and are the most important cause of death in these patients. Better models are necessary to predict mortality in moderate AH adequately.

Table.- Univariate and multivariate competing risk analyses. Mortality is the primary event, and liver transplant is the competing risk.

	Univariate analysis			Multivariate analysis		
Variables	sHR	95% CI	p-value	sHR	95% CI	p-value
Age (years)	1.035	1.020–1.049	< 0.001	1.042	1.019–1.0656	< 0.001
Sex (Female)	0.918	0.658–1.280	0.616	1.237	0.734–2.084	0.423
MELD	1.00	0.955–1.054	0.885	-	-	-
MELD-Na	1.00	0.997–1.006	0.316	-	-	-
MELD 3.0	1.025	0.988–1.064	0.177	-	-	-
mDF	1.013	1.007–1.020	< 0.001	1.013	0.993–1.033	0.179
Cirrhosis	1.037	0.682–1.577	0.863	-	-	-
Corticosteroids use	1.036	0.730–1.469	0.842	-	-	-
Albumin at admission	0.837	0.682–1.026	0.087	-	-	-
Bilirubin at admission	1.013	0.989–1.038	0.267	-	-	-
Serum creatinine	0.992	0.488–2.015	0.983	-	-	-
INR	1.534	1.070–2.198	0.020	-	-	-
Renal replacement therapy	7.066	4.381–11.392	< 0.001	7.796	3.993–15.218	< 0.001
Infections during hospitalization	2.079	1.308–3.306	0.002	1.666	0.999–2.779	0.050

sHR: Subdistribution Hazard ratio; mDF: Maddrey's discriminant function; INR: International Normalized Ratio.

https://doi.org/10.1016/j.aohep.2023.101206

P-20 OXIDATIVE STRESS MARKERS IN ALCOHOLIC LIVER DISEASE

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Introduction and Objectives: Several mechanisms participate in the physiopathology of Alcoholic Liver Disease (ALD), such as deregulation in the immune system and oxidative stress. Aim: To analyze markers of lipoperoxidation and oxidative proteins in patients with ALD: Alcohol hepatitis (AH) and liver cirrhosis (CiR).

Materials and methods: This transversal study included 220 individuals divided into three groups: the control group (n=100), individuals with alcohol consumption 10 g/day and AUDIT score 7, the group of AH patients (n=45) and CiR patients (n=75). We measured the serum levels of MDA (thiobarbituric acid method) and carbonylated proteins (DNPH reaction). The statistical analysis was performed by the SPSS v25 software. Data expressed as mean values ± SEM, p-value <0.05 was considered statistically significant.

Results: The control group (CT), with 30.47±0.52 years old, alcohol consumption of 2.32±0.21 gOH/day and AUDIT 2.24±0.10. The ALD patients, had 41.68±6.3 years old, consumption of 354.25± 139.54 gOH/day and AUDIT 30±5.45. The AST, ALT, GGT, total and indirect bilirubin serum were higher in AH and CiR compared to CT (p<0.001), ratio of AST/ALT 2. The albumin levels were lower (p<0.001) in AH vs. CT. The carbonylated proteins serum concentrations were higher in patients with AH compared to CT and CiR (p<0.001). Differences in MDA serum levels were found between CiR versus HA and CT groups (p< 0.005).

Conclusions: Our results suggest that carbonylated proteins and MDA are markers of oxidative damage in the alcohol hepatitis and liver cirrhosis Mexican patients. This damage may increase the risk of malnutrition, susceptibility to infections and sepsis, deficient coagulation factors production, gastrointestinal bleeding, among other complications that increase mortality. According these results is necessary to counteract oxidative damage for improving and complementing the actual treatment of alcoholic liver disease.

https://doi.org/10.1016/j.aohep.2023.101207

P-21 FIBROSIS DEVELOPMENT AND MALIGNANCIES ARE DELAYED BY PIRFENIDONE WHILE INCREASING SIRT1 NUCLEAR TRANSLOCATION AND HISTONE 3 DEACETYLATIONS IN A HEPATOCARCINOMA MODEL

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Introduction and Objectives: Hepatocellular carcinoma (HCC) is the most common liver neoplasm worldwide. Pro-inflammatory and pro-fibrogenic processes are fundamental in tumor development. On the other hand, Pirfenidone (PFD) has anti-inflammatory and antifibrogenic properties useful to counteract hepatocarcinogenesis; however, effects of this drug on SIRT1, and epigenetic regulations in this type of damage are unknown. The aimed of this study is to evaluate PDF effects on SIRT1 translocation, and deacetylation of histone H3 lysines 9 and 14 (H3K9 and H3K14) in a HCC model.

Materials and Methods: Male Fischer-344 rats (n=18) were divided into three groups: CTL: control group, HCC: damage group, rats weekly administrated with diethylnitrosamine (DEN,50mg/kg/i.p.) and 2-aminofluorene (2AAF, 25mg/kg/p.o.) for 16 weeks. HCC/PFD group of rats administrated with DEN and 2AAF plus PFD (300mg/kg/day/p.o.). Tumor development and fibrosis markers were analyzed histologically. In addition, expression of SIRT1 deacetylase, p300 acetylase, H3 and H3K9 and H3K14 acetylated were analyzed by western blot.

Results: Normal liver architecture is disturbed by dysplastic nodules formation surrounded by extracellular matrix and fibrosis, also an increase in cells with anaplasia and steatotic foci was observed in liver tissues of HCC group. PFD was effective in preventing these changes. Immunohistochemistry revealed an overexpression of GPC3 and -SMA in damage group, which correlates with malignant degeneration; these responses were also prevented by PFD. Finally, western blots evidenced an overexpression of SIRT1 in nuclear fraction of PFD group, triggering H3K9 and H3K14 deacetylation, in addition, a decrease in p300 acetylase expression in nuclear fractions was noted. Noteworthy, c-Myc was decreased.

Conclusions: PFD reduces fibrotic and malignant patterns development. Likewise, PFD induces SIRT1 expression and nuclear translocation along with H3K9 and H3K14 deacetylation, compacting chromatin and possibly down expression of oncogenes. These results demonstrate the capability of PFD to regulate epigenetic hallmarks on histones.

https://doi.org/10.1016/j.aohep.2023.101208