

Title:

Efficacy of the regional Mexican diet versus the Mediterranean diet in patients with MASLD: a 24-week non-inferiority trial

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Efficacy of the regional Mexican diet versus the Mediterranean diet in patients with MASLD: a 24-week non-inferiority trial

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INTRODUCTION

MASLD is the most common liver disease worldwide. Treatment is based on dietary modification (1,2). The aim of our study was to demonstrate that the Regional Mexican Diet (RMD) is comparable to the Mediterranean Diet (MD) in improving hepatic steatosis and fibrosis in patients with MASLD at 12 and 24 weeks of intervention.

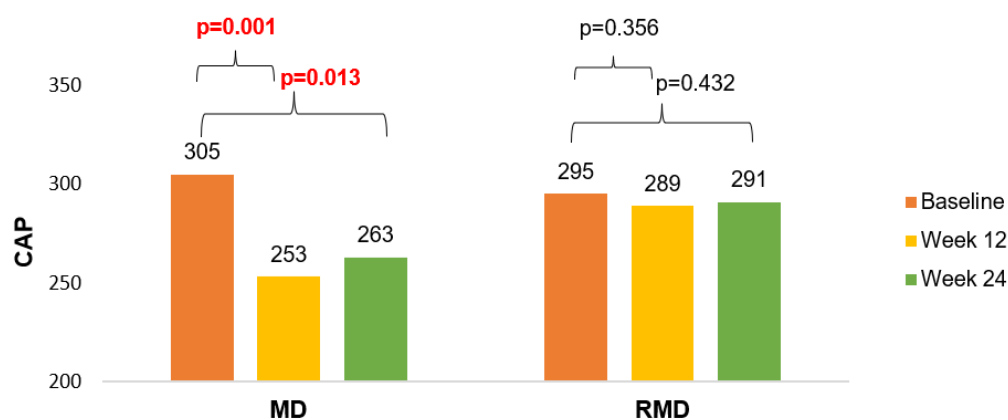
A randomized clinical trial was conducted in patients with MASLD. Participants were included selecting those with moderate-severe echographic steatosis, aged 18-70, Mexican nationality, and without alarming signs. The participants were divided equally into MD or RMD. Assessments included dietary monitoring, somatometry, bioimpedance body composition analysis, general laboratory tests, and Fibroscan® at baseline, week 12,

and week 24, using IBM SPSS V.26 for statistical analysis, adhering Declaration of Helsinki guidelines (IIMB-UV-2022-003).

The study started with 46 individuals, finalizing with 11 lost to follow-up (7 MD, 4 RMD). In the MD group, average age was 55.6 ± 8 years, BMI 30.14 ± 5 kg/m², predominantly men (69.2%), with arterial hypertension (46.2%). Significant reductions in weight ($p=0.010$), BMI ($p=0.048$), visceral fat, ($p=0.006$), umbilical ($p=0.002$), waist ($p=0.008$), hip circumferences ($p=0.012$), ALT ($p=0.049$), and triglycerides ($p=0.003$) were observed at 12 and 24 weeks. RMD participants, average age 60 ± 9 years and BMI 33.5 ± 5 kg/m², were mainly women (82.4%) with obesity (70.5%). After 24 weeks follow-up, reductions in BMI ($p=0.001$), weight ($p=0.001$), waist circumference ($p=0.014$), hip ($p=0.010$), and decrease of transaminases (AST, $p=0.034$; ALT, $p=0.017$) were observed.

Both diets effectively lowered mean CAP values. kPa changes indicated no significant fibrosis signs, but overall kPa mean decreased ($\Delta = -0.93 \pm 5.5$ kPa). (Figure 1).

Figure 1. Mean CAP of the patients with MASLD on the Mediterranean Diet and the Regional Mexican Diet, at the baseline and at weeks 12 and 24



* CAP: Controlled Attenuation Parameter; MD: Mediterranean Diet; RMD: Regional Mexican Diet.

DISCUSSION

Our study found DM and RMD equally effective in improving MASLD symptoms, particularly steatosis, highlighting the feasibility of using regionally adapted diets for treating fatty liver. The implementation of DM is not feasible in all countries. For this reason, adapting the diet to the availability of ingredients in the country is a better option, because its balanced implementation can improve the health of patients with fatty liver (3-5).

Studies based on dietary regimens have limitations. Limitations include uncontrolled food preparation, small sample, and brief follow-up. This limits the generalizability of our results.

CONCLUSION

Both diets significantly improved hepatic steatosis and fibrosis parameters in MASLD patients, demonstrating that RMD provides comparable benefits to MD. This suggests the importance of implementing adaptable dietary plans based on local food availability that parallel MD's components.

Financial Disclosure

No funding was received.

Conflict of Interest

No conflicts declared.

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