

MASH

#P19 - Weight loss is associated with decreased serum insulin levels in non-diabetic MASH patients

L. TOMA¹, A. MIHAILA¹, M. ISTRATE¹, I. TANASIE¹, A. SIMU¹, L. ILIESCU¹

(1) Fundeni Clinical Institute - Bucharest (Romania)

Background & Aims

Metabolic-syndrome associated steatohepatitis (MASH) is a critical step in the progression of liver disease and may represent a turning point in the evolution of MASLD patients. Therapeutic interventions performed early in this stage may decrease the rate of progression to advanced fibrosis and severe liver disease. Insulin-resistance is a critical component in steatohepatitis and high levels of serum insulin have been described in non-diabetic patients. This study aims to evaluate the impact of weight loss in non-diabetic MASH patients with hyperinsulinemia.

Methods

We prospectively evaluated over-weight patients diagnosed with MASH. MASH diagnosis was based on ultrasonography aspect, presence of risk factors and increased levels of transaminases. After initial evaluation, patients received a written action plan regarding weight loss and life-style changes. We determined anthropometric parameters, serum levels of transaminases and insulin, at initial evaluation and at 3 months. Patients with diabetes or impaired glucose-tolerance test were excluded.

Results

149 patients were included in the study (mean age 43.31 +/- 13.91 years old, 58.4% female). Increased abdominal circumference was noted in 73.5% of females and 95.1% of males. Mean BMI was 28.3 +/- 2.1 kg/m² and mean serum insulin levels were 18.4 +/- 6.13 µU/mL. At three months, 108 patients obtained a weight reduction of over 5% of the initial body weight. Patient with weight loss has significantly lower levels of insulin (10.24 µU/mL versus 16.21 µU/mL, p= 0.02), liver stiffness (4.8 kPa versus 7.2 Kpa, p= 0.03) and CAP (236.15 versus 263.53, p= 0.01) compared to patients without weight loss. Increased transaminases were noted in 7 patients with weight loss (6.5%) and 12 patients without weight-loss (29.2%). In addition, increased insulin levels correlated with progression of CAP in patients without weight loss.

Conclusions

This study emphasizes the importance of weight reduction in MASH management. Furthermore, serum levels of insulin may help reveal patients at high risk of MASH progression, in whom prompt therapeutic interventions are required.