To assess one-year survival of LT patients over 60 years

**Materials and Patients:** Retrospective, observational, and analytical study of patients over 60 years who underwent LT, evaluating survival, cold ischemia time (CIT), hot ischemia time (HIT), and donor age (DA), compared with a group of patients under 60 years who underwent LT.

We evaluated survival over time in months with a follow-up at one year of recipients under 60 years and older than 60 using the Kaplan-Meier curve and the log-rank test, with a significant alpha level <0.05.

**Results:** A total of 81 patients were included: 51 under (44.33  $\pm$ 10.59) and 30 over 60 years (64.13  $\pm$ 3.30), 31 females (38.27%) 50 males (61.72%). Etiologies of cirrhosis: alcohol intake 30.86%, autoimmune diseases 24.69%, MALFD 11%, hepatocellular carcinoma 9.88%. CIT and HIT in under and over 60 years were 313.64  $\pm$ 97.69min and 29.91  $\pm$ 6.14min, and 307.39  $\pm$ 101.85min and 30.36  $\pm$ 7.57min, respectively. DA was 35.55  $\pm$ 14.33 years. Mortality rates were 11.76% (6/51) and 13.3% (4/30) in patients under and over 60 years, respectively, with a cumulative rate of 12.34% (10/81). The average survival in months was 12.27 (11.45–13.1, 95%CI) and 10.83 (9.6–12.0, 95%CI) in under and over 60 years, respectively. Comparison based on age was not statistically significant (log-rank test, Chi-square 1=0.742, p=0.389).

**Conclusions:** One year survival in geriatric patients after LT is equal to that of younger patients, indicating that age should not be a contraindication for LT.

#### **Ethical statement**

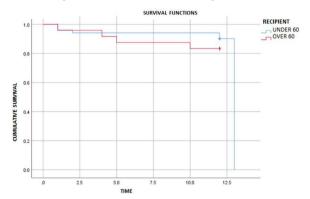
The protocol was registered and approved by the Ethics Committee. The identity of the patients is protected. Consentment was obtained.

#### Declaration of interests

None

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# Development of hepatic steatosis in liver transplant recipient patients.

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**Introduction and Objectives:** It has been reported that up to 39.7% of liver transplant recipients develop hepatic steatosis at some point during follow-up, with recurrence being more likely than de novo appearance. Specifically in patients previously known to have MAFLD, this condition is favored by the components of the metabolic syndrome (particularly being overweight), to which is added the use of immunosuppressive drugs. The objective is to determine the prevalence of hepatic steatosis by ultrasound in patients receiving liver transplants at the Hospital de Especialidades del Centro Médico Nacional La Raza.

**Materials and Patients:** In this study were included liver transplant recipients treated in the period from 2017 to 2023 who had a liver ultrasound at least six months after transplantation. The diagnosis of hepatic steatosis was established by an increase in the echogenicity of the liver parenchyma, which is equal to or exceeds the echogenicity of the pancreas.

**Results:** A sample of 40 patients was analyzed, 19 men (47.5%) and 21 women (52.5%), with age of  $52.05 \pm 10.49$  years. The most common causes of liver disease were hepatitis C virus infection (32.5%), MAFLD (17.5%), and autoimmune hepatitis (15%). The most frequent comorbidity was diabetes (20%)(Chart 1). Hepatic steatosis was found in 25% of cases (50% men and 50% women) (Graph 1). The most frequent etiology of liver disease in patients who developed steatosis was MAFLD (20%), while in those who did not develop steatosis it was HCV infection (40%), without statistical significance. When compared with patients without steatosis, there were no statistically significant differences in post-transplant weight and BMI (69.2 vs. 67.0 kg, p= 0.601; BMI 26.0 vs. 25.0, p=0.529) or pre-transplant MELD (14.3 vs. 16.4, p= 0.251)

**Conclusions:** In our study, the prevalence of steatosis found was similar to that reported by other authors. They have not evidenced statistically significant differences in age, gender, comorbidities, anthropometry, or etiology of cirrhosis. Patients need close monitoring to identify the development of this complication in a timely manner.

#### **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

## **Funding**

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

**Table 1**Characteristics of people who developed hepatic steatosis.

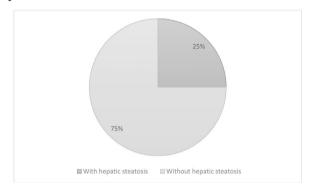
Variable	Patients who developed steatosis (%) n= 10 (24.3)	Patients who didn't develop steatosis (%) n= 31 (75.6)	p value
Sex			0.023
Male	8 (80)	12 (38.7)	
Female	2 (20	19 (61.2)	
Age	$52.4 \pm 12.3$	51.3±10.3	0.818
Comorbidities			
Diabetes	4 (40)	4 (12.9)	0.060
Hypertension	1 (10)	2 (6.4)	0.708
Hypothyroidism	0(0)	4 (12.9)	0.232
Etiology			0.192
MASLD	4 (40)	3 (9.6)	

(continued)

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Autoimmune	2 (20)	5 (13.8)	
hepatitis Primary biliar	1 (10)	2 (6.4)	
cholangitis	- ()	_ ()	
Primary sclerosing	0(0)	1 (3.2)	
cholangitis			
Ethylism	0 (0)	2 (6.4)	
Chronic hepatitis C	2 (20)	11 (35.4)	
virus infection			
AIH-PBC overlap	0(0)	4 (12.9)	
Polycystic disease	0(0)	3 (9.6)	
Cryptogenic	1 (10)	0(0)	
BMI pre-transplant	27.5±3.7	$24.0 \pm 3.1$	0.032
BMI pre-transplant			0.049
interpretation			
Low	0(0)	2 (6.4)	
Normal	3 (30)	19 (61.2)	
Overweight	4 (40)	2 (6.4)	
Class 1 obesity	3 (30)	1 (3.2)	
BMI post transplant	$27.6 \pm 3.7$	$24.8 \pm 2.9$	0.054
BMI post- trasplant			0.162
interpretation			
Low	0(0)	0(0)	
Normal	2 (20)	14 (45.1)	
Overweight	6 (60)	16 (51.6)	
Obesity	2 (20)	1 (3.2)	

MASLD, metabolic dysfunction-associated steatotic liver disease; AIH, autoimmune hepatitis; PBC, primary biliary colangitis; BMI, body mass index.



**Figure 1.** Prevalence of steatosis in patients receiving liver transplantation.

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# Observational Study of Biliary Duct stenosis in patients with Post-Liver Transplant

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**Introduction and Objectives:** Liver transplant is a surgical procedure indicated in terminal hepatic diseases or patients who fail any other type of treatment. Complications of liver transplant are stenosis of biliary tract, with an incidence of 5-25%, which influences both morbidity and mortality.

Nowadays, treatment has evolved with Endoscopic Retrograde Cholangiopancreatography (ERCP). This treatment consists of dilation, prothesis placement and stents.

The main objective of this study consists in describing the clinical characteristics, therapeutic strategies, results and impact in post-liver transplant patients with bile duct stenosis at the National Medical Center "20 de Noviembre".

**Materials and Patients:** In this retrospective observational study, a total of 39 post-liver transplant patients who presented bile duct stenosis complications were included, receiving endoscopic treatment from 2018 to 2023 with ERCP at the National Medical Center "20 de Noviembre".

**Results:** A total of 39 post-liver transplant patients with bile duct stenosis were included. The mean age was 49.8 years, with equal distribution between genders. The main causes of liver transplantation were autoimmune diseases (41%) and alcohol-induced liver cirrhosis (23%). The immunosuppressive treatment they received consisted of mycophenolate mofetil (MMF), tacrolimus, and prednisone in 92% of the cases. Regarding endoscopic procedures, a total of 163 ERCP were performed, an average of 4 per patient with prosthesis placement in 64%, mainly plastic (64%). Pneumatic dilation was the most used method (64%). The complication related to endoscopic procedure was cholangitis in 17.9%, without pancreatitis. Bile duct rehabilitation was successful in 64%. Three patients presented death, all related to graft rejection.

**Conclusions:** Bile duct stenosis is a significant complication in post-liver transplant patients, which must be treated individually. Bile duct rehabilitation was successful in more than half of the cases. That said, placement of prosthesis is the most effective strategy in these cases. However, additional research is required to identify success predictors and improve the management of post-transplant complications.

### **Ethical statement**

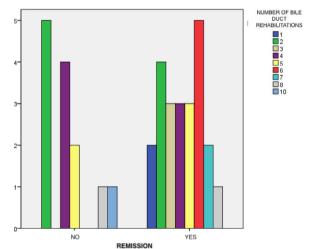
The protocol was registered and approved by the Ethics Committee. The identity of the patients is protected. Consentment was obtained.

## **Declaration of interests**

None

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**Figure 1.** Number of bile duct rehabilitiations and remission (N=39)

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