

Author's Reply

Reply to the Letter "Effect of anti-oxidant agents in patients with hepatocellular diseases"

Dear Editor,

In response to the interesting letter to the editor written by Di Francia et al¹, we also think that among the several molecular events leading to fibrogenesis, the initiation and perpetuation of oxidative stress in the liver appear to play a crucial role. In fact, patients with fibrogenic non-alcoholic steatohepatitis (NASH) display an increase in radical oxygen and nitrogen species production² with a lack of endogenous antioxidant defenses³. Although the natural history of non-alcoholic fatty liver disease (NAFLD) remains uncertain some patients have a progressive disease.

In our study⁴ mean age was 47.4 years old, because this pathology is common in early stages of the life due to the progressive and alarming increase of childhood obesity. In the last years childhood obesity has reached epidemic diffusion. Between 3% and 11% of the paediatric population present NAFLD^{5,6}. Simultaneously, also the prevalence of obesity comorbidities has been increased and the NAFLD has become the most common liver disease in young people⁷.

In our study⁴, we have excluded patients with other liver diseases (hepatitis B, C, autoimmune liver disease, hemochromatosis or treatment with steatosis-inducing drugs) and this is the reason of lack of the other liver diseases and frail patients as commented by Di Francia et al¹.

Both, genetic⁸⁻¹² and environmental factors, especially dietary habits¹³ influence the pathogenesis of NAFLD.

Also, probiotic has been shown to improve some parameters of NAFLD. We have demonstrate that treatment with a probiotic containing of 500 million of *Lactobacillus bulgaricus* and *Streptococcus thermophilus*, with a randomized clinical design, improved liver aminotransferases levels in patients with NAFLD¹⁵.

Modification of the lifestyle is effective in the treatment of liver steatosis and inflammation whereas there is not enough evidence on the effects of lifestyle changes on fibrosis (Practice Guideline AGA, 2012¹⁶).

However, most of patients are not compliant with healthy diet and physical activity. Some drugs for the management of NAFLD have been proposed, despite none has shown considerable efficacy on the whole spectrum of liver damage, including silimarin¹⁷⁻¹⁹ that they have been shown to improve liver histology in NAFLD as well as components of oxidative stress and insulin resistance.

Although these studies have shown unclear data to support or refute the use of antioxidant supplements for patients with NAFLD, it may be advisable to carry out large prospective randomised clinical trials on this topic.

Conflict of Interest

The Authors declare that they have no conflict of interests.

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