Discussion: Supplementation with MexMix improves biochemical parameters and enriches beneficial bacterial genus in MAFLD models.

Conclusion: MexMix supplementation is an attractive nutraceutical strategy for the treatment of diseases associated with excessive consumption of fat and sugar, such as MAFLD.

Funding: The resources used in this study were from the hospital without any additional financing

Declaration of interest: The authors declare no potential conflicts of interest.

https://doi.org/10.1016/j.aohep.2022.100863

Serum determination of IL-1β and IL-1RA in patients with chronic liver diseases

A Hernandez-Barragan[1], D Montes-de-Oca-Angeles[1], M Lemus-Peña[1], M Hernandez-Santillan[1], KZ Medina-Avila[1], M Martínez-Castillo[1], JL Pérez-Hernández[2], F Higuera-De la Tijera[2], D Santana-Vargas[2], P Cordero-Pérez[3], L Muñoz-Espinosa[3], A Torre-Delgadillo[4], J Córdova-Gallardo[4], D Kershenobich[5], G Gutiérrez-Reyes[1]

[1] *Liver, Pancreas and Motility laboratory. Unit of Research in Experimental Medicine. School of Medicine. UNAM. General Hospital of Mexico. Mexico City. Mexico*
[2] *Departament of Gastroenterology. General Hospital of México "Dr. Eduardo Liceaga." Mexico City. Mexico*
[3] *Universitary Hospital "Dr. José Eleuterio González". School of Medicine. UANL. Nuevo Leon. Mexico*
[4] *General Hospital "Dr. Manuel Gea González". México City. México*
[5] *National Institute of Medical Sciences and Nutrition "Salvador Zubirán." México City. México*

Introduction and Objectives: This study aimed to evaluate serum concentration of IL-1β and IL-1RA in subjects with alcoholic liver disease (ALD), chronic hepatitis C (CHC) and non-alcoholic fatty liver disease (NAFLD).

Materials and methods: A cross-sectional and multicenter study was carried out, which included alcoholic subjects (OH), alcoholic cirrhosis (CiOH) and alcoholic hepatitis (HA); patients with CHC and NAFLD were compared against subjects without criteria for alcohol drinking habits (CT). IL-1β and IL-1RA were quantified by Multiplex-MERCK©. For statistical analysis SPSS V.22 were used, Mann-Whitney U, $p<0.05$; values expressed as mean ± standard error.

Results: The groups included were: 18 (OH), 25 (CiOH), 14 (HA), 55 (CHC), 22 (NAFLD) and 81 (CT). IL-1β results (pg/mL): 13.8±9.2, OH; 4.4±1.7, CiOH; 3.05±0.05, HA; 7.1±2.3, CHC; 5±2, NAFLD and 3.2±0.1, CT. With differences in HA vs. CHC. For IL-1RA (pg/mL) 83.5±30, OH; 100.4±53.5, CiOH; 85±38.3, HA; 74.4±2, CHC; 316± 203, NAFLD and 13.02±4.4, CT. With differences in CHC and NAFLD vs. CT and CiOH vs. CHC.

Discussion: IL-1β was 2.3 times increased in HA/CHC, which highlights the effect on exacerbating the inflammatory response in acute over chronic alcohol damage; IL-1RA that inhibits the activities of IL-1β are increase may have protective effects on liver injury.

Conclusion: IL-1RA is a cytokine that limits inflammation in liver disease, especially in non-alcoholic fatty liver disease, alcoholic cirrhosis and chronic hepatitis C.

Funding: This work was partially financed by CONACyT SALUD-2016-272579 and PAPIIT- UNAM TA200515

Declaration of interest: The authors declare no potential conflicts of interest.

https://doi.org/10.1016/j.aohep.2022.100864

Evaluation of IL-12 and CXCL-10 in patients with hepatitis C, non-alcoholic fatty liver disease and liver damage for alcohol consumption

M Hernandez-Santillan[1], M Martínez-Castillo[1], Z Medina-Ávila[1], M Lemus-Peña[1], D Montes de Oca-Ángeles[1], A Hernández-Barragan[1], JL Pérez-Hernández[2], F Higuera-De la Tijera[2], D Santana-Vargas[2], P Cordero-Pérez[3], L Muñoz-Espinoza[3], J Córdova-Gallardo[4], D Kershenobich[1,5], G Gutiérrez-Reyes[1]

[1] *Liver, Pancreas and Motility laboratory. Unit of Research in Experimental Medicine. School of Medicine. UNAM. Mexico City. Mexico*
[2] *Department of Gastroenterology. General Hospital of México "Dr. Eduardo Liceaga." México City. México*
[3] *Universitary Hospital "Dr. José Eluterio González". School of Medicine. UANL. Nuevo Leon. México City. México*
[4] *General Hospital "Dr. Manuel Gea González". México City. México*
[5] *National Institute of Medical Sciences and Nutrition "Salvador Zubirán." México City. México*

Introduction and Objectives: To Compare serum levels of IL-12 and CXCL-10 in different etiologies of liver disease.

Materials and methods: A cross-sectional and multicenter study was carried out, including subjects with alcoholism according to criteria WHO, without (OH) and with liver injury (cirrhosis, CiOH) and (Alcoholic Hepatitis, HA); non-alcoholic fatty liver (NAFLD) and chronic Hepatitis C (CHC), diagnosed by clinical, biochemical data. They were compared with subjects control (CT). For determination of IL-12 and CXCL-10 with Multiplex®-MERCK©. Statistical analysis by SPSS V.22 using U de Mann Whitney, $p<0.05$; values expressed as mean ± standard error.

Results: Included 20 subjects with NAFLD, 78 CHC, 14 HA, 20 CiOH, 15 OH y 60 CT. IL-12 was found elevated in OH, HA, CHC vs. CT in OH vs. HCc y HGNA ($p\leq0.05$). CXCL-10 was found elevated in CiOH, HA and CHC vs. CT($p\leq0.050$).

Discussion: The IL-12 showed elevated levels in subjects with alcohol consumption and CHC vs. CT that activates other cell types involved in inflammation. CXCL-10 is induced by IFN-γ, was found elevated in CiOH, HA and CHC, exerting their biological effects through CXCR3, including activation of peripheral immune cells and apoptosis. The ratio of IL-12/CXCL-10 in OH increased 4.6 times, ratifying the participation in chronic and continual inflammatory response by alcohol consumption.

Conclusions: IL-12 and CXCL-10 have an important role in alcohol-induced liver disease, confirming their contribution to inflammation, being evident CXCL-10 in advanced stages of the disease, by stimulating and favoring the migration of immune cells to the damage sites.

Funding: This work was partially financed by CONACyT SALUD-2016-272579 and PAPIIT- UNAM TA200515.

Declaration of interest: The authors declare no potential conflicts of interest.

https://doi.org/10.1016/j.aohep.2022.100865