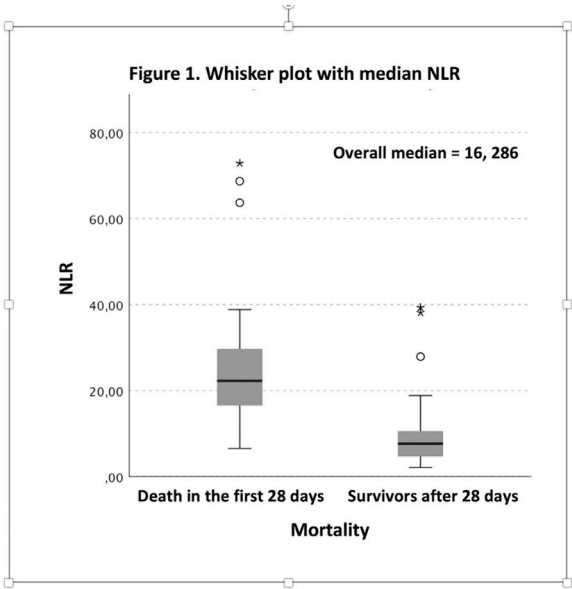


Table 1
Comparison of clinical data and severity scales between surviving and non-surviving subjects at 28 days.

Variable	Death in the first 28 days (n=33)	Survivors after 28 days (n=25)	p
Age	46.0 ± 8.7	41.8 ± 10.1	0.094
Leukocytes	21.6 (15.0, 29.6)	9.6 (7.7, 13.2)	< 0.001
Platelets	168.9 ± 97.1	138.8 ± 91.9	0.234
PT	23.0 (19.1, 28.6)	22.2 (17.9, 25.7)	0.236
BT	24.4 ± 9.3	15.0 ± 10.1	< 0.001
INR	2.00 (1.79, 2.70)	1.94 (1.50, 2.27)	0.118
Cr	2.16 (1.30, 3.19)	1.30 (0.82, 2.09)	0.007
NLR	23.0 (18.0, 34.0)	8.0 (5.0, 11.0)	< 0.001
CLIF SCORE	56.18 ± 6.28	46.88 ± 6.35	< 0.001
MADDREY	71.3 (55.3, 99.1)	65.6 (33.4, 74.5)	0.059
MELD	35.7 ± 12.5	25.0 ± 8.6	< 0.001
MELD NA	39.2 ± 15.8	29.7 ± 13.8	0.021

BT, Total bilirubin; CLIF SCORE, Chronic Liver Failure score; Cr, Creatinine; INR, International Normalized Ratio; MADDREY, Maddrey's discriminant function; MELD, Model for End-Stage Liver Disease; MELD NA, MELD sodium; NLR, Neutrophil-lymphocyte ratio; PT, Prothrombin Time.



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Importance of the profile of inflammatory and anti-inflammatory cytokines in patients with Hepatitis C according to degrees of fibrosis.

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Introduction and Objectives: The cure for chronic Hepatitis C (HCV) is a milestone for humanity, however, patients could still progress toward hepatocellular carcinoma even after receiving direct-acting antiviral treatment [1]. Therefore, determining the inflammatory (IFN- γ , TNF- α), and anti-inflammatory (IL-10- IL-1RA) profiles in patients with different degree of liver fibrosis are the important aim in researching of new biomarkers.

Materials and Methods: Prospective, cross-sectional and multicenter study; approved through the ethics committee of the UNAM, and the Hospital General de Mexico, patients with chronic Hepatitis C (CHC), and healthy subjects (control group) were included. A personalized survey of chronic and recent pathologies, as well as alcohol consumption, was performed in all the subjects. Biochemical and hematological laboratory test were performed, including Fibroscan and/or Fibrotest to determinate the degree of fibrosis. In addition, the cytokine profile (IFN- γ , TNF- α , IL-10 and IL-1RA) was quantified in the serum by multiple suspension array. The data was analyzed by Kruskal-Wallis, Mann-Whitney U and ANOVA statistical tests by SPSS v.22 software, considering $p > 0.05$

Results: A total of 180 CT subjects were included; whereas 90 patients with CHC with different grades of fibrosis: F0=20, F1=15, F2=15, F3=16 and F4=24, were enrolled. As has been studied, Hepatitis C Virus inhibits the activity of IFN- γ , despite of this, its concentration has been controversial in different populations. In our population, the levels were low with the exception for F2 ($p < 0.01$). Another important factor of inflammation is TNF- α , which was found increased in all stages: F0-F4 and in F2 up to 6 times more than the CT and F4 groups ($p < 0.001$). When analyzing the results of anti-inflammatory cytokines; the highest concentration of IL-10 was observed in F2 (increased up to 7 times) ($p < 0.001$), while for IL-1RA in F2 it was found to be increased up to 10 times more than in F1 and F3 ($p < 0.05$); what it shows that in F2 the inflammatory/anti-inflammatory microenvironment at the peripheral level has more activity. On the other hand, the highest concentration of IL-1RA was observed in F4, which may be actively participating in the repair due to decreased mediators of inflammation.

Conclusions: The F2 stage is an important turning point, indicating a shift in the microenvironment due to the accumulation of the extracellular matrix, making it clear the importance of measuring inflammation at intermediate stages of fibrosis, which would allow for impacting the limitation of the hepatic fibrogenic process.

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

Declaration of interest: None.

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Nopal and Pirfenidone Ameliorate Epididymal Fat Weight and Anthropometric Parameters in a Mouse Obesity Model with Diethylnitrosamine

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Introduction and Objectives: Obesity is associated with liver diseases. Mexico has a high prevalence of obesity and metabolic

dysfunction-associated steatotic liver disease (MASLD). Nopal and Pirfenidone (PFD) increase insulin signaling and decrease hepatic steatosis in obese mice. We investigated PFD and nopal on anthropometric parameters in obese mice and with diethylnitrosamine (DEN).

Materials and Methods: Five-six-week-old male C57BL/6J mice were treated with a single dose of DEN (25 mg/kg) and fed with a high fat diet (HFD, 60 kcal% from fat: D12492) for 16 weeks. Animals were provided ad libitum access to food and water. The mice were randomly divided into eight groups (n=5 for each group): normal diet (ND), ND plus DEN (ND+DEN), HFD, HFD plus DEN (HFD+DEN), HFD plus DEN plus supplements (cellulose, maltodextrin, and casein; HFD+DEN+SUPPL), HFD plus DEN plus nopal (HFD+DEN+NOP), HFD plus DEN plus PFD (HFD+DEN+PFD), and HFD plus DEN plus NOP plus PFD (HFD+DEN+NOP+PFD). Freeze-dried nopal in fine powder (7%) were mixed with HFD and PFD (300 mg/kg/day) also were mixed with HFD. PFD dosage was adjusted according to body weight and mixed with the diets three times a week. Food intake was measured three times a week, and measurement of body weight each week. Experiments were done according to ARRIVE guidelines. Statistical significance of anthropometric data was determined for parametric data with one-way ANOVA analysis of variance followed by Tukey's post hoc analysis, statistical analyses were performed using SPSS.

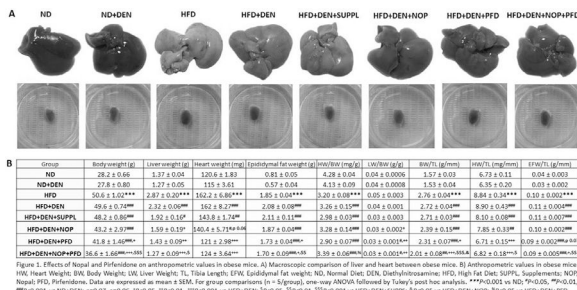
Results: All HFD mice developed obesity ($P \leq 0.05$), and PFD and NOP plus PFD reduced body weight ($P \leq 0.05$). Liver weight was increased in HFD, HFD+DEN, and HFD+DEN+SUPPL groups ($P \leq 0.05$), and epididymal fat was increased in all HFD mice ($P \leq 0.001$), but NOP, PFD, and NOP plus PFD reduced liver weight ($P \leq 0.05$) and PFD, and NOP plus PFD decreased epididymal fat ($P \leq 0.05$). Heart weight was increased in HFD, HFD+DEN, HFD+DEN+SUPPL, and HFD+DEN+NOP groups ($P \leq 0.05$), but NOP ($p=0.06$), PFD, and NOP plus PFD reduced it ($P \leq 0.001$). The heart weight/body weight ratio was reduced in all mice with HFD ($P \leq 0.001$), and only NOP plus PFD increased the heart weight/body weight ratio ($P \leq 0.05$). Liver weight/body weight ratio tended to increase in HFD and HFD plus DEN, but decreased with NOP, PFD, and NOP plus PFD ($P \leq 0.05$). Body weight/tibia length ratio was increased in all HFD mice ($P \leq 0.01$) and decreased with PFD and NOP plus PFD ($P \leq 0.05$). Heart weight/tibia length ratio was increased in HFD, HFD+DEN, HFD+DEN+SUPPL, and HFD+DEN+NOP ($P \leq 0.01$), but decreased with PFD and NOP plus PFD ($P \leq 0.001$). Epididymal fat weight/tibia length ratio was increased in all HFD mice ($P \leq 0.001$) but decreased with PFD ($P=0.07$) and NOP plus PFD ($P \leq 0.05$) (Figure 1).

Conclusions: In this study, we showed that intervention with nopal and pirfenidone improved epididymal fat weight and anthropometrical parameters in obese mice with DEN, this effects observed are possibly due to increased insulin sensitivity and decreased hepatic steatosis by nopal and pirfenidone.

Ethical statement: CUCS Research Committee at the University of Guadalajara approved this study (protocol number: CI-01724).

Declaration of interests: None.

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Polycystic liver disease in a third level hospital

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Introduction and Objectives: Polycystic liver disease is part of a group of rare congenital disorders that result from altered development of the embryonic ductal plate. The prevalence is 1/10,000 to 1/158,000. The objective is to describe the characteristics of patients with polycystic liver disease at the General Hospital of Mexico.

Materials and Patients: Observational, cross-sectional, descriptive study, case series type, during the period from January 2018 to May 2024, carried out in the outpatient clinic of the liver clinic in the Gastroenterology service of the General Hospital of Mexico "Dr. Eduardo Liceaga." Patients over 18 years of age who had at least one imaging study (ultrasound of the liver and bile ducts, computed tomography of the abdomen, magnetic resonance imaging of the abdomen) where characteristic imaging data of hepatic cysts with a number equal to or greater than 10 were identified. According to findings, it was classified according to Gigot and also as autosomal dominant polycystic liver disease (ADPD) and autosomal dominant polycystic kidney disease (ADPD). The clinical records were collected, the following data were collected: sex, age, body mass index, comorbidities, a history of family members with polycystic liver and/or kidney disease, the presence of high blood pressure, unintentional weight loss, studies were intentionally collected. laboratory tests of liver biochemical tests, extrahepatic symptoms, complications of polycystic disease and previous treatments, if they are in the transplant protocol. The statistics of the liver clinic offices were reviewed. Frequencies and percentages were used to summarize qualitative variables and mean and standard deviation were used for quantitative variables.

Results: During the period from January 2018 to May 2024, 56 patients were included, the majority of women (83.9%). With an average age of 58.8 ±20 years. Of them, 26.8% as EPHAD, and 73.2% are associated with EPRAD. 12 patients with Gigot III. No weight loss in 92.8%. 25% with a family history of polycystic kidney and/or liver disease. The most frequent comorbidity was SAH in 44.6% followed by those who did not present comorbidities in 39.3%. The most frequent symptom was abdominal pain in 26.8%, followed by abdominal distention and early satiety in 14.3 and 12.5% respectively and asymptomatic patients in 44.6%. Complications were presented as cyst infection and bile duct obstruction, which corresponds to 3.6%. The results of the analysis up to 5.4% with alteration of the synthesis function, 5.4% with alteration of the transaminases, in the blood count 5.4% between mild and moderate anemia, 3.6% with leukocytosis, 7.1% with thrombocytopenia, the Renal function was altered in 32.2%, and dyslipidemia was recorded in 17.9 to 35.7%. In statistics of the liver clinic outpatient consultation, 61,493 consultations were granted, and the prevalence is calculated at 0.09%.

Conclusions: Polycystic liver disease is a rare disorder with a prevalence of 0.09% for our institution. Most growth monitoring should be performed with imaging studies and questionnaires for symptoms and quality of life. Gigot III and severe symptoms must be individualized for surgical or definitive treatment by liver transplant.

Ethical statement: The study was carried out in accordance with good clinical practice guidelines and the Declaration of Helsinki.

Declaration of interests: None.

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