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Introduction and Objectives: Worldwide, cirrhosis secondary to the hepatitis C virus is the first indication for liver transplantation. In Mexico, alcohol abuse, viral hepatitis, and obesity are the highlighted causes. Hepatitis C virus (HCV) eradication leads to reduced morbidity, mortality and transmission. Hemodialysis users are a high-risk group with high prevalence of HCV. The aim of this study was to identify patients with liver damage in hemodialysis users and their relationship with viral hepatitis, diagnosis, and management.

Materials and Patients: We reviewed the electronic medical records of hemodialysis users from January 1, 2017, to December 31, 2019. All patients who underwent at least one hemodialysis procedure were included. We used descriptive statistics with the SPSS v21 program.

Results: We analyzed 362 patients, 57% of whom were men, with a mean age of 52. The most frequent etiology attributable to kidney damage was hypertension 96% and diabetes mellitus 59%. The mean time on hemodialysis was 19 months. The biochemical and serological characteristics of the group are show in Table 1. We found forty-seven patients with transaminasemia, of which thirteen had liver cirrhosis, evaluated by FIB4/APRI. A viral load was requested for hepatitis C in only one patient, with a positive result, who received treatment with glecaprevir/pibrentasvir for 12 weeks without complications. Retrospective review limits us in identifying the cause for which the patients did not undergo molecular tests for hepatitis B and C. These patients have significant depression of immunity with negative serology on the presence of viral replication “hidden infection.”

Conclusions: Hemodialysis users should be exhaustively studied, and molecular tests should be performed on suspicion of viral hepatitis.

Ethical statement

The protocol was registered and approved by the Ethics Committee. The identity of the patients is protected. Consentment was obtained.

Declaration of interests

None

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This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Table 1
Biochemical and serological characteristics of hemodialysis users

Variable	Without transaminasemia n=315	With transaminasemia n=47
Hemoglobin g/dL	9	9
Platelet K/μL	228	217
AST	23	74
ALT	25	70
Antibodies HBV, HCV (n)		
2017 y (32)	27	5
2018 y (101)	89	12
2019 y (229)	200	29

Footer: y (year)

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Epidemiology and demographic aspects in patients with acute on chronic liver failure in a third-level care hospital in Mexico.

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Introduction and Objectives: Patients presenting with acute on chronic liver failure (ACLF) is a syndrome characterized by acute decompensation of cirrhosis associated with failures of different organs as well as leading to high mortality in the short term, being its demographic and epidemiological characteristics important points to evaluate predictors of poor prognosis in this group of patients. This study aimed to characterize the demographic aspects of patients with acute on chronic in the Mexican population.

Materials and Patients: A retrospective, observational, descriptive and unicentric study was carried out, which included patients with a confirmed diagnosis of ACLF who had been hospitalized during the period from 2017 to 2022 in the gastroenterology service of Centro Médico Nacional Siglo XXI "Bernardo Sepulveda," IMSS.

Results: 186 patients were included, 95 women (51%) and 91 men (49%) being more prevalent in the range between 56-65 years 59 patients (32%). The most frequent etiology of cirrhosis was NAFLD (esteatohepatitisc not alcoholic) in 54 (29%) and ethylism in 42 (23%). A MELD of 31-35 predominated in 50 patients (27%) and a Child Pugh C in 163 patients (87%). The antecedent of at least one previous decompensation was found in 161 (85%), the most common being ascites in 141 (76%) followed by hepatic encephalopathy in 95 (51%). 25 patients (13%) had no previous decompensation. The infection was identified as precipitating in 111 (60%) and without precipitating factor identified in 21 (11%). The most frequently identified infectious focus was abdominal in 60 (36%) and urinary in 40 (24%). The most frequent isolated agent was *Escherichia coli* in 22 (12%). Hepatorenal syndrome was found in 12 patients (6%). At admission, grade I ACLF occurred in 37 (20%), grade II 72 (39%), grade III 77 (49%) with a predominant CLIF C between 51-60 points in 99 patients (53%) requiring an average of 8 days of hospitalization.

Conclusions: We found that the ACLF does not present gender predilection as being more frequent between 56-65 years. The main etiology of cirrhosis was NAFLD, the majority being found in Child-Pugh C. Most have a history of at least one decompensation, the most frequent being ascites. 13% debuted with ACLF as the first decompensation. The most common precipitant was infectious, with the abdominal focus manifested as PBE as the main one. The most common agent was *Escherichia coli.* At admission, ACLF grade III was the most common.

Ethical statement

The protocol was registered and approved by the Ethics Committee. The identity of the patients is protected. Consentment was obtained.

Declaration of interests

None

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Table 1. Baseline characteristics of patients with ACLF

Characteristics	No. patients	Percentage
Average age		
56 years		
Gender		
Female	95	51%
Male	91	49%
Etiology	No. patients	Percentage
Bile duct atresia	1	1%
CBP	13	7%
CBP/HAI	8	4%
CEP	5	3%
Portal cholangiopathy	1	1%
Alpha 1 antitrypsin deficiency	1	1%
NAFLD	54	29%
Wilson's disease	1	1%
Ethylism	42	23%
HAI	10	5%
Not determined	20	11%
HBV	4	2%
HCV	25	13%
HCV/CBP	1	1%
CLIF C ACLF		
71-80	4	2%
61-70	41	22%
51-60	99	53%
41-50	38	20%
31-40	4	2%
MELD		
51-55	2	1%
46-50	10	5%
41-45	20	11%
36-40	39	21%
31-35	50	27%
26-30	32	17%
21-25	26	14%
16-20	7	4%

CBP: Primary biliary cholangitis, AIH. Autoimmune hepatitis. CEP: Primary sclerosing cholangitis. NAFLD: Steatonepatitis not alcoholic. HCV: hepatitis C virus. HBV: hepatitis B virus. CLIF C ACLF: scale for mortality of acute on chronic liver failure. MELD: Model for end-stage liver disease

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CLIF-C-ACLF scale to predict mortality in pediatric patients with acute-on-chronic liver failure

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Introduction and Objectives: The acute decompensation of liver cirrhosis associated with organ failure is known as acute-on-chronic liver failure (ACLF); in pediatrics, it develops >22%, with mortality >33% per month; Based on prognosis, CLIF-C ACLF is a score with greater discriminative capacity to predict short-term mortality (25%) compared to already established scales, which require more complex variables. To describe the utility of the CLIF-C ACLF scale in pediatrics. Specific: In children with cirrhosis who developed ACLF: Describe the sociodemographic, clinical, and biochemical characteristics; Determine the MELD, PELD, Child Pugh, AARC and CLIF-C ACLF scales and compare their predictive value.

Materials and Patients: Retrospective cohort, age: 6 months to 18 years, temporality: March 2018 - February 2022. Frequency and percentage were reported for qualitative variables, and median variables and range for quantitative variables; Inferential with Pearson and Spearman correlation between the scales at admission, 28 and 90 days, an area under the receiver operating characteristics (AUROC) and Whitney U were calculated.

Results: Out of 95 cases with chronic liver disease, 63.1% presented ACLF, mostly stage II (35.3%). The female sex predominated (72.1%) and bile duct atresia was the most common entity (80%), with a mean age at diagnosis of 38 months and mortality of 55%. Ascites (97%) and hepatic encephalopathy (58.3%) were the main complications. The major precipitating factors described were infections (57.4%): bacterial cholangitis (16.2%) and pneumonia (8.8%). Through AUROC we compared CLIF cACLF with PELD, MELD, Child Pugh and AARC, observing greater statistical significance at 28 and 90 days (sensitivity: 0.63, specificity: 0.85) and through the U test, we observed that coagulopathy is the biochemical index with higher prediction for acute decompensation in ACLF.

Conclusions: CLIF-C ACLF compared to ACLF scores predicted increased risk of 28-day mortality (AUROC: 0.758) relative to PELD, MELD (AUROC: 0.721), Child Pugh (AUROC: 0.746), AARC (AUROC: 0.621), and at 90 days (AUROC: 0.663) with PELD, MELD (AUROC: 0.505), Child Pugh (AUROC: 0.598), AARC (AUROC: 0.357). We established a CLIF-C ACLF score $\geq$ 77.5 as a high predictor of mortality (95% CI). The scale is useful in pediatrics.

Ethical statement

The protocol was registered and approved by the Ethics Committee. The identity of the patients is protected. Consentment was obtained.

Declaration of interests

None

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