PREVALENCE AND CLINICAL CHARACTERISTICS OF FATTY HEPATIC DISEASE ASSOCIATED WITH METABOLIC DYSFUNCTION IN A POPULATION WITH NORMAL BODY MASS INDEX. (LEAN MAFLD)

A.L. Ordóñez-Vázquez[1], D. Pérez[1], J.P. Soriano[2], E. Tovar[2], E. Juárez[1], M. Uribe[1], Y.I. López[1]

[1] *Department of Gastroenterology, Hospital Médica Sur, México City, México*
[2] *Integral Center for Diagnosis and Therapeutics (CIDyT), Hospital Médica Sur, Mexico City, Mexico*

Introduction and Objectives: The prevalence of fatty liver disease associated with metabolic dysfunction (MAFLD) is estimated at 39.1%. 4.1% of patients with lean MAFLD are characterized by steatosis, normal BMI, and metabolic alterations. This work aims to describe the prevalence of lean MAFLD and metabolic characteristics in the Mexican population.

Materials and Methods: Retrospective study of patients with preventive medical check-up from 2019-2020 includes elastography for evaluation of fibrosis and steatosis (controlled attenuation parameter, CAP). Criteria to define lean MAFLD: BMI <24.9 and ^{3}2 metabolic alterations: blood pressure> 130/85, previous diagnosis of hypertension, glucose alterations (100 - 125 mg / dl; 140 -199 mg / dl postprandial; HbA1c 5.7 - 6.4%, triglycerides> 150 mg / dl, HDL <40 mg / dl in men and <50 mg / dl in women, treatment for dyslipidemia, abdominal circumference ≥102 cm in men and ≥ 88 cm in women and C-reactive protein> 2mg / L). Exclusion: history of liver disease, significant hepatotoxic and/or alcohol consumption (> 2 drinks/day in women,> 3 drinks/day in men). Measures of central tendency and dispersion present data according to the distribution of the sample. A test was performed to analyze differences in clinical variables.

Results: 3863 patients were evaluated, 1754 (45.4%) presented steatosis (CAP> 263 dB / m) and 5.7% (n = 100) met criteria for lean MAFLD. 54% men with median age: 46 [40-56] years, BMI: 23.7 [22.8-24.4] kg / m2, CAP: 293 [271-314] dB / m and liver stiffness: 4.0 [3.5-4.7] kPa. 40% had grade 1 steatosis (> 263dB), 17% grade 2 (> 283 dB) and 43% grade 3 (> 296 dB). The clinical characteristics are shown in Table 1. The BMI showed a significant difference according to the degree of steatosis, being greater in patients with grade 3 (G1: 23.6 [IQR 22.8-24.3], G2: 23.3 [IQR 22.8 - 23.9] and G3: 24.1 [IQR 22.6 [24.1-24.7], p = 0.01)

Discussion: This study confirms the high prevalence of MAFLD / lean MAFLD in the Mexican population. The cut-off points to define the presence of steatosis (> 263 dB / m) has reported greater diagnostic precision (AUROC 0.97) than that used in the clinic (> 232 dB / m); When using the latter, the prevalence of steatosis rises to 65.9%; however, the prevalence of lean MAFLD does not change. This is the first report on the prevalence of Lean MAFLD in Mexico according to different cut-off points of CAP. With more inclusive MAFLD criteria, the prevalence of lean MAFLD does not change. Therefore, it is possible to start non-pharmacological therapy early in patients with overweight, obesity, or normal BMI.

Conclusion: The prevalence of lean MAFLD in the Mexican population is high, with a higher proportion of patients with grade 3 steatosis presenting a higher BMI. The prevalence does not change when using different cut-off points for CAP.

The authors declare that there is no conflict of interest.

Table 1
Clinical characteristics of patients with lean MAFLD

Characteristics	Median [IQR]/ % (n)
Age	46 [40-56]
Weight	66.1 [59-74]

(continued)

Table 1 (*Continued*)

Characteristics	Median [IQR]/ % (n)
BMI	23.7 [22.8 – 24.4]
kPa	4.0 [3.5-4.7
CAP	293 [271-314]
IQR CAP	24 [17-29]
Systolic blood pressure	110 [104-122]
Diastolic blood pressure	73 [69-80]
Fasting glucose	94 [89-99]
Triglycerides	171 [110-236]
HDL	40 [34-47]
PCR	1.6 [0.82-3.0]
HbA1c	5.3 [5.1-5.5]
Waist circumference	89 [83-93]

INCIDENTAL FINDING OF FATTY LIVER IN AUTOPSIES

I.E. Bravo-Espinoza[1], G. Arist-Urista[2], M.A. Durán-Padilla[2], J.L. Pérez-Hernández[1], R.Y. López-Pérez[1], P.L. Pérez-Santos[1], J.L. Montenegro-Tablada[1], J. Escobedo-Uribe[3], A. Servín-Caamaño[3], F. Higuera-De la Tijera[1]

[1] *Service of Gastroenterology. General Hospital of Mexico Dr. Eduardo Liceaga. Mexico City, Mexico*
[2] *Service of pathology General Hospital of Mexico Dr. Eduardo Liceaga. México City, México*
[3] *Internal Medicine Service General Hospital of Mexico Dr. Eduardo Liceaga. Mexico City, Mexico*

Introduction and Objectives: Non alcoholic fatty liver disease (NAFLD) and alcoholic fatty liver disease (ALD) are the most common emergent causes of chronic liver disease; they evolve from simple steatosis, steatohepatitis, fibrosis/cirrhosis and hepatocellular carcinoma. Knowing the factors that influence their development and screening can improve the prognosis of these patients.

Objective: To determine the prevalence of incidental findings of fatty liver in necropsies performed for all causes of mortality and to analyze the main characteristics of these patients.

Materials and Methods: Type and design of the study: Observational, descriptive, transversal study.

Procedure: All necropsy records for all causes of mortality registered at the Pathology Department in our center in the last 10 years were reviewed (January 2010 – December 2019). We search the following findings: "liver steatosis," "steatohepatitis," degree of fibrosis/cirrhosis, "atherosclerosis," "heavy alcohol intake," "diabetes, obesity, dyslipidemia, metabolic syndrome." We used descriptive and analytical statistics: X^2, exact Fisher's test, univariate and multivariate logistic regression models.

Results: 4557 necropsies were registered. Fatty liver was found in 6.4% of the cases. 53.3% were women; 51 ± 15 years old; There was simple steatosis in 156 cases (53.6%) and steatohepatitis with necroinflammatory activity in 135 (46.4%). A 49.8% presented liver fibrosis (F1=38 [13.1%]; F2=48 [16.5%]; F3=15 [5.2%]; F4=44 [15.1%]). The etiology through clinical history and histological findings compatible with alcoholic liver injury occurred in 67 cases (23%), NAFLD in 98 (33.7%), mixed type (NAFLD+ALD) in 19 (6.5%), the etiology could not be identified in 107 (36.8%). The multivariate analysis showed alcohol intake as the main risk factor for necroinflammation (OR=2.58; ICal95%= 1.52-4.38; p<0.0001). History of alcohol intake (OR=2.52; ICal95%= 1.40-4.54; p=0.002) and presence of necroinflammatory activity (OR=6.53; ICal95%= 3.72-11.47; p<0.0001) were predictive factors of fibrosis F2-F4. (Table 1)

Conclusions: In this study, which included all causes of death, incidental findings of steatosis, steatohepatitis, and fibrosis/cirrhosis