

Lactate/albumin ratio as an indicator of mortality in patients hospitalized with ACLF at the Juárez Hospital in Mexico.

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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. To determine the association between lactate/albumin ratio levels and mortality in patients with ACLF.

Materials and Patients: 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: 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.

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

Declaration of interests: None.

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Figure 1. Lactate/albumin ratio AUC.

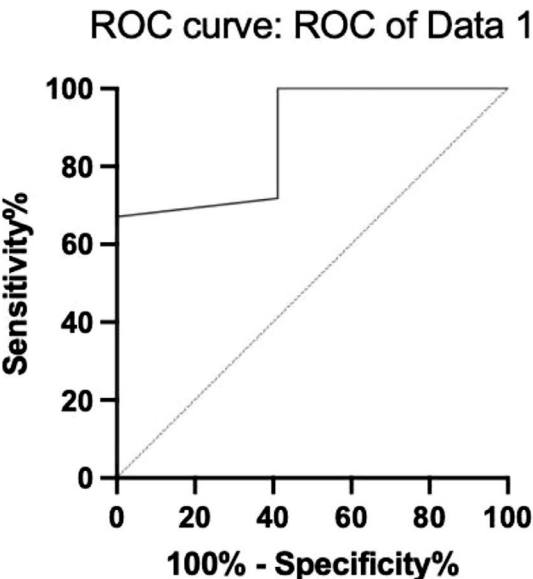


Table 1
Descriptive statistics of study population.

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%)

ACLF, acute-on-chronic liver failure;
MAFLD, metabolic dysfunction-associated fatty liver disease.

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Sarcopenia evaluated by phase angle is associated with complications and mortality Pre- and Post-Liver Transplantation

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Introduction and Objectives: Sarcopenia is a marker of poor prognosis in patients with cirrhosis. Evidence on the role of sarcopenia prior to liver transplantation (LT) and its impact on post-transplant outcomes remains limited. Phase Angle (PhA) is a nutritional marker that has been validated against CT scan for assessing sarcopenia in cirrhosis. We aimed to evaluate the association between phase angle and the development of complications and mortality before and after liver transplantation.

Materials and Patients: This was a retrospective cohort study conducted at a tertiary care center. Patients with cirrhosis of any etiology, being evaluated for liver transplant that had a phase angle measurement before LT were included. We excluded patients that were considered for LT for causes different from cirrhosis (polycystic liver disease, benign bile duct injury, acute liver failure, etc.). For statistical analysis descriptive statistics were used, along with ROC curves and Youden index, Kaplan-Meier survival analysis and Cox regression models were also applied.

Results: A total of 141 patients were included in the study, of which 55% were women, with a mean age of 53 ± 13 years. Mean phase angle was 4.5 ± 2.1, and the mean MELD Na score was 17 ± 7; most patients (45.4%) were classified as Child-Pugh C stage. The median follow-up period was 224 days (range 83-301). At least one hospitalization was required for 49.1% of patients, with a waiting list mortality rate of 35.7%, primarily due to septic shock (36.3%). Post liver transplant mortality was 13.8%. Complications were observed in 65.5% of patients, predominantly infections (25%). ROC curves indicated that a PhA < 3.8° was associated to an increased risk of hospitalization and infectious complications both before and after LT, with