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).

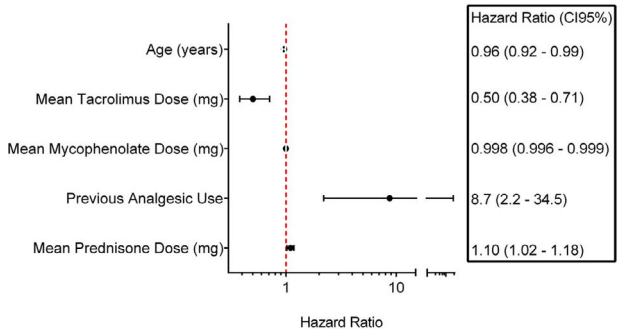
Results and Discussion: During the study period, 63 patients underwent transplantation; 60% (38) were men, and the median age was 60 (IQR 52-63) years. The incidence of rejection was 43% (27), of which 11 (17%) were biopsy-confirmed, and 6% (4) of the patients died during the first year.

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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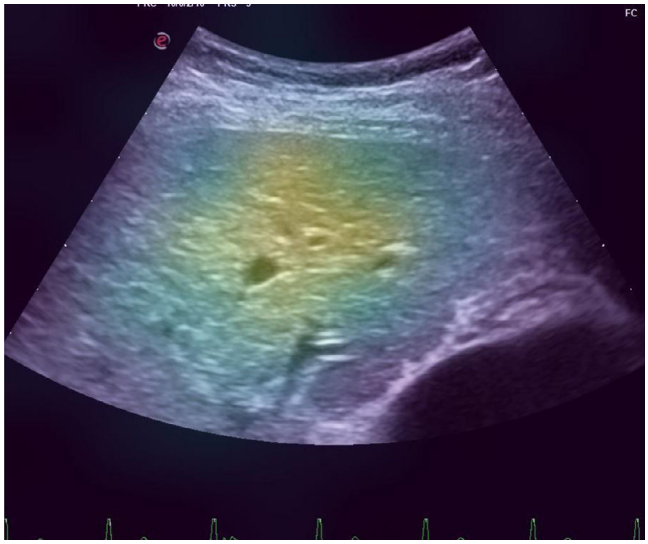
Conflict of interest: No

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).

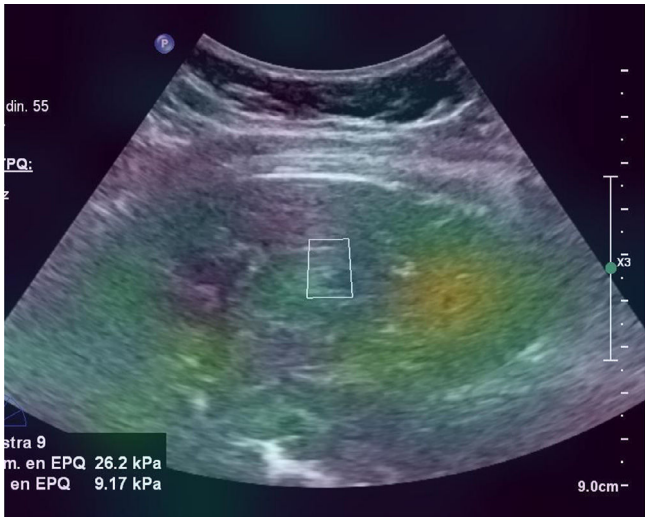
Patients / Materials and Methods: The dataset was composed of 1625 two-dimensional, ultrasound liver images annotated as cirrhotic (N=677) or not (N=948) captured from 165 individuals at Sanatorio Sagrado Corazon and Sanatorio de los Arcos, Buenos Aires, Argentina. We stochastically split the master 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

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

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