

Prevalence of polypharmacy in patients with a diagnosis of liver cirrhosis treated in the Gastroenterology service of the La Raza National Medical Center

Martín Rivera-Huizar¹, Javier I. Carrillo-Rojas¹,
Francisca Martinez-Silva¹

¹ Gastroenterology, Specialty Hospital, La Raza
National Medical Center, Mexico

Introduction and Objectives: The need for multiple drugs to treat the complications associated with liver cirrhosis, as well as its comorbidities, places patients with chronic liver disease at high risk of polypharmacy with the possible use of unnecessary drugs and drug interactions. We propose to evaluate the prevalence of polypharmacy in patients with liver cirrhosis in our unit.

Materials and Patients: In a descriptive, observational, retrospective study with the aim of evaluating men and women with a diagnosis of liver cirrhosis in follow-up by the gastroenterology service of the Hospital de Especialidades del CMN la Raza in the year 2023.

The prevalence of polypharmacy will be evaluated, taking as the definition established by the World Health Organization as the consumption of 5 or more drugs.

Drug interactions will be recorded and evaluated using the Lexi-comp-online formulary tool, classifying them as X (said drug should be avoided), D (consider modification of therapy), C (requires therapy monitoring), B (no action required) A (no known interaction).

For qualitative variables, descriptive statistics will be used through measures of central tendency and measures of dispersion. To know the association between these variables, it will be evaluated using Pearson correlation and to know the level of association between variables, it will be evaluated with cross tables and Chi square. The analysis will be carried out through the SPSS25 program.

Results: A total of 100 patients were recruited, of which 35% were men and 65% were women, the average age was 57 years, the most frequent etiological entity associated with liver cirrhosis was MASLD, representing 45%, followed by 18% by primary biliary cholangitis and in third place chronic HCV infection with 13%. Among the most frequent comorbidities is type 2 diabetes (48%), followed by systemic arterial hypertension (32%), and hypothyroidism (18%). The classification of liver dysfunction found a predominance of Child Pugh B with 49%. The diagnosis of polypharmacy (use of more than 5 drugs) had a prevalence of 44%. The analysis of probable pharmacological interactions found a percentage of D and C interaction of 18% and 60%, with no X or A interactions reported.

Through Chi square analysis, no association was found between MASLD etiology and polypharmacy. By degree of liver dysfunction, an association was found between the Child Pugh C classification and polypharmacy with a P value of 0.002 and a relative risk of 6.25 (CI 1.73-25.27). The association between drug interactions D, and C were associated with polypharmacy with a statistically significant P with a RR of 9.1 and 9.7 respectively.

Conclusions: The prevalence of polypharmacy in our population was higher than that reported in the international literature, placing patients with liver cirrhosis at high risk of adverse effects and drug interactions, with up to 60% reported in our population with classification D. This should prompt a thorough review of the drugs consumed as well as close monitoring.

Ethical statement: This project has been carried out based on the ethical principles for medical research on human beings, in accordance with the Declaration of Helsinki of the World Medical Association, protecting the personal information of the participants in this research, protecting the information obtained through the clinical record as well as the results of the present study.

This observational, descriptive and retrospective study is classified as risk-free based on the Regulations of the General Health Law on research, so it does not require informed consent.

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.

Age Mean (years)		Standard deviation	
57		12.04	
Gender	Count	N (%)	
Male	35	35%	
Female	65	65%	
Etiology			
Etiology	Count	N (%)	
Hepatitis C chronic infection	13	13%	
MASLD	45	45%	
Biliary primary colangitis	18	18%	
Alcohol abuse disorder	9	9%	
Hepatitis autoimmune	5	5%	
AIH-PBC overlap síndrome	6	6%	
Primary sclerosin colangitis	1	1%	
Cryptogenic	3	3%	
Comorbidities	Count	N (%)	
Type 2 Diabetes	48	48%	
Hypertension	32	32%	
Hypothyroidism	18	18%	
Chronic kidney disease	9	9%	
Liver dysfunction for Child Pugh			
	Count	N (%)	
Child Pugh A	36	36%	
Child Pugh B	49	49%	
Child Pugh C	15	15%	
MELD			
Mean	15	Standard deviation	
		6.6	
Farmacology interactions			
Classification		N (%)	
D		18%	
C		60%	
B		2%	
Association with polypharmacy			
Variable	RR	CI	P
MASLD	0.744	0.3-1.65	0.46
Child Pugh A	0.22	0.88-0.56	0.001
Child Pugh B	1.48	0.67-3.29	0.325
Child Pugh C	6.6	1.73-25	0.002
Association with type D interactions			
Polifarmacia	9.1	2.4-30	0.001

<https://doi.org/10.1016/j.aohep.2025.101812>

Acute Liver Failure Triggered by Idiosyncratic Drug-Induced Liver Injury Associated with Ibuprofen Consumption. Case Report.

Luis R. Alvarez-Martín¹, Luis A. Esquivel-Pacheco¹,
Alexis V. Hinojosa-Pezo¹, Karla J. Arroyo-García¹,
Montserrat D. Moreno-Huesca²,
Adrian Z. Feria-Avendaño³, Carlos A. Galván-Castro⁴

¹ Internal Medicine: High Specialty Regional Hospital
Yucatán, Mexico

² Internal Medicine: High Specialty Medical Unit "Lic.
Ignacio García Téllez" IMSS, Mexico

³ Internal Medicine: Regional General Hospital 12,
IMSS, Mexico

⁴ Gastroenterology Department: High Specialty
Regional Hospital Yucatán, Mexico

Introduction and Objectives: Drug-induced liver injury (DILI) refers to hepatic function alterations associated with drugs. The idiosyncratic form can progress from remission to acute liver failure (ALF).

The objective is to present the case of a patient with ALF secondary to idiosyncratic DILI due to ibuprofen consumption.

Materials and Patients: A 43-year-old woman with no history of alcohol, herbal, or drug consumption. She presented with asthenia, adynamia, and unquantified fever, self-medicating with ibuprofen 1.2 g/day. Subsequently, she developed right hypochondrium pain and generalized jaundice without discontinuing ibuprofen. Four weeks after the onset of symptoms, she developed choloria, acholia, and hyporexia, with laboratory findings showing mild thrombocytopenia (platelets 109,000 u/L), transaminasemia (aspartate aminotransferase 890 U/l, alanine aminotransferase 1183 U/l, alkaline phosphatase 311 U/l), direct hyperbilirubinemia (total bilirubin: 7.8 mg/dl, direct: 6.8 mg/dl), and prolonged prothrombin time. Hepatotrophic virus and HIV infections were ruled out, as well as autoimmune liver diseases. Hepatic ultrasound showed a starry sky pattern and splenomegaly. Magnetic resonance cholangiopancreatography revealed only hepatosplenomegaly. Liver biopsy showed intense inflammation with polymorphonuclear and lymphocytic infiltrate, total acinar involvement, cholestasis, and hepatocellular necrosis, compatible with acute severe hepatitis and accentuated cholestasis probably secondary to DILI. Management with urso-deoxycholic acid and prednisone (50 mg/day) was initiated without improvement, with a torpid evolution due to the development of hepatic encephalopathy, coagulopathy, and upper gastrointestinal bleeding.

Results: DILI has an estimated annual incidence of 2.5 cases/100,000 inhabitants, considered a diagnosis of exclusion, with complementary studies useful to increase diagnostic suspicion. In this context, the R factor should be calculated to characterize the type of liver injury. Liver biopsy is useful and shows three patterns: necroinflammatory, cholestatic, and mixed. Idiosyncratic reactions occur in susceptible individuals, are dose-independent, and mostly occur 5-90 days after drug intake. Ibuprofen is associated with a mixed pattern in this presentation. DILI is one of the main causes of ALF, defined by the appearance of hepatic encephalopathy between 7-28 days after the onset of jaundice, with coagulopathy and moderate elevation of transaminases and bilirubin. In this case, a woman with no history of liver disease, recent ibuprofen intake, and acute liver damage was observed. During her evaluation, alcoholic, infectious, and autoimmune pathologies were ruled out, revealing a mixed pattern of liver injury (necroinflammatory and cholestatic) on imaging and histopathological studies. In patients with ALF secondary to DILI, early liver transplantation should be considered due to the high risk of irreversible damage and complications.

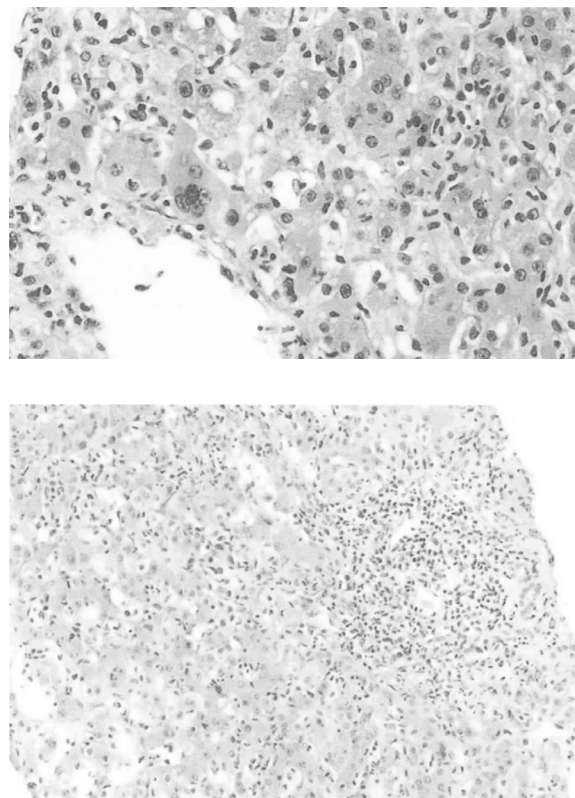
Conclusions: In patients with recent-onset liver failure, it is essential to rule out recent drug intake that may cause DILI to detect it early and initiate timely supportive management, considering liver transplantation due to the high risk of associated complications.

Ethical Statement: This case report has been prepared following the highest ethical standards and respecting the principles of integrity and transparency. All relevant ethical guidelines have been followed, ensuring the privacy and confidentiality of the individuals involved.

Conflict of Interest: None.

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

Figure 1. Liver biopsy from the patient



Giant cells, cholestasis, Kupffer cells and hepatocellular necrosis were identified

<https://doi.org/10.1016/j.aohep.2025.101813>

Acute Liver Failure: Cohort of patients treated at the La Raza National Medical Center Specialty Hospital.

Karenn Garcia-Campos, Francisca Martinez-Silva

Gastroenterology Service, "Antonio Fraga Mouret" Specialty Hospital, La Raza National Medical Center, Mexico

Introduction and Objectives: Identify the clinical, biochemical behavior, complications and mortality of patients with acute liver failure admitted to the hospital.

Materials and Patients: A descriptive, cross-sectional and retrospective observational study was carried out on all patients who entered the gastroenterology service of the CMN La Raza Specialty Hospital from April 2022 to April 2024 with a diagnosis of Acute Liver Failure. Information was taken from the electronic medical, radiological and laboratory care records. Taking demographic data, clinical and biochemical behavior of the patients, the presence of complications, comorbidities and the outcome. The results were analyzed using measures of central tendency to obtain percentages and arithmetic mean.