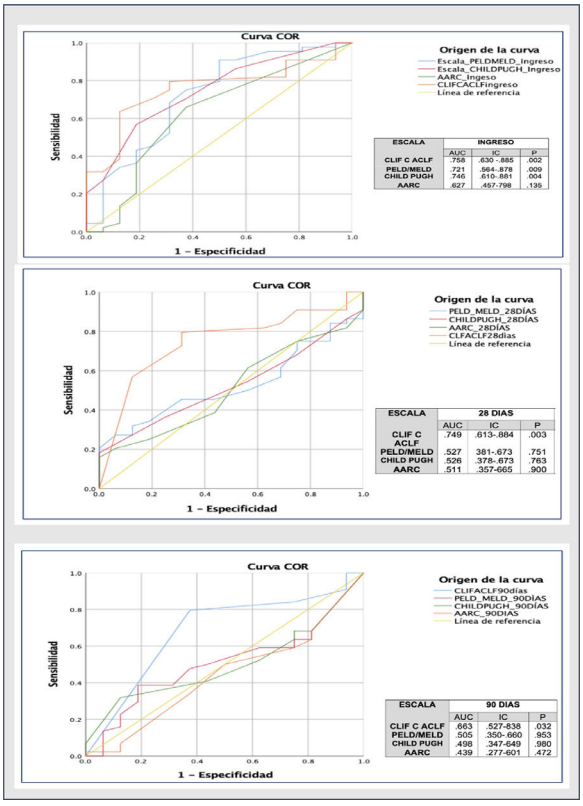
AUROC of CLIF-C ACLF, MELD/PELD, Child Pugh, AARC in predicting at admission, 28- and 90 - days mortality.



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Extrahepatic disease in a cohort of HCV infected patients succesfully treated with direct acting antivirals. One year follow up.

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Introduction and Objectives: The hepatitis C virus (HCV) infects hepatocytes and B lymphocytes. The ability to infect B lymphocytes has been linked to cryoglobulinemia, cryoglobulinemia syndrome, lymphomas, and organ-specific and systemic autoimmune diseases (AD). Among the AD, diabetes mellitus, thyroiditis, and Sjögren syndrome stand out as extrahepatic diseases (EH). The aim of a study was identify HCV-related EH, during infection and one year after successfully direct-acting antiviral (DAA) treatment

Materials and Patients: We conducted a prospective study in a Regional Hospital of reference for the treatment of Hepatitis C, from 14 hospital units in the Northeast of Mexico. From June 15, 2018, to January 1, 2023.

Results: Of 364 patients with positive serology, 153 had viremia, and 127 received DAA, with different schemes aligned to the guidelines of treatment of hepatitis C. 50% were women, with a mean age of 54. 80% received regimens based on sofosbuvir. 96.8% achieved a sustained viral response 12. Before the treatment with DAA, we identified nine hypothyroidisms, eight cryoglobulinemic vasculitis, one with anemia and thrombocytopenia autoimmune, and 25 with diabetes. At basal visit for treatment, 17 hypothyroidisms, eight prediabetes, eight diabetes, one lymphoma, one monoclonal gammopathy of uncertain significance, three rheumatoid arthritis, and three hepatocellular carcinomas. At one year of follow-up, plus sixteen with diabetes mellitus, three with hepatocarcinoma, 6 with xerophthalmia, and one with breast cancer, increasing obesity, and fatty liver were identified.

Conclusions: EH is frequent and carries out morbidity, especially proliferative disorders of B lymphocytes and AD as some can persist even after the treatment of HCV infection. The intentional search for EH should be mandatory and, once identified, will be multidisciplinary follow-up, for the timely identification of worsening or malignant transformation, to offer timely diagnosis and treatment.

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

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Evaluation of the hepatoprotective effect of an hydroalcoholic extract of *Jatropha dioica* against the damage induced by valproic acid in Wistar rats

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Introduction and Objectives: Liver diseases have gained importance due to their prevalence, incidence and because most chronic liver diseases have no cure, except for hepatitis C. Liver damage induced by drugs such as valproic acid (VPA) has been used to study therapeutic alternatives. *Jatropha dioica* may be one of these alternatives as it has metabolites with potential antioxidant activity. The objetive of this study was to evaluate the hepatoprotective effect of a hydroalcoholic extract of *J. dioica* against VPA-induced damage in Wistar rats.

Materials and Patients: 24 Wistar rats of both sexes were used. Groups: Sham (SH), Non-Toxicity(JdTox), VPA and *J. dioica*+VPA (JdVPA) (n=6). *J. dioica* (300 mg/kg, p.o) was administered for 7 days, followed by VPA (500 mg/kg, i.p, for four days) injected concomitantly. Biochemical markers, oxidative stress, and histological analysis were determined. Ethics Committee approval under HI22-00003 registry and PAICYT 143-CS-2022 financing. The research group declares no conflict of interest.

Results: VPA group showed a significant increase in ALT and AST against Sham, JdVPA group showed a significant decrease in these parameters *vs.* VPA (Figure 1), and the remaining biochemical markers showed no statistically significant differences between the groups. The VPA group presented statistically significant alterations in the concentrations of malondialdehyde (MDA), reduced glutathione (GSH), and superoxide dismutase (SOD) *vs.* SH. The JdVPA group significantly improved the damage caused by VPA, decreasing MDA and increasing GSH and SOD (Figure 2). Histologically, VPA presented an inflammatory infiltrate, which decreased in the JdVPA group. However, this difference was not statistically significant.

Conclusions: In murine models, VPA has been able to induce alterations in transaminase levels and oxidative stress markers, both of which may indicate the presence of liver damage. Plants of the *Jatropha* genus have been shown to possess phenolic and flavonoid compounds with antioxidant capacity, which may be responsible for the hepatoprotective effect observed in this study using *J. dioica* at the evaluated dose without showing toxicity.

Ethical statement

The protocol was registered and approved by the Ethics Committee.

Declaration of interests

None

Funding

Funding for this project came from PAICYT under registration number 143-CS-2022.

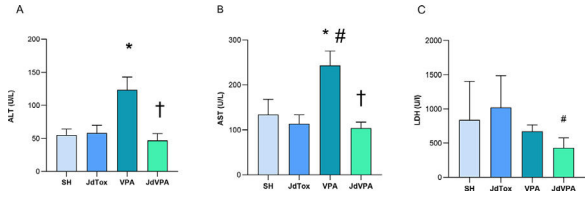

Figure 1. Serum biochemical markers. (A) Serum ALT levels, *P = 0.036 vs. SH, † P= 0.0015 vs. AVP-C. (B) Serum AST levels, *P<0.0001 vs. SH, #P<0.0001 vs. JdTox, †P<0.0001 vs. AVP-C. (C) Serum LDH levels, #P < 0.0498 vs. JdTox. Kruskal-Wallis with Dunn's post hoc (A) and One-way ANOVA with Tukey's post-hoc (B-C)

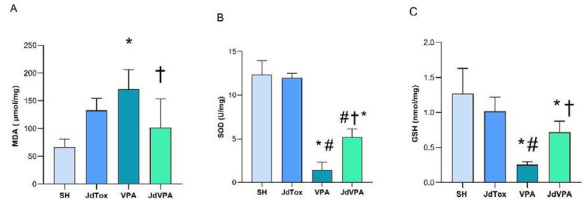

Figure 2. Liver tissue concentrations of oxidative stress biomarkers. (D) MDA, *P = 0.0012 vs. SH, † P= 0.0283 vs. AVP-C. (E) SOD, *P < 0.0001 vs. SH, #P < 0.0001 vs. JdTox, †P < 0.0003 vs. AVP-C. (F) GSH, * P < 0.007 vs. SH, # P =0.0007 vs. JdTox, † P=0.0221 vs. AVP-C. One-way ANOVA with Tukey's post-hoc (A-C)

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Evaluation of the hepatoprotective effect of *Flourensia cernua* against the damage induced ischemia-reperfusion in Wistar rats.

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Introduction and Objectives: Liver transplantation is the optimal treatment in patients with irreversible liver damage. The principal complication of a transplant is ischemia-reperfusion injury (I/R), which induces primary graft rejection. Treatment with plant extracts prior to I/R has decreased the severity of this injury due to their potential anti-inflammatory and antioxidant activity. A plant that presents potential antioxidant activity is *Flourensia cernua* (Fc). The objective was to evaluate the hepatoprotective effect of *Flourensia cernua* against the damage induced by ischemia-reperfusion in Wistar rats.

Materials an Patients: 42 mixed Wistar rats were sorted into 7 groups (n=6). Fc was administered (200 mg/kg/, p.o/5 days) followed by I/R clamping of the left portal triad producing 1hr of 70% ischemia and 2 or 24hrs of reperfusion. Biochemical and oxidative stress biomarkers, proinflammatory cytokine and gene expression were determined. Ethics Committee approval under HI17-00002 registry and PAICYT 152-CS-2022 financing. The research group declares no conflict of interest.

Results: The I/R groups with 2 (IR2hr) and 24 hour (IR24hr) reperfusion displayed significantly elevated ALT and AST concentrations vs. Sham (SH); only FcIR2hr significantly decreased these enzymes (Figure 1). The remaining biochemical parameters did not show any significant differences between the groups. IR2hr group induced a statistically significant alteration of oxidative stress biomarkers, Fc counteracted these effects, with a decrease of malondialdehyde (MDA) and an increase of reduced glutathione (GSH) and the superoxide dismutase(SOD) (Figure 2). The gene expression of NF$\kappa\beta$ was increased in IR2hr group, the treatment with *F. cernua* counteracted this increase. TNF-α was significantly increased in the IR2hr group and decreased in the treatment group.

Conclusions: I/R is a widely studied injury model, capable of inducing pathological changes in several spheres, not unlike the observed results in the present study; the hydroalcoholic extract of Fc displayed anti-inflammatory and antioxidant activity at 200mg/kg, it was not toxic and proved to be hepatoprotective against I/R.

Ethical statement

The protocol was registered and approved by the Ethics Committee.

Declaration of interests

None

Funding

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