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Introduction and Objectives: Hepatic cells undergo different processes in response to the steatogenic input of MAFLD. Hepatic cell culture in steatogenic medium is a useful, reproducible tool intended to elucidate these pathogenic mechanisms. This study aimed to study cellular proliferation, death, and senescence in hepatocytes and hepatic stellate cells (HSC) using a model of steatosis *in vitro*.

Materials and Methods: HepG2 hepatocytes were cultured in RPMI1640 (Control-Hep) and LX-2 HSC in DMEM (Control-LX2). Steatogenic media: either RPMI1640 or DMEM supplemented accordingly: *mild steatosis* (MS:50μM sodium oleate/sodium palmitate (OA/PA) at 2:1 ratio), *severe steatosis* (SS:500μM 2OA:1PA). HepG2 or LX-2 cells were preincubated for 24h at 37°C and 5% CO_2, then incubated in MS or SS medium for up to 72h. Steatogenic medium was refreshed daily. Viability, mortality, proliferation, and senescence were analyzed. Assays are performed in triplicates. Data: Mean±SD. 2-way ANOVA followed by Tukey. $P<0.05$.

Results: Hepatocytes: MS showed lower viability and proliferation, with increased mortality at 72h and higher senescence from 48h. SS displayed lower viability, and proliferation, with increased mortality but lower senescence from 24h. HSC: MS showed diminished viability and increased mortality (16.0%) at 72h. SS showed lower viability and increased mortality rate (50.0%) from 48h.

Proliferation increased in both MS and SS at 24h but decreased by 72h. Cellular senescence was diminished at 24 and 48h in both steatogenic conditions.

Conclusions: Steatogenic conditions induced different outcomes in the two cell lines studied. Hepatocyte behavior depends on lipid contents. In MS, increased senescence might be considered a mechanism to avoid damaged-cell proliferation. In SS, increased mortality rate and decreased senescence suggest lipotoxicity and activation of death pathways. In contrast, HSC cultured in steatogenic conditions might turn into the activated state, therefore increasing their proliferation and avoiding other cellular processes, including senescence. Both hepatocyte and HSC outcomes presented here contribute to the pathogenesis of MAFLD.

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P- 28 ATORVASTATIN SHOWS ANTI-PROMOTOR AND ANTI-NEOANGIOGENIC EFFECT IN HEPATOCELLULAR CARCINOMA DEVELOPMENT IN VIVO AND IN VITRO MODEL BY INHIBITING TGF-β1/pERK SIGNALING PATHWAY

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Introduction and Objectives: Hepatocellular carcinoma (HCC) represents 90% of liver tumors. Statins may reduce HCC incidence. Its antitumor activities are controversial and may be mediated by disrupting several hepatocarcinogenic pathways. This study aimed to evaluate *in vivo* and *in vitro* the anti-proliferative and anti-angiogenic action of atorvastatin (AT) in the development of HCC as well as its mechanisms of action.

Materials and Methods: *In vivo* model: the pesticide hexachlorobenzene (HCB) was used to promote the development of HCC in Balb/C nude mice inoculated with Hep-G2 cells. Tumor hepatic number, cell proliferation parameters (proliferating cell nuclear antigen, PCNA), cholesterol metabolism (3-hydroxy-3-methylglutaryl-coenzyme-A-reductase, HMGCoAR), angiogenesis and VEGF levels were analyzed. *In vitro* model: Hep-G2 and Ea-hy926 cells were used to evaluate the effect of AT (2,5; 5 and 5 mg/kg b.w.) on HCB-induced cell proliferation, migration, and vasculogenesis and analyze proliferative parameters.

Results: *In vivo*: AT 5 mg/kg prevented liver growth and tumor development and inhibited PCNA, TGF-β1 and pERK levels increase. AT 5 mg/kg prevented VEGF levels and skin blood vessel formation. *In vitro*, AT prevented cell proliferation and migration as well as tubular formation in the endothelial cell line by inhibiting the TGF-β1/p ERK pathway.

Conclusions: We were able to demonstrate the potential AT antiproliferative and anti-angiogenic effects in an HCC model and the involvement of TGF-β1 and pERK pathways.

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P-29 THE LIVER IN AMYLOIDOSIS: AN ANALYSIS OF THE INSTITUTIONAL AMYLOIDOSIS REGISTRY

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Introduction and Objectives: The liver can be either compromised by infiltrative damage of amyloid, as it happens in AL and AA amyloidosis, or its cause, as it occurs in transthyretin TTR-related amyloidosis. In the latter, the liver synthesizes a defective variant TTR which has the capacity for cardiac, neurological, and renal damage, but the liver function is preserved. This study aimed to describe the clinical characteristics and prognosis of patients with liver involvement of amyloidosis (AL and AA)

Materials and Methods: Retrospective cohort of patients with hepatic involvement included in the Institutional Amyloidosis Registry (ClinicalTrials.gov NCT01347047) between June 2010 and January 2022. Clinical characteristics and complementary studies were analyzed, as well as their evolution.

Results: 359 patients with amyloidosis were included in the registry, of whom 16 (5% (CI 2.7-7.3)) had liver involvement. The most frequent types of amyloidosis were: AL 88% (14), AA 6% (1) and non-typed 6% (1). The median age at diagnosis was 64 years (IR 63-74), male 44% (7). The median albumin value was 3.0 gr/dL (IR 2.5-3.8), alkaline phosphatase 705 IU (IR 395-114), total bilirubin mg/dL 1.1 (IR 0.5-14.8), and more than 25% had jaundice. Thirty-one percent presented a cardiac compromise. The mortality rate in the study period was 56% (CI 30%-80%). When comparing patients with amyloidosis with and without liver involvement, mortality was higher in the liver involvement group (29% vs. 56%, p 0.02).

Conclusions: We present the first report in our region with adequate sampling that allows us to approximate the burden of this disease in relation to the liver. Hepatic infiltrative involvement has a high mortality rate in amyloidosis compared to those without liver involvement.

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P- 30 CLINICAL FEATURES, TREATMENT, AND SURVIVAL OF PATIENTS WITH BUDD-CHIARI SYNDROME IN A HEPATOLOGY COLOMBIAN CENTER

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Introduction and Objectives: Budd-Chiari syndrome is defined as the obstruction of the hepatic venous flow. In Colombia, there is limited evidence regarding the characterization of these patients. This study aims to describe the clinical features, management, and survival of these patients in a Colombian hepatology reference center. This study aimed to describe the clinical features, management, and survival of patients diagnosed with Budd-Chiari Syndrome at a Colombian Hospital from 2010 to 2021.

Materials and Methods: A retrospective descriptive longitudinal study of a cohort of patients with Budd-Chiari syndrome. Adult patients diagnosed with Budd-Chiari Syndrome were included. A descriptive analysis of the data was carried out.

Results: A total of 31 patients diagnosed with Budd-Chiari syndrome were included. 58.1% (n=18) were women. The median age was 27 years [interquartile range (IQR) 23-27]. Ascites was the main clinical manifestation (87.1%, n=27). At the time diagnosis was made, 48.4% (n=15) were cirrhotic. Acquired thrombophilia was the main prothrombotic risk factor (48.4%, n=15), with the antiphospholipid syndrome as the most frequent cause (73.3%). The principal location of the outflow obstruction was in the hepatic veins (73.3%, n=22). 48.3% (n=14) had a Class II Rotterdam score (intermediate prognosis). 80.6% (n=25) were on anticoagulation. A transjugular intrahepatic portosystemic shunt (TIPS) was placed in 6 patients (19.4%), and five patients received liver transplants (16.1%). 25.8% (n=8) died. The median time from diagnosis to death was 337.1 days [interquartile range (IQR) 46.5-647.5].

Conclusions: Budd-Chiari syndrome is an infrequent disease poorly described in Colombia. This study shows that this population has similar risk factors, clinical features, and mortality as it is described in other cohorts.

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P-31 SHORT-TERM EFFICACY AND SAFETY OF LOLA THERAPY IN PATIENTS WITH CIRRHOSIS AND MINIMAL HEPATIC ENCEPHALOPATHY: A REAL-LIFE COHORT STUDY

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Introduction and Objectives: Minimal hepatic encephalopathy (MHE) is associated with the risk of accidents, falls, and impaired quality of life. Treatment with L-ornithine L-aspartate (LOLA) could be an effective strategy. This study aimed to verify the efficacy and safety of LOLA treatment in a real-life cohort of cirrhotic patients with MHE.

Materials and Methods: Cirrhotic patients with MHE were included. Those who had received any anti-ammoniacal measure or with alcohol consumption in the last six months, creatinine > 1.5 mg/dL, or previously known chronic kidney disease were excluded. The diagnosis of MHE was made using the psychometric hepatic encephalopathy score (PHES) and the critical flicker frequency (CFF). MHE patients received LOLA 6 g t.i.d. for three days and were reassessed with PHES and CFF. The project was approved by the local research and ethics committees.

Results: 98 cirrhotic patients were evaluated; 38 (38.8%) had baseline MHE, 26 (68.4%) women, mean age 53.3±8.8 years, median education nine years (range 0-15). According to Child-Pugh: 26 (68.4%) A, 9 (23.7%) B, and 3 (7.9%) C. The median MELD was 11 (range 6-21), and MELD-Na 12 (range 6-26). *Intention to treat analysis:* According to PHES, 30(78.9%) patients showed remission of MHE (p<0.0001). The incidence rate ratio for persisting with MHE was 8 per 38 person-times; that is, 0.2 (95%CI: 0.1-0.5; p<0.0001), with the fraction prevented after exposure to LOLA being 0.78 (95%CI: 0.55-0.90; p<0.0001). According to CFF, 29(76.3%) patients showed remission of MHE (p<0.0001). The incidence rate ratio for persisting with MHE was 9 per 38 person-times; that is, 0.2 (95%CI: 0.1-0.5; p<0.0001), with the fraction prevented after exposure to LOLA being 0.76 (95%CI: 0.51-0-89; p<0.0001). No adverse effects were reported.