For the quantitative variables Student's t or Mann-Whitney U according to the distribution of the variables and to show the difference between the degree of hepatic encephalopathy on admission and after the infusion of l-ornithine l-aspartate, Wilcoxon was used.

**Results:** 72 patients with decompensated liver cirrhosis of any etiology were included, mostly Child-Pugh C functional class (56.9%), with a predominance of female sex (75%), and it was found that the most frequent triggering factor was constipation (22.2). %), followed by urinary tract infection (12.5%). Upon admission, the degree of encephalopathy was classified according to the West-Haven clinical scale of which grade II was the most prevalent, the single intravenous dose of L-ornithine, L-aspartate was effective with a significant response p< 0.05

**Conclusions:** The response to a single intravenous dose of 20 g of l-ornithine l-aspartate is effective for the treatment of hepatic encephalopathy, clinically manifesting in an acute episode.

**Ethical statement:** Risk-free research and approved by the ethics committee.

#### **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 patients with hepatic encephalopathy.

Age	59 (56.25 – 67.75)
Women	54 (75%)
Men	18 (25%)
Etiology	
BPC	19 (26.4%)
MASLD	19 (26.4%)
Alcohol	11 (15.3%)
Child-Pugh C	41 (56.9%)
MELD	20 points (18.25-29)
WHC severity scale	
Grade II	35 (48.6%)
Grade III	31 (43.1%)
Grade IV	6 (8.3%)
Precipitanting factors	
Constipation	16 (22.2%)
UVI	9 (12.5%)
Unidentified	9 (12.5%)

BPC, Primary Biliary Cirrhosis; MASLD, Metabolic dysfunction—associated steatotic liver disease; UVI, Urinary Tract Infection

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## Glycogen storage disease, an uncommon cause of portal hypertension in adulthood.

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**Introduction and Objectives:** Glycogen storage diseases are inborn errors of metabolism, with an estimated incidence of 1 in 10,000. Type IV represents 3% of this diseases (GBE1 gene 3p14

involvement), presenting with varied clinical features, including a milder form of hepatic involvement, with hepatic integrity described up to 19 years of age.

**Materials and Patients:** We present a 22-year-old woman with a history of low weight since childhood, she presented episodes of hematemesis and melena, and she underwent panendoscopy, documenting esophageal varices requiring variceal ligation. Extensive studies demonstrated indirect signs of portal hypertension, partial portal vein thrombosis, and multiple liver lesions, located in segments V, VI and VII, with an irregular heterogeneous morphology, partially defined borders, with a peripheral hypodense halo, the hyperdense center even in simple and porta phases, with the largest lesion being  $8.2 \times 7.8 \times 8.1$  cm. A defect in the filling of the left branch of the portal vein was identified, as well as compression of the right branch due to mass effect. Differential diagnoses included cholangiocarcinoma, hepatocellular carcinoma, and hepatic tuberculosis.

**Results:** Infectious-viral or autoimmune etiologies were ruled out through investigation. Percutaneous liver biopsy guided by ultrasound was performed. The histopathological report showed morphological findings suggestive of metabolic deposit disease. Tiny intracytoplasmic granules, PAS positive, F2 fibrosis on the metavir scale (Masson's trichrome staining); all of these findings consistent with glycogen storage disease type IV (branching enzyme deficiency) with non-progressive hepatic subtype was reached. Based on the history and evolution of the patient she was at the advanced stage of the disease with evidence of fibrosis and portal hypertension. She presented a torpid clinical course, with poor oral tolerance, we identified she had cardiomyopathy with left ventricular hypertrophy, manifesting with cardiac arrhythmia, managed with medical treatment.

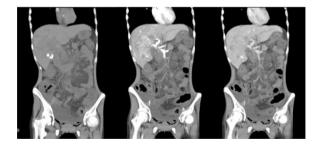
This was a challenging case, as the diagnosis was made at an advanced stage of the disease, with multiple complications, limiting the prognosis and therapeutic options for the patient. She was referred to the genetics service for further evaluation.

**Conclusions:** We present a clinical case of a challenging diagnosis, due to the multiple clinical expressions and variants of glycogen storage disease. It can primarily affect the liver, heart, and neuromuscular system, according to enzymatic deficiency, with milder phenotypes having residual enzymatic activity.

**Ethical statement:** The patient's identity is protected.

**Declaration of interests:** None.

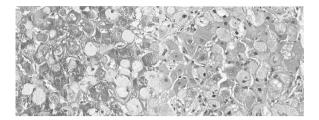
**Funding:** This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.



**Figure 1.** Triphasic abdominal CT scan. Liver, enlarged with multiple lesions located in segments V, VI, and VII, with defined borders, heterogeneous, with peripheral hypodense halo, hyperdense center in all phases, more pronounced in the arterial phase. Left branch of the portal vein, with filling defect attached to the wall, and right branch with decreased caliber.

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**Figure 2.** Microphotographs at 40X in H&E and PAS of lobular parenchyma with hepatocytes showing broad, granular cytoplasm, foamy appearance, standing out among normal hepatocytes.

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## Clinical outcomes in patients with hepatitis A virus infection in a tertiary center: retrospective cohort 2022-2024.

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**Introduction and Objectives:** In Mexico, the incidence rate of hepatitis A virus (HAV) infection is 3.11/100,000 person/year. 70% of adults develop symptoms, representing 3% of cases of acute liver failure (ALF). This study aimed to evaluate the clinical outcomes obtained in our institution.

**Materials and Patients:** It is a retrospective, observational cohort study, which included all patients over 18 years of age hospitalized from March 2022 to April 2024. 16 patients with a confirmed diagnosis of HAV infection (IGM) who required hospital management in the Centro Medico Nacional 20 de Noviembre ISSSTE were included. All patients who did not have a confirmatory serological test were excluded. The SPSS v.24 program was used for statistical analysis, using frequencies and percentages for reporting the data.

**Results:** Of the total of 16 cases included, 31.3% (5) patients were women, and 68.8% (11) were men, with an average age of 35 years old (19-47). The comorbidities they presented were: type 2 diabetes in 18.8% (3), systemic arterial hypertension in 6.3% (1), rheumatoid arthritis in 6.3% (1). Among the clinical manifestations they presented during the evolution were the following: hepatic encephalopathy 31.3% (5), abdominal pain 62.5% (10), fever 3.1% (8), vomiting 3.5% (9), diarrhea 1.6% (4). Of our studied population, 25.0% (4) patients developed acute liver failure requiring attention in the intensive care unit, where they received adjuvant treatment based on n-acetylcysteine and renal replacement therapy. The remaining patients presented alarm symptoms 75.0% (12) without developing liver failure. The mortality reported in our population was 18.8% (3).

**Conclusions:** The observed mortality was 18.8% (3) of the total included, higher than that reported worldwide. In recent years, an epidemiological transition has been seen in patients with FHA. Among the factors that increased mortality were serious infections, hydroelectrolytic alterations, and limiting the transplant protocol.

**Ethical statement:** This study follows the ethical principles of clinical research; no intervention was performed on patients and the information is obtained from the clinical record.

### **Declaration of interests:** None.

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### Sarcopenia in patients with liver cirrhosis according to hepatic functional reserve

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**Introduction and Objectives:** Computed tomography (CT) is one of the most used and validated methods for the non-invasive diagnosis of sarcopenia; its measurement is not affected by the presence of obesity or ascites. The objective of the study was to know the frequency of sarcopenia in patients with liver cirrhosis with different degrees of liver reserve.

**Materials and Patients:** Patients who underwent liver function tests and an abdominal CT were included. The Child-Pugh index (CP) was obtained, and the skeletal muscle index (SMI) was calculated from the measurement of the cross-sectional area of the psoas muscle at the level of the third lumbar vertebra and normalized by the height of the patients (reference values for sarcopenia (Men <50cm2/m2; women <39cm2/m2).

**Results:** 110 patients were included (75 women and 35 men) with an average age of  $54\pm11$  years, in CP A (n=21), CP B (n=53), and CP C (n=36); with a history of non-alcoholic fatty liver disease (n=36), hepatitis C virus infection (n=19), primary biliary cholangitis (n=15), excessive alcohol consumption (n=10), and other etiologies (n=30). The SMI was significantly higher in Child-Pugh A patients (48.15 $\pm$ 9 cm2/m2) compared to Child-Pugh B (44.19 $\pm$ 9 cm2/m2) and Child-Pugh C (41.20 $\pm$ 7 cm2/m2) patients. The frequency of sarcopenia was 59% (CP A: 33.3%; CP B: 43.4%; CB C: 66.6%).

**Conclusions:** The results of the study confirm that sarcopenia is common in patients with liver cirrhosis and increases as liver reserve deteriorates.

**Ethical Statement:** Approval for the study was obtained from the local ethics committee (R 2022-3601-239).

**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.

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# Metabolic reprogramming induced by fructose promotes therapys failure in liver cancer cells *in vitro* and *in vivo*.

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