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Introduction and Objectives: Pulse Wave Velocity (PWV) and ultrasound analysis of the carotid and femoral arteries (CA/FA) may offer a more accurate estimation of the cardiovascular risk (CVR) than traditional scores beyond the Coronary Calcium Score. The aim was to evaluate the impact of PWV and Doppler examinations of the CA/FA as modifiers of CVR in MASLD-patients in whom traditional scores were calculated.

Patients and Methods: This was a sectional study in MASLD-outpatients without clinical atherosclerotic disease. The AHA/ACC, Framingham and PREVENT scores were calculated, with a value ≥ 20% considered high-risk. PWV index (patient-PWV/median PWV of the National CVR standard) was assessed (Arteris® AOP), and if ≥ 1 was considered as high-risk. CA/FA Doppler (Affiniti-70, Philips, USA) identified atherosclerotic plaques. The prevalence of high-risk patients was first calculated according to each score and reassessed after PWV and Doppler of CA/FA.

Results: One hundred fifty-three patients were evaluated between Oct-2023 and Mar-2025 (78% women, 60.2 ± 9.4 yrs., 68% obese, 79% SAH, 67% T2DM, 77% dyslipidemia). Regarding overall scores, 32% of patients were classified as high risk (Prevent 15%, AHA/ACC 18%, Framingham 26%). Notably, a high PWV-index was observed in 33%, and 76% had atherosclerotic plaques, characterizing established atherosclerotic disease. The risk reclassification by the PWV-index ocurred in 21%,25%, and 28%, and by the Doppler 53%,60%, and 62%, respectively, for the Framingham, AHA/ACC, and Prevent scores.

Conclusions: Patients with MASLD have a high prevalence of subclinical atherosclerosis. Traditional scores underestimated CVR, highlighting the need for additional methods for better risk stratification.

Conflict of interest: None

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#18

CHANGES IN BODY COMPOSITION AND HEPATIC ELASTOGRAPHY VALUES IN PATIENTS WITH METABOLIC DYSFUNCTION-ASSOCIATED STEATOTIC LIVER DISEASE AT A MEDICAL CENTER IN CARTAGENA – COLOMBIA, DURING THE PERIOD FROM OCTOBER 2023 TO JANUARY 2025

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Introduction and Objectives: Metabolic dysfunction-associated steatotic liver disease (MASLD) is characterized by the accumulation of triglycerides in the liver, linked to cardiometabolic risk factors. Its global prevalence exceeds 30%, rising in parallel with overweight and type 2 diabetes. Visceral fat is associated with systemic inflammation and hepatic fat accumulation. Although elastography is useful for assessing disease progression, its high cost and limited availability necessitate the exploration of alternative tools. The use of body composition parameters has been proposed as potential predictors of disease progression.

To determine the relationship between changes in body composition and hepatic elastography values in patients with liver disease associated with metabolic dysfunction.

Materials and Methods: This was an analytical, observational, and prospective study. Patients over 18 years old with a previous diagnosis of steatotic liver disease were included. All underwent elastography and bioelectrical impedance analysis at baseline and after one year to assess progression risk factors. The patients signed the informed consent.

Results: A total of 88 patients were included, 52.3% of whom were women. Initial elastography readings averaged 9.2 kPa; the controlled attenuation parameter (CAP) was 269 dB/m. Factors associated with elevated liver stiffness included type 2 diabetes, chronic kidney disease, AST, APRI, and FIB-4 scores. During follow-up, smoking, alcohol consumption, CAP, and changes in body fat were linked to disease progression. In multivariate analysis, only smoking and baseline CAP were independent predictors.

Conclusions: Smoking and baseline CAP were significantly associated with the risk of MASLD progression, suggesting their potential utility in guiding timely interventions.

Conflict of interest: None

Variable	b	IC 95%	p-value
Female sex	-0,209	(-3,681 - 0,535)	0,14
Arterial hypertension	-0,099	(-2,916 - 1,415)	0,49
Overweight	0,084	(-2,205 - 4,037)	0,558
Prediabetes/Type 2 diabetes mellitus	0,069	(-1,629 - 2,672)	0,628
Smoking	0,483	(2,2 - 7,2)	<0,001
Alcohol consumption	0,311	(0,002 - 0,032)	0,026
Changes in BMI	0,18	(-0,272 - 1,173)	0,216
Changes in waist circumference	0,047	(-0,060 - 0,083)	0,754
CAP	0,346	(0,005 - 0,041)	0,013
Changes in CAP	0,265	(-0,001 - 0,033)	0,06
Changes in body fat mass	0,274	(-0,013 - 0,634)	0,06
Changes in skeletal muscle mass	-0,1	(-1,423 - 0,696)	0,493
Changes in body fat percentage	0,345	(0,089 - 0,799)	0,015
Changes in waist-to-hip ratio	0,051	(-19,025 - 26,984)	0,729
Changes in visceral fat	0,217	(-0,147 - 1,066)	0,134

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#19

PLANT-DERIVED MONOTERPENE SYNERGIZES WITH SORAFENIB TO SUPPRESS DRUG-TRIGGERED HEPATOCELLULAR CARCINOMA IN ANIMALS

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Introduction and Objectives: Sorafenib (SB), while established as a first-line multikinase inhibitor for advanced hepatocellular carcinoma (HCC), demonstrates constrained clinical utility due to significant adverse effects and the emergence of drug resistance. To potentially enhance its therapeutic profile, we explored combination therapy with natural compounds. Previous investigations from our group identified safranal (SF), a major bioactive monoterpene constituent of saffron, as exhibiting notable anti-HCC properties.

This study aimed to investigate potential synergistic interactions between SB and SF that might improve HCC treatment outcomes.

Materials and Methods: We employed a chemically-induced cirrhotic HCC rat model to evaluate both SF monotherapy and SB-SF

combination therapy. Comprehensive molecular characterization included RNA sequencing with subsequent differential gene expression analysis, pathway enrichment studies, and protein interaction network mapping. Mechanistic findings were confirmed through immunohistochemical and immunoblotting techniques.

Results: The SB-SF combination demonstrated enhanced anticancer efficacy compared to SB alone. Transcriptomic profiling identified 45 differentially expressed genes associated with HCC suppression, particularly those involved in proliferation control, oxidative stress response, and apoptotic regulation. The combination therapy significantly downregulated key oncogenic markers including NF-κB-p65, COX-2, and β-catenin, suggesting its potential as a cost-effective therapeutic approach that warrants further clinical investigation.

Conclusions: The study reveals a multifaceted mechanism by which SF augments SB's anticancer activity in HCC. The combined treatment modulates critical oncogenic pathways including NF-κB and Wnt/β-catenin signaling while rebalancing apoptotic regulators through decreased Bcl-2 and increased Bax/caspase expression. Additionally, it suppresses proliferative markers such as Ki-67 and PCNA while attenuating inflammatory mediators including TNF-α and MMP-9. These coordinated effects demonstrate potent anti-tumorigenic, anti-angiogenic, and pro-apoptotic activity, highlighting the therapeutic promise of this combination approach for HCC treatment.

Conflict of interest: None

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#20

CONNECTIVE TISSUE GROWTH FACTOR AS A MARKER OF FIBROSIS IN PATIENTS WITH CHOLESTASIS

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Introduction and Objectives: Connective Tissue Growth Factor (CTFG) is a multifunctional protein, plays a crucial role as a mediator in fibrogenic pathways involved in the development and progression of liver disease.

To establish the correlation between serum CTGF values by ELISA and the degree of liver fibrosis determined by transitional elastography in patients with cholestasis diagnosed with primary biliary cholangitis (PBC).

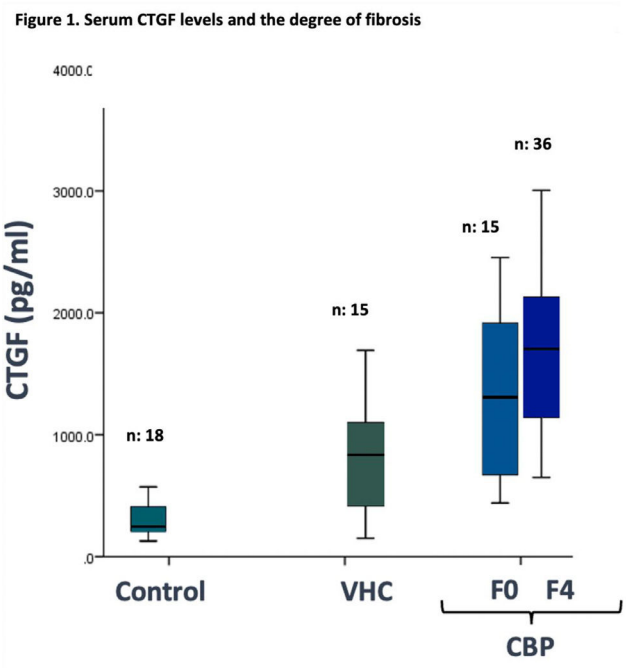
Materials and Methods: A descriptive and analytical prolective study that included patients with cholestasis diagnosed with PBC, patients with cirrhosis due to hepatitis C and a control group of healthy subjects. Serum CTGF levels and the degree of fibrosis were quantified. Statistical analysis: CTGF means were compared using a univariate model with etiology as an between-group factor and degree of fibrosis as an within-group factor, significance level 5%.

Results: 51 patients with PBC, 15 HCV and 18 controls were included. Age 48±15 years, 75% women. The level of CTFG in patients with cholestasis increased with increasing degree of fibrosis. PBC (F0) 1342.4±669.9; PBC (F4) 1679.9±623.3. HCV (F4) 816.3±431.6, CT 314.1±163. Statistically significant differences (p<.001) were found between groups CT vs PBC (F0); CT vs CBP (F4), HCV (F4) vs PBC (F4) and CT vs HCV (F4). Figure 1

Conclusions: There is a direct relationship between serum levels of CTFG of patients with cholestasis and degrees of fibrosis by transition elastography, perhaps it can be considered as a marker of fibrosis induction in patients with cholestasis.

Conflict of interest: None

Serum CTGF levels and the degree of fibrosis



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#21

CONNECTIVE TISSUE GROWTH FACTOR ASSESSMENT: DETERMINATION OF CUT-OFF POINTS FOR LIVER FIBROSIS IN CHOLESTASIS

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