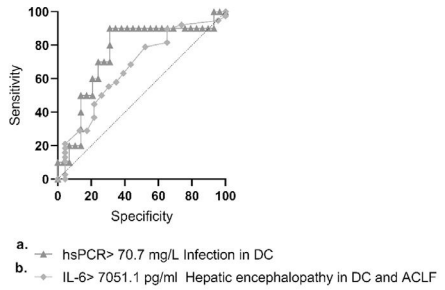
taxonomy (at the level of bacterial family and genera) at 7 and 90 days of patients who died, compared to those who did not die. The bars represent the log-fold change (LFC) between both groups. The blue bars indicate the characteristic taxa of the group that died, while the brown bars represent the survivor group. A cut-off of $p<0.05$ and $q<0.05$ was used. Analyzed by means of ANCOM-BC algorithm (Analysis of Compositions of Microbiomes with Bias Correction).



	AUROC	p	Sensitivity (%)	Specificity (%)
Infection in DC (hsPCR>70.7 mg/L)	0.75	0.009	90	68.97
HE in DC and ACLF (IL-6>7051.17 pg/ml)	0.67	0.014	81.4	45.8

Figure 2. ***High-sensitivity C-reactive protein (hs-CRP) and interleukin 6 (IL-6): biomarkers associated with bacterial infections and the presence of hepatic encephalopathy.*** a) ROC curve of hs-CRP, which demonstrates the prediction of bacterial infections in patients with decompensated cirrhosis without ACLF (cut-off point >70.7 mg/L (AUROC: 0.75, with 90% sensitivity and 68.9% specificity); b) ROC curve of IL-6, that demonstrates the prediction of hepatic encephalopathy in patients with decompensated cirrhosis with ACLF and without ACLF (cut-off point >7051.1 pg/ml (AUROC: 0.67, with 81.4% sensitivity and 45.8% specificity).

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IGFBPs in chronic liver diseases: Are they potential biomarkers?

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Introduction and objectives: Liver diseases are caused by alcohol consumption, Hepatitis C virus, and metabolic dysfunction. There are few studies on insulin-like growth factor binding proteins (IGFBPs), also IGFBP-1 being involved in regulating glucose and lipid metabolism but its relation with liver diseases has not been fully clarified yet. To evaluate serum levels of IGFBPs 1,2,3 and 7 in subjects with alcoholic liver cirrhosis, alcoholic hepatitis, chronic hepatitis C, and Metabolic Dysfunction-Associated Steatotic Liver Disease.

Materials and patients: Prospective, cross-sectional, and multicenter study; approved by the research and ethics commission at UNAM, and the Hospital General de México, which included subjects with clinical and biochemical data of alcohol-related liver damage, defining two groups: alcoholic liver cirrhosis (OHCi) and alcoholic hepatitis (AH). Another group with Metabolic Dysfunction-Associated Steatotic Liver Disease (MASLD). The last group was defined with a diagnosis of chronic hepatitis C (HepC). FibroScan Testing, and/or Fibrotest were realized. All study groups were compared with healthy subjects called the control group (CT). IGFBPs were quantified in serum using a multiplex suspension array. The data were analyzed and compared between groups. For statistical analysis, Kruskal-Wallis and Mann-Whitney U tests were used.

Results: The serum concentrations of IGFBPs 1, 2, and 7 in Hepatitis C were elevated compared to all groups. In the case of HA, IGFBP-2, 3, and 7 decreased compared to the CT group, while IGFBP-1 was higher compared to CT. For IGFBP-3, all groups were decreased compared to the CT group. In the MASLD and CiOH groups, low concentrations of IGFBPs 1, 2, 3, and 7 were observed when compared with HepC, AH, and CT groups.

Conclusions: The serum levels of IGFBPs highlight have the relevance in the diverse liver diseases, it's evident in Hepatitis C are synthesized in higher concentration, while in MASLD and alcohol-related liver disease the concentration is lower, these proteins can be used as differential serum markers in liver diseases. It's necessary to conduct studies that would allow us to find new mechanisms involved in lipid metabolism and its relationship with liver disease.

Ethical statement: The protocol was approved by the Ethics and Research Committees of the "Dr. Eduardo Liceaga" General Hospital of Mexico (HG/DI/16/107/03/082), and the Faculty of Medicine of UNAM (FMD/DI/15/2015).

Declaration of interests: None.

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Clinical and epidemiologic characteristics of pregnant women with liver disease in a tertiary hospital.

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Introduction and Objectives: It has been demonstrated that approximately 3% of pregnant women are affected by some type of liver disorder. The aim of this study is to determine the clinical and epidemiological characteristics of pregnant patients who developed liver disease during their pregnancy or liver pathology unrelated to pregnancy.

Materials and Patients: The study is a retrospective and observational analysis of a cohort composed of 72 pregnant women

diagnosed with liver pathologies. These patients were seen in the gynecology and obstetrics service of the Hospital General de México between January 2023 and May 2024. The selection of the participants was based on their admission during the aforementioned period and the presence of a diagnosis of liver disease associated with pregnancy or under investigation. Data collection was carried out using forms designed for this purpose, through the review of the patients' clinical records, which classifies the source of information as secondary. Data analysis was performed using SPSS statistical software version 23. A descriptive approach was used for the analysis, presenting qualitative variables in terms of frequency and percentage, while measures of central tendency, such as mean and standard deviation, were calculated for quantitative variables.

Results: Data were collected from 72 files of pregnant patients who developed liver disease during pregnancy or liver pathology unrelated to pregnancy. The average age was 28.36, 28.36+-6.96 (26.75-29.97). 66.7% were multipregnant and 31.9% were primigravida. Regarding associated comorbidities, 59.7% did not present any comorbidity, while 40.3% presented some comorbidity, with subclinical hypothyroidism being the most frequent at 9.7%. Regarding nutritional status, 40.3% were obese, 6.9% overweight, and 27.8% normal weight. In the viral panel, 30.6% were non-reactive for HAV, HBV, and HCV, and up to 65.3% were not tested. Imaging studies showed the absence of intra- and extra-hepatic duct dilatation in 25%, on the other hand, 31.1% did not undergo imaging studies. The 87.5% presented some pathology related to pregnancy, the main ones being intrahepatic cholestasis (30.6%), preeclampsia with severe features (27.8%), HELLP syndrome (18.1%), and only 13.9% pathologies not related to pregnancy, the main ones being metabolic hepatic steatosis (5.6%) and viral hepatitis (2.8%).

Conclusions: In our study, liver pathology in pregnant women has similar characteristics to those reported in the world literature, with those related to pregnancy predominating over pre-existing pathologies. It should be emphasized that all pregnant women should be approached for such pathology and thus avoid complications in both mother and child.

Ethical statement: The research was conducted in accordance with the Helsinki Declaration (2013 revision).

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.

Characteristics	n=72		%
Sociodemographic			
Mean age (in years) (± SD)		28	7
Occupation	Unemployed	64	88.9
	Employee	8	11.1
Scholarship	primary	1	1.4
	Secondary	31	43.1
	Superior	40	55.6
Civil status	With partner	57	79.1
	Single	15	20.8
Comorbidities			
Subclinical hypothyroidism		6	9.7
Gestational diabetes		4	5.6
Gestational hypertension		6	8.3
Subclinical hypothyroidism + gestational diabetes		5	6.9
None		43	59.7
Nutritional condition			
Malnutrition		17	23.6
Overweight		5	6.9
Obesity		3. 4	47.2
Normal weight		5	27.8
Deeds			
Multiple pregnancies		48	66.7
First pregnancy		23	31.9
viral panel			
VHA		2	2.8
HCV		1	1.4
Non-reactive to HAV, HBV, HCV		22	30.6
Not performed		47	65.3
Image study			
Without dilation of the intra- and extra-hepatic pathway		18	25.0
Reactive cholecystitis without signs of exacerbation, without bile duct dilation		3	9.7
Not performed		31	43.1
Pathologies related to pregnancy n= 63 87. 5 %			
Hyperemesis gravidarum		6	8.3
intrahepatic cholestasis		22	30.6
Pre-eclampsia with severity data		20	27 . 8
Hellp syndrome		1 3	18.1
Eclampsia		1	1.4
Pregnancy fatty liver		1	1.4
Pathologies not related to pregnancy n=9 12.5%			
Hepatic cirrhosis		1	1.4
viral hepatitis		2	2.8
Probable autoimmune liver disease		1	1.4
Metabolic hepatic steatosis		4	5.6
Polycystic liver disease		1	1.4

DM, Diabetes mellitus; HAV, Hepatitis A virus; HBV, Hepatitis B virus; HCV, Hepatitis C virus.

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Chronic Administration of DEN and 2-AAF for 13 and 18 weeks in Wistar Rats Leads to Progress of Hepatocarcinogenesis

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Introduction and Objectives: Induction of hepatocellular carcinoma by administration of the agents diethylnitrosamine (DEN) and N-(2-Fluorenyl) acetamide (2-AAF) in murine animals, is a model to study liver cancer. The objective was to evaluate the alterations triggered by the chronic administration of DEN and 2-AAF during 13 and 18 weeks (wks.) in Wistar rats.

Materials and Patients: Male Wistar rats (180-200 g) were organized in groups: a) Control 18 wks. (18-wk Ctl; n=6); b) Damage 18 wks. (18-wk Dmg; n=8), c) Control 13 weeks. (13-wk Ctl; n=5), and d) Damage 13 wks. (13-wk Dmg; n=6). The 13- and 18-wk Dmg groups were weekly treated with i.p DEN (50 mg/Kg) on day one and with i. g. 2-AAF (25 mg/Kg) on day three; the treatment (Tx) was maintained over 13 and 18 weeks, respectively. Then, livers and serum were collected for histological, serum biochemistry, and gene expression analyses. Statistical test Student's t-tests or Kruskal-Wallis and