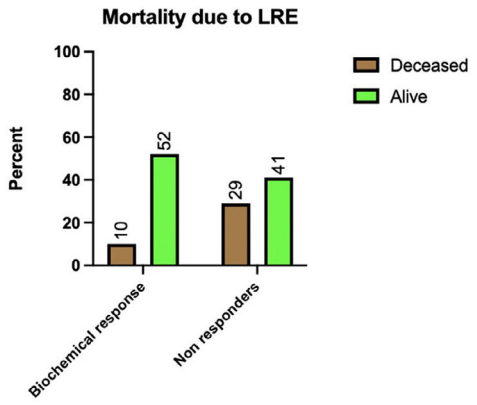

Figure 1: *Mortality for LRE*
Mortality due to **LRE,** among patients who fulfilled Toronto criteria for Biochemical response vs those who did not. OR 3.67, 95% CI [1.608 , 8.411], p<0.001

Multivariate regression *	OR (95% CI)	p value
ALP > 2x ULN	3.13 (3.02-3.15)	0.0476
ALT > ULN	2.82 (2.78-2.86)	0.0465
AST > ULN	3.06 (3.01-3.11)	0.0483

Table 2. *Multivariate regression analysis of variables associated with no response.* **Adjusted for sex, age, autoimmune diseases.* **Only overall mortality and development of respiratory failure remained statistically significant.**

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P-104 PREVALENCE AND SEVERITY OF MASLD AND ITS ASSOCIATION WITH METABOLIC COMORBIDITIES: INSIGHTS FROM A LINKAGE TO CARE PROGRAM FOR FATTY LIVER DISEASE

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Conflict of interest: No

Introduction and Objectives: Metabolic-associated steatotic liver disease (MASLD) is prevalent and linked to comorbidities such as obesity, diabetes, and hypertension. This study aimed to conduct a fatty liver detection campaign as part of a linkage to care program for MASLD at Hospital El Cruce in Buenos Aires and to evaluate its association with metabolic comorbidities.

Patients / Materials and Methods: The community was invited to participate in liver evaluations through a background survey and transient elastography (FibroScan® 530). Adults over 18 years old without known chronic liver diseases, excluding MASLD, were included. Patients were classified by CAP into steatosis positive or negative, and significant fibrosis defined as >7 kPa and advanced fibrosis as >15 kPa. Data on BMI, diabetes, hypertension, and dyslipidemia were collected. Patients with significant alcohol consumption were excluded and followed up. Statistical analyses included Student's t-test, chi-square test, and Fisher's exact test.

Results and Discussion: From March 6 to July 5, 2024, 321 evaluations were conducted. Of these, 62.1% were women and 37.9% men (p = 0.07). The mean age was 56 ± 11.3 years, 58.4 ± 10.9 years for women, and 54 ± 11.6 years for men. Moderate to severe steatosis was observed in 85.2% (273/321) of patients. Additionally, 22.1% (71/321) had significant fibrosis and 6.5% (24/321) had advanced fibrosis. The median BMI was 34.6, with 82.1% presenting obesity, 13.7% overweight, and 4.2% normal. Comorbidities included diabetes (47.4%), hypertension (42.1%), and dyslipidemia (30.5%). The combination of obesity and diabetes was more common in patients with advanced fibrosis compared to those with significant fibrosis (62.5% vs. 32.4%, p = 0.051).

Conclusions: This study highlights the high prevalence of significant and advanced fibrosis in MASLD patients, by. The strong association between obesity, diabetes, and advanced fibrosis underscores the need for early detection and targeted interventions in high-risk populations. Managing these comorbidities is crucial for improving outcomes in MASLD patients.

https://doi.org/10.1016/j.aohep.2024.101718

P-105 RISK FACTORS FOR MORTALITY IN PATIENTS WITH DECOMPENSATED CIRRHOSIS DURING HOSPITALIZATION

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Conflict of interest: No

Introduction and Objectives: Cirrhosis is a highly prevalent disease, classified into compensated, decompensated, and advanced stages. The risk of death is higher in patients with decompensated and advanced cirrhosis. Various risk factors are associated with mortality. *Objective:* To determine the main risk factors for mortality in patients with decompensated cirrhosis in the gastroenterology service of the General Hospital "Dr. Eduardo Liceaga".

Patients / Materials and Methods: This is an observational, longitudinal, prospective, and analytical study in a cohort of patients with cirrhosis of various etiologies, with and without acute kidney injury (AKI), who were hospitalized during 2022 and followed up to the present date (2024). Patients who were lost to follow-up or diagnosed with hepatocellular carcinoma were excluded. Data was analyzed using SPSS version 23. Qualitative variables were reported as frequencies and percentages, while numerical variables were presented as means and standard deviations or medians and ranges, depending on their distribution. Multivariable analysis was performed using logistic regression to calculate adjusted odds ratios (OR) for each predictive factor. A p-value < 0.05 was considered statistically significant

Results and Discussion: A total of 110 patients with cirrhosis were included, 54 men (49%) with a mean age of 54 ± 8 years, and 56 women (51%) with a mean age of 56 ± 9.7 years. The most frequent etiology of cirrhosis was MASLD (41%), followed by alcohol (39%), with 10 patients having alcohol-induced hepatitis (9%). The Child-Pugh classification distribution was: A: 12 patients (11%), B: 40 patients (36%), and C: 58 patients (53%). Additionally, 37 patients presented ACLF (34%). During follow-up, 28 patients died during

hospitalization and 49 within 24 months, with an overall mortality rate of 44.5%. Among the patients, 56 (45%) developed AKI, of which 44 (36%) had a prior episode. Additionally, 25 patients (20%) had an infection at admission or during hospitalization, and 28 (22%) experienced shock. The results showed that AKI and shock during hospitalization were the most significant factors. Shock during hospitalization had an OR of 3.886 (95% CI: [1.928, 7.835]), $p < 0.001$, and AKI an OR of 3.540 (95% CI: [1.767, 7.092]), $p < 0.001$, with a significant model according to the Chi-square test ($x2 = 46.6$, $p < 0.0001$). (Figure 1)

Conclusions: AKI and shock during hospitalization are significant predictive factors of mortality at two years. Early recognition and management of these factors are crucial to improve patient outcomes.

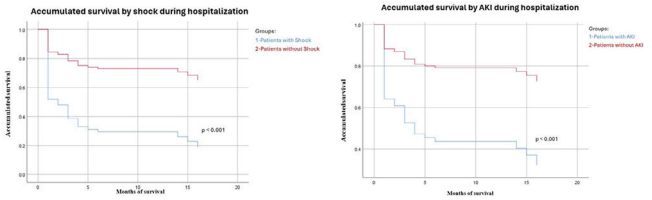

Figure 1

https://doi.org/10.1016/j.aohep.2024.101719

P-106 DIAGNOSTIC ACCURACY OF SHEAR-WAVE ELASTOGRAPHY IN METABOLIC DYSFUNCTION –ASSOCIATED STEATOTIC LIVER DISEASE, A SINGLE CENTER REPORT

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Conflict of interest: No

Introduction and Objectives: Metabolic dysfunction-associated steatotic liver disease (MASLD), the most prevalent liver disease in history, requires non-invasive tests to assess fibrosis and determine follow-up. The limited access and high cost of FibroScan necessitate the validation of other alternatives. The objective of this study is to assess the diagnostic accuracy of short-wave elastography (SWE).

Patients / Materials and Methods: This single-center, retrospective study was conducted from 2022 to 2024. We identified patients who underwent SWE as a non-invasive test to assess liver fibrosis. Clinical and demographic characteristics were ascertained by reviewing medical records. Clinical evidence of advanced fibrosis was defined by the presence of clinically significant portal hypertension (CSPH).

SWE (Philips Affiniti 70G Ultrasound with ElastQ imaging software, Koninklijke Philips N.V., Amsterdam, Netherlands) was performed after a 6-hour fast, with patients in a slight left lateral decubitus position. At least 10 measurements were taken for each patient. Mean and median rigidity were measured in kilopascals (KPa), with >13 KPa defined as the cut-off to rule in compensated advanced chronic liver disease (cACLD) and <9 Kpa to rule out significant fibrosis.

Sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) were calculated for the cut-off score.

Results and Discussion: A total of 86 patients were identified, with a mean age of 55 (range 22-79), 68.8% females, and 47.8% with MASLD as the predominant etiology of chronic liver disease. Overall, 31.4% were previously known to have CSPH. Within the MASLD subgroup, the FIB-4 score had a 100% PPV (under 1.31) compared to 80% with SWE to rule out fibrosis but with a higher sensitivity compared to FIB-4 (53.3% vs 35.7%). Regarding ruling in advanced fibrosis, SWE had a sensitivity of 92.9% vs 88.9% in FIB-4 with a NPV of 80%. See Table 1.

Conclusions: SWE has an excellent NPV to rule out advanced fibrosis and higher sensitivity than FIB-4 to rule out fibrosis. Recent guidelines recommend using at least two non-invasive tests to assess fibrosis. While the study is limited by its power and retrospective nature, the results show that SWE can be used as a first or second test when assessing fibrosis. Further studies with larger populations are needed to establish it as a viable option.

Table 1

	RULE-OUT FIBROSIS		ADVANCED FIBROSIS / ACLD	
	FIB-4	SWE	Fib-4	SWE
SENSITIVITY, % (95% CI)	35.7 (21.4-50)	53.3 (38.4-68.2)	88.9 (79.5-98.3)	92.9 (85-100)
SPECIFICITY, % (95% CI)	100	92.9 (85.2-100)	43.7 (28.9-58.6)	53.3 (38.4-68.2)
POSITIVE PREDICTIVE VALUE, % (95% CI)	100	80 (68-92)	72.7 (59.4-86)	78.8 (66.6-91)
NEGATIVE PREDICTIVE VALUE, % (95% CI)	45.4 (30.1-60.3)	78.8 (66.6-91)	70 (56.3-83.7)	80 (68-92)

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P-107 CLINICAL SPECTRUM OF METABOLIC DYSFUNCTION–ASSOCIATED STEATOTIC LIVER DISEASE (MASLD) IN PATIENTS WITH ALTERED ANKLE-BRACHIAL INDEX (ABI) AND CARDIOVASCULAR (CV) RISK FACTORS.

Diana Karen Tapia Calderón[1],
Francisco Alejandro Félix Téllez[1], Sergio Cerpa Cruz[1],
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Conflict of interest: No

Introduction and Objectives: MASLD is the most common chronic liver disease (CLD) with a worldwide prevalence of 25%. It is defined as >5% steatosis without any other known liver disease. Cardiovascular disease (CVD) is the most common cause of death in MASLD. Due to its association with atherosclerosis and its coexistence with traditional CV risk factors (i.e. obesity, insulin resistance, diabetes mellitus, dyslipidemia and hypertension). ABI is a simple and non-invasive tool used to diagnose peripheral arterial disease (PAD), an ABI of ≤0.9 is diagnostic of PAD and has shown to be an independent risk factor for CV disease and CV mortality. Currently, borderline ABI (0.91-0.99) is recommended to be considered as a CV risk factor. *Aim:* To describe the frequency of MASLD and altered ABI in patients with traditional CV risk factors.

Patients / Materials and Methods: An observational, descriptive, and cross-sectional study was performed, we included adult patients with CV risk factors (18 to 70 years old). The sociodemographic characteristics, alcohol consumption, drug usage, smoking and anthropometric measurements (height, weight, BMI, waist, hip and neck

circumference) were collected. ABI measurement was performed in all patients with a 8 mHz vascular doppler to classify patients as: Normal ABI (1.0-1.4), Altered ABI (≤0.9 or >1.4) and borderline ABI (0.91-0.99). Transient elastography (Fibroscan) was performed to determine steatosis and fibrosis stage. We excluded pregnant women, previously known CV disease, CLD or PAD. Descriptive statistics and comparative analysis were performed using SPSS version 24 software.

Results and Discussion: Sixty-eight patients with CV risk factors were included (48 female [70.6%] with a mean age of 47.38 years). Comorbidities were detected as follows: obesity in 52 patients (76.5%); dyslipidemia in 49 patients (72%); diabetes mellitus in 46 patients (67.6%); arterial hypertension in 35 patients (51.5%). Fifty-three patients had normal ABI (77.9%); altered ABI was found in 15 patients (22.1%). Sixty-one patients were found to have steatosis (89.7%), out of which 14 patients had fibrosis (22.9%). Comparison of both groups (altered vs. normal ABI) are presented in Table 1.

Conclusions: Patients with traditional CV risk factors showed a high rate of MASLD and similar altered ABI compared to previously described populations.

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P-108 MAFLD-S SCORE: A CONVENIENT CLINICAL TOOL FOR PREDICTING MASLD IN PRIMARY CARE SETTINGS

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Conflict of interest: No

Introduction and Objectives: Non-invasive methods for screening metabolic dysfunction-associated steatotic liver disease (MASLD) are gaining attention. A recent advancement in non-invasive screening is the MAFLD-S score, a tool that exclusively uses clinical data to predict the risk of MASLD.

The aim is to evaluate the performance of the MAFLD-S score to identify individuals with MASLD in a cohort of apparently healthy individuals.

Patients / Materials and Methods: A cross-sectional study was conducted including adults with unknown MASLD. A transient elastography was performed and hepatic steatosis was defined by a controlled attenuation parameter (CAP) > 248 dB/m. The MASLD criteria were assessed, and the MAFLD-S score, Fatty Liver Index (FLI) and Hepatic Steatosis Index (HSI) were calculated in each member of the cohort. The classification accuracy of these scores was evaluated through their areas under the receiver-operating characteristic (AUROC) curves and their calibration to predict the risk of MASLD was assessed graphically.

Results and Discussion: A total of 521 participants were included, being 61% women, and the mean age was 41 years. The frequency of MASLD in the study population was 44.1%. The area under the ROC curve for MAFLD-S was 0.823 (95% CI, 0.788-0.858), for FLI was 0.841 (95% CI, 0.807-0.875) and for HSI was 0.822 (95% CI, 0.787-0.858). The calculated sensitivity for MAFLD-S score using the recommended threshold was 61% (95% CI 0.55-0.68) and specificity of 81% (95% CI 0.77-0.86), for FLI sensitivity was 62% (95% CI 0.56-0.68) and specificity was 82% (95% CI 0.78-0.87) and for HSI sensitivity was 85% (95% CI 0.80-.89) and specificity was 61% (95% CI 0.56-0.67).

Conclusions: The MAFLD-S score, a tool that only uses clinical variables, confirmed to be a very good tool for screening MASLD in apparently healthy individuals in Mexico.

	Sensitivity	Specificity	+LR	-LR
Using recommended threshold				
MAFLD-S score	0.61 (0.55-0.68)	0.81 (0.77-0.86)	3.24 (2.50-4.20)	0.48 (0.40-0.57)
Fatty Liver Index	0.62 (0.56-0.68)	0.82 (0.78-0.87)	3.51 (2.67-4.60)	0.46 (0.39-0.55)
Hepatic Steatosis Index	0.85 (0.80-0.89)	0.61 (0.56-0.67)	2.19 (1.87-2.56)	0.25 (0.18-0.34)
Using optimal threshold in our study population				
MAFLD-S score	0.76 (0.70-0.81)	0.77 (0.72-0.81)	3.20 (2.60-4.04)	0.32 (0.25-0.40)
Fatty Liver Index	0.92 (0.89-0.96)	0.66 (0.61-0.72)	2.74 (2.32-3.24)	0.12 (0.08-0.19)
Hepatic Steatosis Index	0.72 (0.66-0.78)	0.76 (0.71-0.81)	3.00 (2.40-3.75)	0.30 (0.30-0.46)

Sensitivity and specificity for the thresholds recommended by each index and with the optimal threshold for our study population

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P-109 ALKALINE PHOSPHATASE AND CIRRHOSIS AT DIAGNOSIS ARE ASSOCIATED WITH DEEP RESPONSE TO URSODEOXYCHOLIC ACID IN PRIMARY BILIARY CHOLANGITIS

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Conflict of interest: No

Introduction and Objectives: Primary biliary cholangitis is a chronic and progressive autoimmune liver disease, whose prognosis can be improved by normalizing alkaline phosphatase and bilirubin. While ursodeoxycholic acid (UDCA) is first line standard of care, approximately 40% of patients exhibit incomplete response. We aimed to identify prognostic markers for deep response to UDCA therapy at presentation.

Patients / Materials and Methods: Data from the Brazilian Cholestasis Study Group cohort were analyzed retrospectively. Patients were assessed for deep response (defined as normalization of alkaline phosphatase and bilirubin) after 1 year of UDCA treatment. With the purpose of selecting the set of relevant variables related to the deep response for a parsimonious multivariate model, we applied the Varrank algorithm. Additionally, the performance of the UDCA response score in predicting deep response was evaluated.

Results and Discussion: A total of 297 patients were analyzed, with 57.2% achieving an adequate response according to the Toronto criteria, while 22.9% reached deep response. Cirrhosis (OR 0.460; 95% CI 0.225-0.942; p=0.034) and elevated baseline alkaline phosphatase levels (OR 0.629; 95% CI 0.513-0.770; p<0.001) were associated with reduced odds of deep response. The UDCA response score exhibited moderate discrimination power (AUROC=0.769) but lacked calibration.

Conclusions: Baseline ALP, and cirrhosis at diagnosis emerge as the most important prognostic factors to predict normalization of alkaline phosphatase and bilirubin after UDCA. The UDCA response score is inadequate for predicting deep response in the Brazilian PBC population.

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P-110 CHANGES IN THE CLINICAL PRESENTATION OF PRIMARY BILIARY CHOLANGITIS (PBC) OVER THE YEARS IN A UNIVERSITY CENTER IN ARGENTINA

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Conflict of interest: No

Introduction and Objectives: The clinical presentation of primary biliary cholangitis (PBC) has changed globally over time. However, these data have not been sufficiently analyzed in our setting. *Objective:* To analyze changes in the clinical presentation of PBC over the last 40 years in a university center in Argentina.

Patients / Materials and Methods: A retrospective study including 596 patients, divided into four groups according to the year of diagnosis: <1990 (N=113), 1990-1999 (N=206), 2000-2009 (N=151), and >2009 (N=106). Variables analyzed included age at diagnosis, disease stage, clinical presentation (asymptomatic or symptomatic), biochemical stages (according to Rotterdam criteria), and histological stages.

Results and Discussion: The female-to-male ratio was 24:1 and remained stable over time. There was an increase in the mean age at diagnosis, from 54.3 years (±11.6) before 1990 to 57.2 years (±12.2) after 2009 (p=0.0185). The symptomatic clinical variant decreased from 73.7% to 50.0% (p<0.001), while early biochemical stage diagnosis increased from 18.0% to 77.4% (p<0.001) over the same period. Advanced histological stages (III-IV) decreased from 60.2% before 1990 to 20.8% after 2009 (p<0.001).

Conclusions: Over time, patients with PBC have shown a change in their clinical presentation, characterized by an older age at diagnosis, earlier biochemical and histological stages, and a predominance of asymptomatic clinical forms. These findings are consistent with global reports and may be attributable to better knowledge of the disease, greater availability and access to diagnostic tests, and possibly changes in environmental triggers over time.

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P-111 CHARACTERIZATION OF PATIENTS WITH PRIMARY SCLEROSING CHOLANGITIS, IN TWO REFERENCE CENTERS, FROM 2011 TO 2023

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Conflict of interest: No

Introduction and Objectives: Primary sclerosing cholangitis (PSC) is a chronic cholestatic disease, characterized by inflammation with fibrosis and obliteration of the intrahepatic and extrahepatic bile ducts. The process of chronic cholestasis eventually leads to biliary cirrhosis. It is associated with ulcerative colitis (UC) in most cases. *Objectives:* To describe clinical, laboratory and imaging characteristics of patients with PSC, in two reference centers for liver diseases, from 2011 to 2023.

Patients / Materials and Methods: Observational, descriptive, retrospective study. Excel is used for data collection. The variables were expressed in frequency, range, mean and percentage.

Results and Discussion: 16,347 records were reviewed, of which, 36 (0.22%) had the diagnosis of PSC. Four had incomplete medical records so 32 were included. Fifty nine percent were

male, the mean age was 43 years, with a range of 20 to 88. The clinical presentation of 75% of the patients was jaundice. Abdominal pain or pruritus were the second and third most frequent symptoms. Pruritus, as an isolated symptom, occurred in 13%. Thirteen percent of the patients were asymptomatic. The liver function test showed a cholestatic pattern in 94% of the patients. The diagnosis was confirmed by cholangio-resonance in 78%, endoscopic retrograde cholangiopancreatography in 6% and a combination of both in 16%. Fifty percent of the patients had associated Inflammatory Bowel Disease (93.75% were UC). One of the 32 patients (3%) presented PSC associated to Autoimmune Hepatitis. The complications were: progression to liver cirrhosis in 53%, bacterial cholangitis in 13%, bile duct stones in 6%. Sixteen percent underwent Liver Transplantation and 28% did not present any complications.

Conclusions: The first series of patients with PSC in our country is reported. The characteristics of this pathology, in this series, do not differ significantly from the characteristics published in most other countries.

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P-112 ADVANCED FIBROSIS IN PATIENTS WITH LIVER STEATOSIS MEASURED BY FIBROSCAN AND ITS ASSOCIATED FACTORS

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Conflict of interest: No

Introduction and Objectives: The prevalence of fatty liver disease associated with metabolic dysfunction (MASLD) has been increasing. Its most advanced stage is F3-F4 fibrosis with eventual decompensation and the need for liver transplantation. The aim was to identify the factors associated with advanced fibrosis as observed by liver elastography (Fibroscan®) in patients with MASLD and in a subgroup of patients with diabetes mellitus (DM).

Patients / Materials and Methods: Retrospective, descriptive study of patients with MASLD who underwent Fibroscan® in our center between October 2023 and June 2024. Patients were categorized into 2 groups: without advanced fibrosis (F0-F2) and with advanced fibrosis (F3-F4). Sociodemographic variables, clinical and laboratory history were analyzed between groups, using chi2 and Mann-Whitney in Stata 16.0 software.

Results and Discussion: Of 1297 Fibroscan® performed in the study period, 577 (44%) patients met MASLD criteria for analysis; 62% women, median age 58 years (interquartile range 48 – 66); Advanced fibrosis was presented in 132 (33%) patients. The table compares the sociodemographic and clinical characteristics of the patients according to the degree of fibrosis. Older age, Fonasa health insurance, hypertension, diabetes mellitus, obesity, higher level of glycosylated hemoglobin and higher CAP (Coefficient Attenuated Parameter) were associated with advanced fibrosis. A sub-analysis was carried out in patients with MASLD and DM (n = 151), observing that Fonasa health insurance (65% vs 47%; p=0.032) and obesity (67% vs 43%; p=0.004) were associated with advanced fibrosis.

Conclusions: In patients with MASLD who present cardio metabolic risk factors such as older age, hypertension, diabetes mellitus, and obesity, the presence of advanced fibrosis should be evaluated to prevent associated complications.

Table. Sociodemographic characterization and clinical history of patients with hepatic steatosis according to the degree of fibrosis

	Advanced fibrosis (F3 – F4) N = 132	Without advanced fibrosis (F0 – F2) N = 445	P value
Age in years (median;IQR)	60 (52 – 68)	57 (47 – 65)	**0.0031**
Gender (n, %)			
Female	79 (60)	277 (61)	0.756
Male	53 (40)	172 (39)	
Health insurance			
Public (Fonasa)	79 (60)	175 (41)	**< 0.0001**
Private	53 (40)	254 (59)	
Comorbidities (n, %)			
Hypertension	70 (53)	164 (37)	**0.001**
Diabetes Mellitus	60 (45)	91 (26)	**< 0.0001**
Insulin resistance	23 (17)	83 (19)	0.749
Dyslipidemia	9 (7)	40 (9)	0.432
Obesity	87 (66)	218 (49)	**0.001**
Body Mass Index (median;IQR)	32 (29 – 35.7)	29,9 (27.3 – 32.5)	**< 0.0001**
Laboratory tests (median;IQR)			
Glucose (n = 204)	100 (90 – 119)	99 (158 – 211)	0.183
Insulin (n = 59)	22.9 (15.2 – 36.2)	13.1 (10.1 – 20.9)	**0.020**
Glycosylated hemoglobin (n = 125)	6 (5.8 – 7.1)	5.7 (5.4 – 6.1)	**0.0031**
Cholesterol (n = 231)	164 (141 – 198)	185 (158 – 211)	**0.0044**
LDL (n = 167)	90 (67 – 114)	103 (75 – 128)	0.058
HDL (n = 167)	50 (41 – 57)	50 (39 – 62)	0.985
Triglycerides (n = 199)	123 (100 – 172)	139 (100 – 205)	0.467
CAP (median;IQR)	309 (266 – 345)	297.5 (268 – 322)	**0.026**
Steatosis			
Mild	32 (24)	106 (24)	0.095
Moderate	17 (13)	94 (21)	
Severe	83 (63)	245 (55)	

IQR: Interquartile range; CAP: Coefficient Attenuated Parameter

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P-113 EVALUATION OF THE MELNA AGIB SCALE TO PREDICT MORTALITY IN PATIENTS WITH CIRRHOSIS AND VARICEAL HEMORRHAGE

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Conflict of interest: No

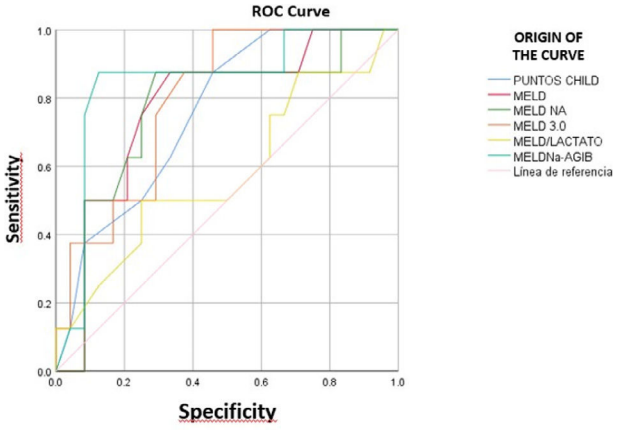
Introduction and Objectives: Patients with decompensated cirrhosis are at risk of variceal hemorrhage, which increases the risk of mortality. Validated scales exist to assess this risk, but there is currently no scale that evaluates the risk of variceal hemorrhage and death simultaneously. The MELDNa AGIB (acute gastrointestinal bleeding) scale incorporates sodium (Na) levels, albumin levels, the corrected QT interval (QTc), and a history of hemorrhage to calculate mortality at 6 weeks. While it has been evaluated in other centers, further studies are needed to validate its utility. To evaluate the MELDNa-AGIB scale for predicting the risk of mortality in decompensated cirrhotic patients.

Patients / Materials and Methods: This was a retrospective, analytical, observational study conducted on a cohort of patients with decompensated cirrhosis and variceal hemorrhage. The MELDNAA-GIB scale was calculated for each patient and compared with other scoring systems, including MELD, MELD NA, MELD LACTATE, and MELD 3.0, to assess its effectiveness. Statistical analysis involved the construction of ROC curves to determine the prognostic value of each

scoring system in predicting mortality among patients with variceal bleeding. A significance level of p<0.05 was considered, and sensitivity and specificity were determined based on the cutoff points obtained from the significant ROC curves.

Results and Discussion: A total of 32 patients were included in the study, of whom 56.2% were male, with an average age of 57±11. The etiologies of cirrhosis included alcohol-related, metabolic-associated fatty liver disease (MAFLD), dual injury, hepatitis C virus (HCV), autoimmune hepatitis (AIH), and unidentified causes (34.37%, 31.25%, 21.87%, 6.25%, 3.12%, 3.12%, respectively). Fifty percent of the patients had a prolonged QTc interval (>456ms) as calculated using the Fridericia formula, and 67.2% had a history of previous variceal hemorrhage. The MELDNa-AGIB scale demonstrated an area under the receiver operating characteristic (AUROC) curve of 0.849 (95% confidence interval: 0.681-0.950, p=0.004), with a sensitivity of 87.5% and specificity of 83% when a cutoff point of 17 was applied for MELDNa-AGIB. The AUROC for predicting mortality was significantly lower for MELD/Lactate.

Conclusions: Although the study group was small, the MELDNaAGIB scale showed significant performance in predicting 6-week mortality in patients who developed variceal hemorrhage.



AREA UNDER THE CURVE

TEST VARIABLES	Area	Desv. Error[b]	Asymptotic significance[b]	95% Asymptotic Confidence Interval	
				Lower limit	Upper limit
CHILD PUGH SCORE	0.758	0.089	0.031	0.584	0.932
MELD	0.776	0.094	0.021	0.592	0.960
MELD NA	0.766	0.102	0.026	0.566	0.965
MELD 3.0	0.797	0.080	0.013	0.639	0.955
MELD/LACTATE	0.583	0.124	0.486	0.341	0.826
MELDNa-AGIB	0.849	0.086	0.004	0.681	1.000

The test result variables: CHILD POINTS, MELD , MELDNa, MELD 3.0, MELD/LACTATE, MELDNa-AGIB have at least one tie between the positive true state group and the negative true state group.

a. Under the non-parametric assumption

b. Null hypothesis: true area = 0.5

Figure 1. Comparative analysis among different scales in patients with variceal hemorrhage and hepatic cirrhosis.

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P- 114 CLINICAL CHARACTERIZATION OF CIRRHOTIC PATIENTS HOSPITALIZED AT THE CARDIOINFANTIL FOUNDATION: A NEW PERSPECTIVE

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Conflict of interest: No

Introduction and Objectives: Cirrhosis is classically classified as compensated or decompensated in relation to the presence of ascites, variceal bleeding or encephalopathy. 5 stages of the course of the disease have been associated with the combination of these decompensations being the most advanced stages associated with higher mortality (60% per year). Acute-on-chronic liver failure (ACLF) can appear at any time during the course of the disease. Trying to understand the clinical course of cirrhosis, the PREDICT study established the CLIF-C AD score as a scale with greater sensitivity (>50 pts) to discriminate patients at high risk of developing ACLF with new trajectories of the course of cirrhosis: Stable and unstable decompensated cirrhosis; and pre-ACLF. Currently, there are no studies in Latin America that characterize the clinical outcomes in relation to the courses proposed by the PREDICT study. *Objectives:* Describe the demographic, clinical, paraclinical, management and outcomes in adult patients with cirrhosis, who have received medical care at the Cardioinfantil Foundation for any episode of decompensation in the period between 2015-2021

Patients / Materials and Methods: Historical cohort where exposure was defined as decompensated cirrhotic patients requiring hospital care during the period from 2015 to 2021. Descriptive statistics were used, and flow charts were used to indicate the distribution of patients.

Results and Discussion: Information was collected from 259 patients, mainly men (45%). Main etiologies of cirrhosis were MASH (18.9%), alcoholic (17%), cryptogenic (13.9%), and autoimmune hepatitis (12%). Patients mainly corresponded to the stable decompensated group (75%). The most frequent decompensation documented on admission was ascites in 66%, followed by hepatic encephalopathy in 41.3%. In the pre-ACLF group, mortality and renal dysfunction were higher.

Conclusions: Patients who present with decompensation of cirrhosis and who during their stay developed an infectious process associated with renal dysfunction and high CLIF C-AD scores are more likely to develop ACLF.

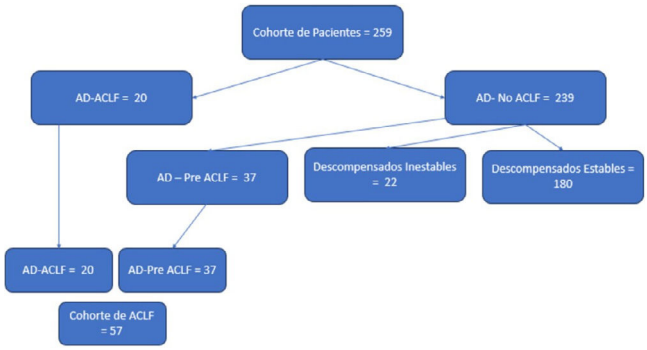
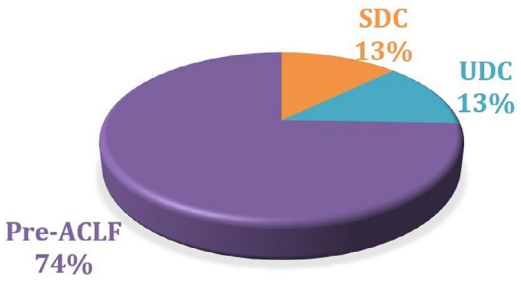


Figura 1



https://doi.org/10.1016/j.aohep.2024.101728

P-115 HLA-DRB1*03 /HLA-DRB1*12 ARE ASSOCIATED WITH AUTOIMMUNE HEPATITIS IN A HISPANIC ADULT POPULATION

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Conflict of interest: No

Introduction and Objectives: Genetic predisposition for autoimmune hepatitis (AIH) has been associated with the presence of specific HLA-DRB1 alleles and/or motifs which vary depending on the population in which they are studied. Besides different genetic and environmental factors influencing the development of AIH in different populations, low and medium resolution typing methods might also impair the identification of critical variants in HLA-DRB1 associated with AIH.

The aim of this study was to identify the principal genetic determinants in HLA-DRB1 in an adult population that act as risk factors for the development of AIH.

Patients / Materials and Methods: 39 patients and 195 controls were typed for HLA-DR by sequence-based typing, and the allele groups associated with the disease in the population of study were identified.

Using sequence data, previously reported epitopes with proposed association with the disease were identified in the population of study.

Results and Discussion: DRB1*03 and DRB1*12 allele frequencies were significantly higher in patients than in controls. Allele DRB1*04 had a higher frequency in patients than controls although this difference was not significant. Moreover, the frequency of allele DRB1*08 was significantly lower in patients than in controls. The only reported motifs that showed an association with AIH in studied patients was LLEQKR and Lysine 71.

Conclusions: The main HLA-DRB1 alleles associated with type 1 AIH in the population of study are DRB1*03 and DRB1*12, and epitopes LLEQKR 67-72 and Lysine 71 were the only reported epitopes associated with the disease. The differences in alleles and epitopes observed in studied patients, especially when compared to studies from other Hispanics with similar populations likely reflect differences in genetic composition, exposure to distinct pathogens and antigens that can trigger autoimmunity and/or the use of more precise HLA typing methods in this study.

Antigen	AIH Patients	Controls	Statistical analysis Patients *vs* Controls
	Frequency (%)	Frequency (%)	P-value
DRB1*01	3,8	9,0	0,1305
DRB1*03	17,9	5,9	0,0003
DRB1*04	32,1	25,4	0,2238
DRB1*07	7,7	9,2	0,6645
DRB1*08	2,6	12,3	0,0111
DRB1*09	1,3	1,3	1,0000
DRB1*10	2,6	1,3	0,3950
DRB1*11	3,8	6,4	0,3839
DRB1*12	5,1	0,5	0,0010
DRB1*13	6,4	10,8	0,2428
DRB1*14	6,4	5,4	0,7186
DRB1*15	9,0	10,0	0,7814
DRB1*16	1,3	2,6	0,4955

(*continued*)

Distribution of HLA-DRB1 alleles in patients with type I Autoimmune Hepatitis and controls

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P-116 PREDICTION OF CIRRHOSIS THROUGH THE VELOCITY TIME INTEGRAL OF PORTAL VEIN TRACE

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Conflict of interest: No

Introduction and Objectives: Doppler ultrasound of the portal vein (PV) is a routine study in the diagnosis and follow-up of cirrhotic patients. Identifying non-invasive parameters for the diagnosis and monitoring of this population is crucial. The assessment of the velocity time integral (VTI) is a widely used parameter in doppler ultrasound (cardiology) but has been less explored in the context of portal doppler.

Patients / Materials and Methods: Portal doppler ultrasound was performed on a cohort of patients with cirrhosis and controls. Several hemodynamics variables of the PV and hepatic artery (HA) were collected (Table 1). Logistic regression was used to determine the predictive capacity of these variables. A ROC curve was generated, and the area under the curve (AUC) was calculated. Sensitivity, specificity, NPV, PPV, and likelihood ratios (LLR+ and LLR-) were also evaluated.

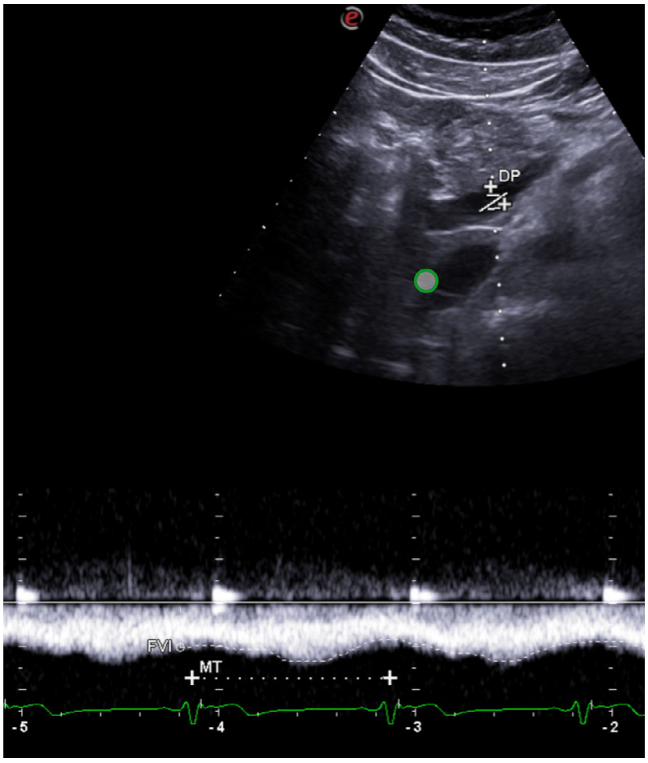
Results and Discussion: Fifty patients were evaluated (36 with cirrhosis and 14 controls). Differences between variables of cirrhosis and control groups are shown in Table 1. The optimal cutoff point for VTI Porta x min was 1517.3 cm/min, with a sensitivity of 88.89%, specificity of 83.33%, NPV of 83.33%, PPV of 88.89%, LLR+ of 5.33, and LLR- of 0.13. The area under the ROC curve was 0.91.

Conclusions: VTI Porta x min is a significant predictor of hepatic cirrhosis. This measure can be a valuable tool in clinical practice to identify patients with a high probability of cirrhosis and may be part of a multiparametric liver evaluation.

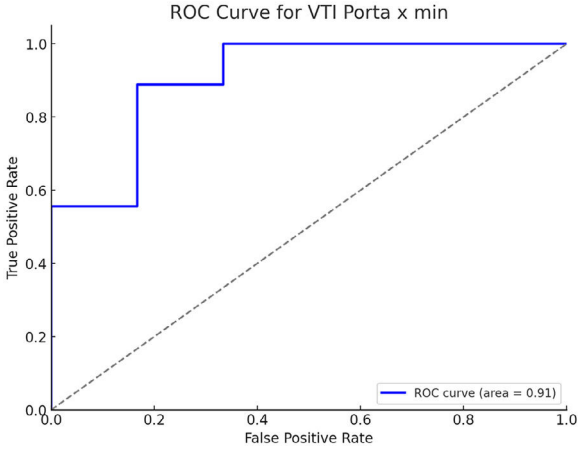
Tabla 1

Variable	Cirrosis	Controles	p
VTI portal x minute (cm x min)	1291.3 (976.8 - 1558.9)	2514.3 (2152.5 - 2670.6)	<0.001*
Total portal volume	1421.9 (1100.7 - 1874.2)	1688.3 (1399.8 - 2881.13)	0.098
VTI HA x beat (cm x beat)	52 (41.4- 65.9)	42 (33- 56.1)	0.160
VTI HA x min (cm x min)	3381.3 (2642.1 - 4087.2)	3265(2327- 4012.9)	0.552
Total HA volume	791.2(282.6- 1189)	257.2 (151.4 - 371.5)	0.001*
Total liver flow	2314.16 (1603.5 - 3115.8)	1968.09 (1650.6 - 3236.1)	0.770
% Portal volume	0.61 (0.5 - 0.8)	0.88 (0.8 - 0.9)	<0.001*
% Arterial volume	0.39 (0.1 - 0.4)	0.12 (0.08-0.1)	<0.001*

Mann-Whitney test, p value < 0,05 statistical significance. HA: Hepatic Artery. VTI: Velocity Integral Time.



VTI V. Porta x min



Curva ROC

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P-117 CONTINUOUS INTRAVENOUS TACROLIMUS FOR LIVER TRANSPLANT RECIPIENTS: IMPLEMENTATION STRATEGY AND CLINICAL OUTCOMES

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Conflict of interest: No

Introduction and Objectives: Tacrolimus is the cornerstone of immunosuppression following liver transplantation (LT). In patients with prolonged orotracheal intubation, enteral administration (oral, nasogastric or sublingual) can result in variable pharmacokinetics and trough levels. Continuous intravenous tacrolimus (CIT) may ensure a more stable dose-to-trough levels ratio. We aimed to describe an implementation strategy and outcomes of CIT in LT recipients.

Patients / Materials and Methods: This case series includes consecutive adult LT patients receiving CIT at a single center from 2018 to 2024. CIT was administered to patients who could not receive enteral medication. The CIT dose ranged from 0.01 to 0.02 mg/kg/day, with adjustments based on the patient's clinical condition, and target blood trough levels 5-8 ng/ml. Clinical outcomes included acute cellular rejection, infections, renal and neurologic toxicities.

Results and Discussion: Twelve patients received CIT, with a median initiation at 4 days (IQR: 2.5–19) post-LT. The median initial dose was 1 mg/24h (IQR: 0.7–1.0), Six (50%) patients achieved target trough levels at a median of 2.5 days (IQR: 1.5–4). Of the 12 patients, 11 had at least one tacrolimus trough level over 10 ng/ml, 7 had levels over 12 ng/ml, and 3 had levels over 15 ng/ml. The median duration of CIT was 12 days (IQR: 9–22). During CIT administration, complications included seizures (n=1), cytomegalovirus reactivation (n=4) and acute kidney injury (n=3). No cases of acute cellular rejection were observed, and 2 patients died during hospitalization, with deaths not related to CIT.

Conclusions: This case series suggests that CIT is a feasible option with manageable toxicities for LT recipients unable to receive enteral medication, helping to prevent acute cellular rejection episodes.

Table 1

Characteristics	No of patients (%) or median [IQR]
Age	58.0 [27.0 - 69.0]
Sex, female	7 (58.3)
Cirrhosis etiology	
Autoimmune hepatitis	4 (33.3)
MASLD	2 (16.6)
MetAld	1 (8.3)
HCV	1 (8.3)
Alcohol	1 (8.3)
Polycystic disease	1 (8.3)
Cryptogenic	1 (8.3)
No cirrhosis	1 (8.3)
Cadaveric donor (complete)	11 (91.6)
Cadaveric donor (split)	1 (8.3)
Meld Na	27 [9 - 40]
ACLF	3 (25)
Re transplant	4 (33)
Hospitalization days	36 [15-110]
Days of intravenous tacrolimus	12 [4-43]
Post transplantation outcomes	
Neurotoxicity	2 (16.6)
Acute kidney injury	3 (25)
Grade 1	1 (8.3)
Grade 2	1 (8.3)
Grade 3	1 (8.3)
Acute cellular rejection	0
Cytomegalovirus reactivation	3 (25)

IQR [interquartile range], MASLD (metabolic dysfunction-associated steatotic liver disease) HCV (hepatitis C virus) MELD NA (model for End-stage Liver Disease), ACLF (Acute-On-Chronic Liver Failure), ICU (intensive care unit)

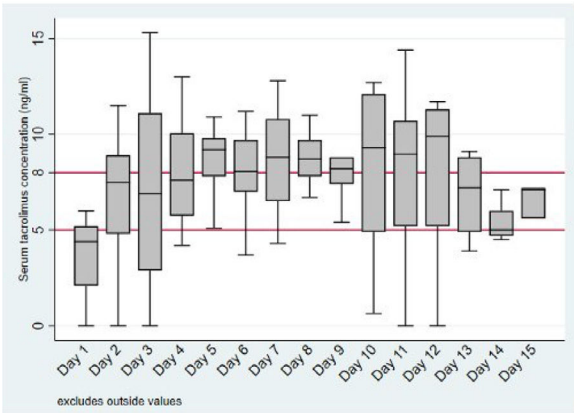

Figure 1. Boxplot of serum dose of tacrolimus every day

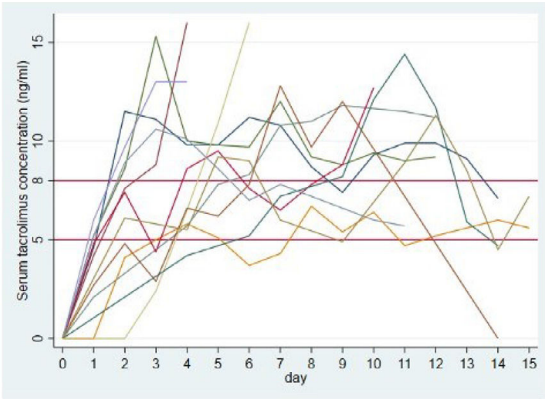

Figure 2. Line of serum concentration in time for every patient in the case series.

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P-118 METABOLIC DYSFUNCTION-ASSOCIATED STEATOTIC LIVER DISEASE: INDICATION FOR LIVER TRANSPLANTATION AND OCCURRENCE IN THE POSTOPERATIVE PERIOD

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Conflict of interest: No

Introduction and Objectives: Metabolic dysfunction-associated steatotic liver disease (MASLD) is one of the most important causes of liver disease worldwide, and it is currently the main indication for liver transplantation.

This study aims to evaluate (1) clinical-epidemiological profile of patients listed for liver transplant due to MASLD-related cirrhosis and mortality on the waiting list; (2) occurrence of allograft steatosis and new post-transplant comorbidities; (3) survival of patients with and without MASLD in the postoperative period.

Patients / Materials and Methods: This retrospective study is based on a review of medical records of patients treated at the Liver Transplant outpatient clinic of the Hospital das Clínicas of the Faculty of Medicine of Ribeirão Preto - University of São Paulo, from 2005 to 2015.

Results and Discussion: Of all patients listed for liver transplant (610), 10% had MASLD-related cirrhosis. Of these, 47.5% were female, with an average age of 56.3 years. These patients had higher MELD values (P = 0.01), higher rates of metabolic syndrome (P<0.05), and waiting list mortality of 42.6%. About transplant patients (264), 58 developed hepatic steatosis post-transplant, 82.8% of these with new steatosis and 17.2% with MASLD recurrence. The development of new comorbidities, such as diabetes and systemic arterial hypertension, was present in 26.2% and 22.5% of transplant recipients. Obesity and hypertension were the variables associated with a greater risk of allograft steatosis. The average survival of patients undergoing surgery was 8.7 years. Individuals transplanted for MASLD had significantly lower survival than those with other causes of cirrhosis (P=0.05).

Conclusions: As MASLD is a highly prevalent disease, with different local realities, studies like this can serve as a basis for understanding the local reality and provide important information for developing public health programs.

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P-119 POST-TRANSPLANT OVERALL AND GRAFT SURVIVAL AFTER LIVER TRANSPLANTATION FOR AUTOIMMUNE HEPATITIS

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Conflict of interest: No

Introduction and Objectives: Autoimmune hepatitis (AIH) represents the cause in 5-6% of the total amount of liver transplant in Brazilian centers. Factors that impact post-transplant outcomes are not well known. Data from the European registry show an overall survival of 79,4% post AIH liver transplant whereas Latin American numbers are scarce. The aim of this study is to evaluate long-term patient and graft survival after liver transplant due to AIH.

Patients / Materials and Methods: This is a retrospective and observational study that included 85 patients with AIH who received liver transplant at a reference center in Brazil, from 1996 to 2023. Demographic data was collected, and survival curves were performed using the Kaplan-Meier method.

Results and Discussion: Most of the cohort was composed of white (52,9%) females (71,8%). The median age at transplant timepoint was 27 years, ranging from 11 to 73 years. After LT 15,5% experienced graft lost, with the need of a second or third liver transplant. During the follow-up 32,9% of the patients died, with a mean survival time of 17.5 years (±1.4). The overall survival in 5 years was approximately 80%. There was no difference in survival between males and females. Conversely, patients who were submitted to more than one liver transplant had a poorer overall survival. (Fig.1).

Conclusions: Preliminary results show a good overall post-transplant survival for AIH, which is in compass with international reports. The necessity of retransplant conveys a worse prognosis. Other features that might impact overall and graft survival are to be further evaluated in this cohort.

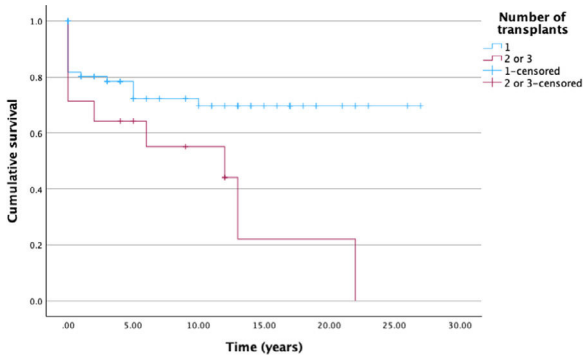

Figure 1 – Overall survival after liver transplantation from autoimmune hepatitis regarding the number of transplants

https://doi.org/10.1016/j.aohep.2024.101733

P-120 POLYMORPHISMS OF HLA (LOCI DR 4*) IN HISPANICS AS RISK FACTOR FOR DE-NOVO AUTOIMMUNE HEPATITIS AFTER LIVER TRANSPLANTATION

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Conflict of interest: No

Introduction and Objectives: De-novo Autoimmune Hepatitis (De-novo AIH) after Liver Transplantation (LT) is considered rare. Its importance relies in a severe clinical course, with graft loss, non-response to immunosuppressants and need for retransplantation. The HLA (loci DR 3 and DR 4) has been associated with De-novo AIH especially in children in India.

The objective was to determine the allelic frequencies of HLA (loci DR 3 * and DR 4 *) in donor livers of an adult population of patients with LT and its association with De-novo AIH.

Patients / Materials and Methods: Retrospective observational study of cases and controls. 260 adult LT recipients were included. Cases were defined as histological confirmation of AIH De-novo after LT, controls were LT recipients free of the disease.

The proportion of exposed cases was compared with the corresponding proportion in the control group.

Results and Discussion: It is found that the frequency expressed as a percentage of individuals with the characteristic (HLA DR4 and De-novo AIH) is higher in the group of cases than in the control group, so it can be assumed a statistically significant association between the presence of HLA DR 4 in the donor and development of AIH De-novo after LT.

8 cases were confirmed. All presented alterations of liver function tests with necroinflammatory pattern during the first 3 months after transplantation despite levels of immunosuppression within therapeutic ranges and all possible causes of alteration of the hepatic profile were ruled out. Despite appropriate management all of them developed cirrhosis and indication of retransplantation.

Conclusions: AIH De-novo after LT is a real challenge for LT programs. Recent evidence demonstrating this type of genomic association with post-transplant diseases arouses the need for new management in line with Future, Precision or Personalized Medicine, where molecular biology and genetics play a crucial role in individualized therapies reducing costs avoiding unnecessary expenses to the health system.

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P-121 SEPTIC SHOCK IN LIVER CIRRHOSIS: A COHORT STUDY OF A UNIVERSITY HOSPITAL IN CHILE

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Conflict of interest: No

Introduction and Objectives: Patients with cirrhosis and septic shock face a high mortality rate, reaching up to 40%. There is limited literature from Latin America on this condition and associated mortality variables. The aim was to describe mortality in patients with liver cirrhosis and septic shock and analyze the associated variables.

Patients / Materials and Methods: A retrospective, observational, analytical study was conducted on patients with liver cirrhosis, who were diagnosed with septic shock, according to Sepsis-3 criteria, during their hospitalization in Hospital Clínico Universidad de Chile, between 2017 and 2023. A confidence level was set at 95% with a statistical significance of $p = 0.05$.

Results and Discussion: A total of 68 patients with septic shock were included, with a mean age of 61 years; the majority were male (57%). The primary etiologies of cirrhosis were alcohol-related (31%) and metabolic-associated (27%). Most patients had a Child-Pugh score of B or C (95%). The 28-day mortality rate was 38%, and the one-year mortality rate was 54%. These patients experienced 74 episodes of septic shock. Of these, 61% were associated with healthcare-related infections, and in 47% a Gram-negative microorganism was identified. Significant variables associated with 28-day mortality included a history of hepatic encephalopathy, low platelet count at admission, elevated total bilirubin, and higher severity scores (SOFA, Meld-Na, CLIF-SOFA). One-year survival was significantly higher among patients who received a liver transplant (HR 0.11, 95% CI 0.01 – 0.86, $p = 0.036$) (Figure 1).

Conclusions: Mortality among cirrhotic patients with septic shock in Chile is high and comparable to international cohorts. Liver transplantation reduces mortality in this patient group. Higher SOFA, Meld-Na, and CLIF-SOFA scores at admission are associated with increased mortality.

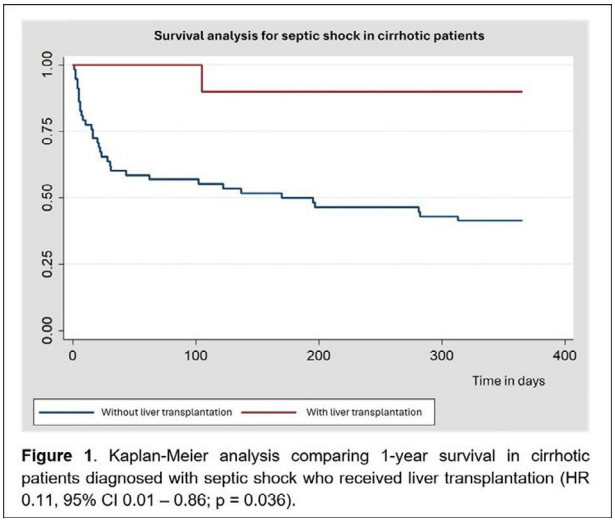

Figure 1. Kaplan-Meier analysis comparing 1-year survival in cirrhotic patients diagnosed with septic shock who received liver transplantation (HR 0.11, 95% CI 0.01 – 0.86; p = 0.036).

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P-122 HELICOBACTER PYLORI AS A RISK FACTOR FOR ENCEPHALOPATHY IN PATIENTS WITH CIRRHOSIS

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Conflict of interest: No

Introduction and Objectives: Helicobacter pylori (H. pylori) has a high prevalence in Mexico, affecting 66% of the population (associated with 30-50% of gastric pathologies). Cirrhosis of the liver ranks as the sixth leading cause of mortality. This study aims to evaluate the correlation between these two entities in patients with liver cirrhosis.

Patients / Materials and Methods: Over a period of 3 years, 148 patients presenting with upper gastrointestinal bleeding were studied. Endoscopy and biopsy confirmed the presence of H. pylori. A certain percentage of these patients also had decompensated liver cirrhosis, assessed through laboratory studies (including prothrombin time), endoscopy with biopsy, elastography, and Child-Pugh classification. A case-control study was conducted, evaluating statistical t-tests, chi-square tests, and odds ratios for both quantitative and qualitative variables.

Results and Discussion: Among the 148 patients with H. pylori, 37 had liver cirrhosis (25%), and among these, 26 had encephalopathy (65%, odds ratio 2.36). The female gender constituted 54%, while males accounted for 46%. The remaining 11 patients (odds ratio 0.041) had a female prevalence of 65% and male prevalence of 35%. According to the Child-Pugh classification, 54% were class A, 31% class B, and 15% class C. Etiologies included obesity and diabetes (58%), alcohol (26%), autoimmunity (8%), and HCV (8%). The correlation between obesity, cirrhosis, H. pylori, and male gender showed an odds ratio of 9.09, while in females, it was 4. Cirrhosis, obesity, and encephalopathy had an odds ratio of 5.36. The mean age for cirrhosis was 60.57, and for cirrhosis with H. pylori and encephalopathy, it was 60.31 (with $P < 0.34$).

Conclusions: H. pylori contributes to over 750,000 deaths annually. In this study, it emerged as a risk factor for encephalopathy in liver cirrhosis patients. Vulnerable groups included women and individuals with obesity and diabetes. Multicenter studies are recommended to assess its true risk factor.

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P-123 CLINICAL COURSE OF PATIENTS WITH CHOLESTATIC LIVER DISEASES IN A LIVER TRANSPLANT CENTER

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Conflict of interest: No

Introduction and Objectives: Primary biliary cholangitis (PBC) and primary sclerosing cholangitis (PSC) are immune-mediated cholestatic liver diseases, in which inflammation and/or fibrosis result in progressive destrucción of the bile duct. In their clinical course they evolve to cirrhosis and its complications.

The objective was to describe the clinical and evolutionary characteristics and long-term survival in patients with cholestatic liver diseases (CLD).

Patients / Materials and Methods: Descriptive, longitudinal and ambispective study, in patients with cholestatic liver diseases seen in the hepatology clinic of the Medical Surgical Research Center, between 2000 and 2024, with an average follow-up of 6 years (minimum of 1 and maximum of 14). Patients with PBC or PSC who received treatment with ursodeoxycholic acid and quarterly evaluations were included.

The main variables were: initial stage, complications, response to treatment and clinical evolution. The data were processed with the SPSS statistical package version 22.0 on Windows; The analysis was performed by calculating the mean, standard deviation and percentage, and for survival the Kaplan-Meier method was used with a 95% confidence interval.

Results and Discussion: Of 44 patients studied, the most frequent entity was PBC (58.8%). Half of the patients had cirrhosis at the time of diagnosis. Ascites was the most frequent complication (40.9%) and highlighted the insertion of cholangiocarcinoma in 50% of patients with PSC. Most patients had no response to treatment: PBC (61.8%) / PSC (80%). Disease progression was greater in PSC and survival was lower in these patients: 20% at six years.

Conclusions: The clinical course of patients with cholestatic liver diseases was determined by the progression of the disease. Patients with PSC had a more torpid evolution, which led to poor survival in long-term follow-up.

https://doi.org/10.1016/j.aohep.2024.101737

P-124 ASSOCIATED FACTORS WITH CLINICAL COURSE OF VASCULAR LIVER DISEASE IN A PUBLIC HOSPITAL IN PERU

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Conflict of interest: No

Introduction and Objectives: Vascular liver disease comprises a heterogeneous group of disorders (portal vein thrombosis, Budd-Chiari syndrome and porto-sinusoidal vascular disease (PSVD) as the main ones) that affect the liver vascular system, characterized by the development of elevated portal venous pressure in the absence of cirrhosis. The incidence varies worldwide, however, this disease occurs in less than 10% of the population. The aim of this study was to identify the associated factors with hospital admissions due to portal hypertension related-complication (PHrC) in a public hospital in Peru.

Patients / Materials and Methods: We performed observational retrospective study. Demographic information, biochemical parameters, imaging techniques, liver stiffness measurements and liver biopsy were collected from medical records. Presence of a previous underlying liver disease was discarded by clinical, radiological, elastography, and when doubts liver biopsy.

Results and Discussion: 35 patients (18 were men and 17 women with a median of age of 34 (25-40) years) were included. Portal vein thrombosis (PVT) was the most frequent etiology (60%) and gastrointestinal bleeding was the most common PHrC (71%). Fifteen patients had more than three hospital admissions. PVT [OR: 5.1 (95% CI: 1.2 - 24.5), p<0.05] and gastrointestinal bleeding [OR: 11.4 (95% CI: 1.7 - 228), p<0.05] were associated with more than three hospital admissions.

Conclusions: In this first study of vascular liver disease in Peru, portal vein thrombosis was the most frequent etiology. Portal vein thrombosis and gastrointestinal bleeding due to portal hypertension related-complication develop more hospital admissions.

	Hospital admissions				
			Multivariate analysis		
	Univariate analysis	P value	Age + PVT	PVT + gastrointestinal bleeding	PVT + Ascites
Age	0.9 (0.8-0.9)	0.02	0.9 (0.82-0.97)		
Gender					
Male	ref				
Female	0.5 (0.1-2.1)	0.3			
Etiology					
No Portal vein thrombosis (PVT)	ref		ref	ref	ref
PVT	5.1 (1.2-24.5)	0.02	5.2 (1.1-33)	7.4 (1.4-48)	7.8 (1.5-59)
Beta-blockers	1.7 (0.3-9.5)	0.5			
Gastrointestinal bleeding	11.4 (1.7-228)	0.03		16.9 (2.1-382)	
Ascites	1.5 (0.3-6.7)	0.5			3.3 (0.5-28)
Albumin mg/dL	1.1 (0.3-3.3)	0.8			
Platelets x 10^9 cell	1 (0.9-1.02)	0.1			
Spleen (cm)	1.1 (0.9-1.5)	0.2			
Portosystemic Collaterals (evaluated in 24 patients)	2 (0.3-17)	0.4			
Right lobe atrophy/caudate (evaluated in 24 patients)	0.5 (0.08-3.1)	0.4			
Transient elastography (kPa)	0.9 (0.7-1.1)	0.4			

Univariate and multivariate analysis for hospital admissions in patients with vascular liver disease

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P-125 FACTORS ASSOCIATED WITH THE DEVELOPMENT OF POST-BANDING ULCER BLEEDING IN PATIENTS WITH CIRRHOSIS.

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Conflict of interest: No

Introduction and Objectives: Variceal bleeding accounts for 10-30% of cases of upper gastrointestinal bleeding and is the most common complication of portal hypertension. The treatment of choice is endoscopic band ligation. Post-banding ulcer bleeding (PBUB), although infrequent, is a complication. *Objectives:* To determine the predictive factors of bleeding due to PBUB in cirrhotic patients.

Patients / Materials and Methods: This is a case-control study involving cirrhotic patients with esophageal varices who developed PBUB (cases) and those who did not develop PBUB (controls).

Results and Discussion: From January 2012 to January 2024, 203 patients diagnosed with esophageal varices due to cirrhosis were included; 105 were men (51.7%) with a mean age of 57.8± 10.9 years. The causes of cirrhosis were: 87 (42.9%) alcohol, 20 (9.9%) viral, 96 (47.3%) MASLD. According to the Child-Pugh classification: 53 (26.1%) were class A, 77 (37.9%) were class B, and 73 (36.0%) were class C. The indications for endoscopy were: 43 (21.2%) primary prophylaxis, 84 (41.4%) secondary prophylaxis, and 76 (37.4%) active bleeding. A total of 160 patients (78.8%) were taking non-selective beta-blockers (BBNS). We found 61 cases (30.0%) of PBUB.

In the univariate analysis, the following were associated with a higher risk of developing PBUB: post-ligation fibrosis [32/136 (23.5%) vs. 29/67 (43.3%); OR=1.8; 95% CI: 1.2-2.8; p=0.004], the presence of endoscopic signs of poor prognosis [13/122 (10.7%) vs. 48/81 (59.2%); OR=5.6; 95% CI: 3.2-9.6; p<0.0001], and the decompensated state of cirrhosis [Child A: 2/53 (3.8%) vs. Child B: 17/77 (22.1%) OR=7.2; 95% CI: 1.6-32.8 vs. Child C: 42/73 (57.5%) OR=34.5; 95% CI: 7.8-152.8; p<0.0001]. The multivariate analysis is shown in Table 1.

Conclusions: Greater cirrhosis decompensation is associated with a higher risk of PBUB; the presence of red signs of poor prognosis at the time of endoscopy also has an influence.

Table 1. Multivariate Analysis: Risk Factors for Developing Post-banding ulcer bleeding

Variable	OR (IC al 95%)	p
Child B	6.1 (1.2-30.2)	0.03
Child C	27.2 (5.7-129.8)	< 0.0001
Post-banding fibrosis	0.5 (0.2-1.2)	0.12
Presence of endoscopic signs of poor prognosis	9.5 (4.2-21.5)	< 0.0001
Placement of 5 or more bands per endoscopic session	0.7 (0.3-1.8)	0.48
Adjusted model: Binary logistic regression		

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