Clinical validation of a non-invasive lipidomic test for the diagnosis of non-alcoholic fatty liver disease (NAFLD)

1. BACKGROUND & OBJECTIVES

Non-alcoholic fatty liver disease (NAFLD) is the most common chronic liver disease in developed countries. NAFLD ranges from simple steatosis to the appearance of inflammation, cell damage and progressive fibrosis in the more severe non-alcoholic steatohepatitis (NASH) condition, which may also evolve to cirrhosis and hepatocellular carcinoma.

The prevalence of NAFLD is high and its incidence has recently risen in most countries due to the current obesity epidemic. There is a clear need for non-invasive markers that allow the diagnosis of this disease without the practice of a liver biopsy.

2. PATIENTS & METHODS

Participants: A total of 22 clinicians from six hospitals and one primary care centre from the Basque Country Public Health System participated in this study.

Patients: The study enrolled 98 NAFLD patients. Preliminary results for 80 patients that already finished follow-up are presented.

Intervention: Patients were prescribed diet and exercise and were monitored for 18 months, with visits at 0, 9, and 18 months, when serum was collected and stored for the test OWLiver. Metabolic profiling was performed.

3. RESULTS

OWLiver results were consistent with those obtained from biochemical and anthropometric analyses; as well as with the adherence of some of these patients (19%) to diet and exercise.

Changes in the metabolic profile of some patients were obvious and shifts from both NASH to steatosis or steatosis to healthy liver were observed in 18 months.

4. CONCLUSIONS

The OWLiver test is able to non-invasively monitor patient response to diet and exercise.

The test is indicated for early stages, allowing to identify patients with risk of progression.

The test emerges as a highly useful tool for specialists to identify those patients with steatosis or normal liver and direct them to primary care, allowing the specialist to focus on patients either with NASH or at risk of developing this more severe condition.

REFERENCES


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