

(lumbar spine: -0.83 vs. -0.10 $p=0.10$; hip: -0.54 vs. -0.04 $p=0.37$). The OR calculated it was 0.750 (95% CI: $0.169 - 3.327$).

Discussion: We show that MAFLD and low bone mineral density are common diseases in Mexican women under 60 years of age with prevalence rates greater than 40%; however, these diseases are not associated. The results are consistent with previously reported data, showing that BMI is higher in patients with MAFLD, reinforcing the importance of this factor and its impact on both diseases.

Conclusions: A high prevalence of MAFLD was found in Mexican women regardless of BMD status.

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.

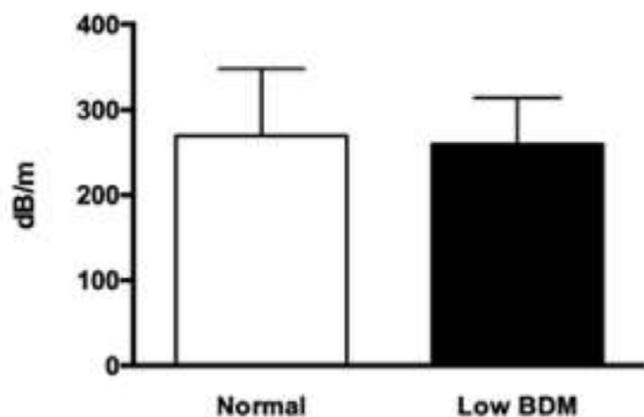


Figure 1. Comparison of the hepatic steatosis degree by means of the controlled attenuation parameter (CAP). <https://doi.org/10.1016/j.aohep.2022.100831>

Mediterranean diet vs. regional diet in a Mexican population with MAFLD: 3-month cohort

MJJ García-Carvajal¹, AD Cano-Contreras¹, MR Francisco¹, HR Ordaz-Álvarez², SA Reyes-Díaz², M Vieyra-Vega², JM Remes-Troche¹

¹ Medical-Biological Research Institute. Veracruz University. Mexico

² Medicine faculty. Veracruz region. Veracruz University

Introduction and Objectives: Metabolic Associated Fatty Liver Disease (MAFLD) is the hepatic manifestation of a multisystemic disease. The Mediterranean diet has been proposed as an effective option in the initial treatment of these patients. The Regional diet is based on traditional Mexican food, favoring the consumption of fiber and antioxidants. This study aimed to compare the Mediterranean diet (MD) versus the regional diet (RD) in patients with MAFLD in a three-month cohort.

Materials and Methods: Prospective, comparative, longitudinal and experimental study in patients diagnosed with hepatic steatosis by ultrasound and transient elastography (FibroScan). Student's T-test was used for related samples for numerical variables. The trial was approved by the research ethics committee, and informed consent was obtained.

Results: Twenty-one patients were studied, mean age of 58.3 ± 8 , female gender predominated (57.1%). Two groups were selected randomly; 8 (%) participants were assigned to the MD group and 13 (%) to the RD group. The comorbidities reported were diabetes mellitus (71.4%), followed by systemic arterial hypertension (38.1%). Most

participants showed obesity at baseline (61.9%). The group with MD showed a significant reduction in steatosis and visceral fat ($p<0.0002$); no significant changes were observed in Kpa ($p=0.291$) (Table 1)

Conclusions: The Mediterranean diet was shown to be effective in reducing intrahepatic fat. The inclusion of foods such as beans, corn, and prickly pear (nopal) should be promoted, reducing the risk of expression of chronic diseases associated with metabolic disorders in Mexico.

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.

Table 1.

	Mediterranean diet		Regional diet	
	Baseline	End	Baseline	End
Visceral fat (%)	15.6±6.9**	14.6±6.3**	13.5±4.3	21.1±2.5
Total fat (%)	36.3±5.2	33±5.9	40±6.9	41.340±7.5
Weight (kg)	84.8±18	82.4±16	79.9±11	76±12
BMI	30.1±5.9	29.5±5	34.1±5.6	31.1±4.8
Systolic BP (mmHg)	122.3±16	118±11	130.7±14	128.7±13
Diastolic BP (mmHg)	72±10	76±5.3	75.1±10	79.1±10
Cap	293.8±39**	245.8±28**	294.4±52	280.1±53
Kpa	7.6±8.4	7.5±6.6	6.1±1.9	7.5±3.4
AST (U/L)	25.5 ± 10.8	18.8 ± 3.5	39.3 ± 21.6**	27.84 ± 8.3**
ALT (U/L)	33.33 ± 12.1	21.7 ± 8.0	40.7 ± 26.4	27.05 ± 9.4
GGT (U/L)	41.83 ± 22.4	31.5 ± 21	53.6± 0.16	45.35 ± 24.3
Glucose (mg/dL)	103.50 ± 18.0	100.5 ± 11.2	109± 0.06	104.96 ± 15.5
Triglycerides (mg/dL)	190.66 ± 144.4	140.9± 52	152.1± 0.13	132.52 ± 31.2
Cholesterol (mg/dL)	201.66 ± 52.5	168± 61	199.6± 48.9	182.73 ± 23.4
Platelets (mcl)	256.83 ± 30.6	258.5 ± 41.7	241.3± 48.8	238.90 ± 37.1
Albumin (g/dL)	4.24 ± 0.7	4.5 ± 21.7	4.4 ± 28.2	4.40 ± 0.3
Globulin (g/dL)	2.76 ± 0.7	2.9 ± 0.71	2.6 ± 0.36	2.75 ± 0.2

<https://doi.org/10.1016/j.aohep.2022.100832>

Prevalence of non-alcoholic fatty liver disease in apparently healthy blood bank donors: metabolic, alcohol, and combined damage

JE Lira-Vera¹, O Morales-Gutiérrez², FY Vargas-Durán², P Alagón-Fernández del Campo², AK Soto Martínez², D Montemira-Orozco², A Burak-Leipuner², C Hinojosa-Segura², G Gutiérrez-Reyes², M Martínez-Castillo², S Sánchez-Valle², MA Lemus-Peña², D Montes de Oca-Ángeles², A Hernández-Barragán², M Hernández-Santillán², MF Higuera-de la Tijera², YL Béjar-Ramírez², JL Pérez-Hernández²

¹ Angeles Hospital. San Luis Potosí, México

² General Hospital of México "Dr. Eduardo Liceaga". México City, México

Introduction and Objectives: This study aimed to determine the prevalence of non-alcoholic fatty liver disease due to alcohol consumption and combined damage in the healthy population of the blood bank of the Hospital General de México "Dr. Eduardo Liceaga."

Material and Methods: Prolective, cross-sectional, descriptive, and analytical study. We included donors ≥ 18 years old. We excluded subjects with known liver disease. Transient vibration-controlled hepatic elastography was the method of estimation of hepatic steatosis and fibrosis. We used descriptive statistics.

Results: We included two hundred fifty-eight donors, 129 (50%) have fatty liver disease. 67 (25.96%) had non-alcoholic fatty liver disease, 31 (12.01%) had alcoholic fatty liver disease, and 31 (12.01%) had combined damage. In the metabolic damage group,

S1 steatosis was found in 14 subjects (20.90%), S2 in 23 (34.32%), and S3 in 30 (44.78%). Of the alcohol damage group, 12 (38.70%) had S1, 5 (19.35%) S2 and 13 (41.95%) S3. 100% of donors with combined damage present S3 steatosis. Advanced fibrosis was found in 3 (4.47%) donors with metabolic damage, 1 (3.22%) with alcohol damage, and 2 (6.45%) with combined damage.

Discussion: One out of two healthy subjects had fatty liver disease. Non-alcoholic fatty liver disease was the most common, while alcohol and combined damage were equally prevalent. These subjects are a sample of the Mexican population that could represent the behavior of the population of our country.

Conclusions: Fatty liver disease was found in all three groups but with predominance in the metabolic damage group. Undiagnosed advanced fibrosis was found in a small percentage of the apparently healthy population.

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.2022.100833>

Changes in physical activity and its impact on MAFLD during the COVID-19 pandemic

MJJ García-Carvajal¹, AD Cano-Contreras¹, MR Francisco¹, HR Ordaz-Álvarez², SA Reyes-Díaz², M Vieyra-Vega², JC Ortiz-Zarate², JM Remes-Troche¹

¹ Medical-Biological Research Institute. Veracruz University. México

² Medical Faculty. Veracruz región. Veracruz University. México

Introduction and Objectives: Multiple factors, such as diet and physical activity, are involved in the pathogenesis of fatty liver associated with metabolic dysfunction (MAFLD). After confinement by COVID-19, interest has arisen to study its effect on the population. This study aimed to describe the impact of changes in physical activity during the COVID-19 pandemic on the progression of MAFLD.

Materials and Methods: Observational, analytical, retrospective, longitudinal and comparative study in patients with MAFLD from the Instituto de Investigaciones Médico Biológicas of the Universidad Veracruzana. The information was obtained from a database from which values of steatosis, fibrosis and degree of physical activity measured by IPAQ were obtained. Student's t-test for related samples was used for numerical variables.

Results: Thirty-four patients were studied, of which 15 were excluded due to incomplete records. Nineteen patients were included; the mean age was 60.42±8.1 years, female sex was predominant (57.9%). Initial somatometric data are described in Table 1. A significant increase in physical activity in minutes per week was observed (p=0.037), as well as the reduction of intrahepatic fat after the pandemic (Fig.1).

Conclusions: The results demonstrate that during the COVID-19 pandemic, our population increased physical activity, which resulted in an improvement in hepatic steatosis significantly.

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.

Table 1. Baseline and two-years after pandemic characteristics in MAFLD patients

	2019	2021
Weight (kg)	80.3632±13	81.2921±14.8
Height (m)	1.5853±0.1	1.5853±0.1
BMI	32.093±5.1	32.337±5.7
BMI scale		
Normal	1 (5.3)	1 (5.3)
Overweight	6 (31.6)	7 (36.8)
Obesity	12 (63.1)	11 (57.9)
Body fat (%)	43.19±6.9	36.2±7.2**
Lean muscle mass (%)	56.93±7.2	31.1±8.7
kPa	8.079±4.0	7.016±5.4
CAP	314.58±32.1**	294.79±39.1**
Physical activity (min per week)	130±26.5**	349.4±99.5**

** p=0.05

Min per week: Minutes per week

<https://doi.org/10.1016/j.aohep.2022.100834>

Association between hypothyroidism and non-alcoholic fatty liver disease

J Zuarth-Vázquez¹, JP Soriano-Márquez², A Velázquez-Alemán³, L Moreno-Castañeda¹, I López-Méndez⁴, MH Ramos-Ostos⁵, M Uribe², E Juárez-Hernández³

¹ Internal Medicine Service. Fundación Clínica Médica Sur. México City. México

² Gastroenterology and Obesity Service. Fundación Clínica Médica Sur. México City. México

³ Translational Research Unit. Fundación Clínica Médica Sur. México City. México

⁴ Hepatology and Transplant Service. Fundación Clínica Médica Sur. México City. México

⁵ Comprehensive Diagnosis and Treatment Center. Fundación Clínica Médica Sur. Mexico City. Mexico

Introduction and Objectives: Association between hypothyroidism and non-alcoholic fatty liver disease (NAFLD) is controversial. The aim of the study was to evaluate the association between levels of thyroid stimulating hormone (TSH) and NAFLD.

Material and Methods: This is a cross-sectional study of patients who attended at check-up unit. NAFLD was evaluated by the controlled attenuation parameter (CAP). Also, patients were classified by metabolic dysfunction-associated fatty liver disease (MAFLD) criteria. TSH levels were divided into three different cut-off points (>4.5, >3.1 y >2.5). Associations between TSH, NAFLD and MAFLD were evaluated by univariate and multivariate logistic regression analysis.

Results: Three thousand seven hundred forty-one patients were included, 59% (n=2211) were male, mean of age and body mass index were 48 [43-55] years and 25.9 [23.6-28.6] kg/m². 44.5% (n=1664) of patients were diagnosed with NAFLD meanwhile, 1% (n=37) presented significant liver fibrosis. In multivariate analysis, TSH levels did not show an independent association with the presence of NAFLD or MAFLD (Table). According to different cut-off points, patients with high levels of TSH presented similar risks for NAFLD to the general population (presence of metabolic syndrome and high-fat percentage).

Discussion: There is evidence of an association between hypothyroidism and NAFLD. However, liver steatosis is diagnosed by abdominal ultrasound. This is the first study that evaluates steatosis by CAP.

Conclusion: TSH levels are not associated with NAFLD or MAFLD; patients with high TSH levels have the same risk for NAFLD as the general population.