Non-Alcoholic Fatty Liver Disease: A New Risk Factor for Cardiovascular Disease?

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The non-alcoholic fatty liver disease (NAFLD), highly prevalent in adult population of developed countries has been widely cited as a hepatic manifestation of metabolic syndrome or as a component of it. Significantly related to cardiovascular disease, its true role in this context remains without adequate elucidation probably due to frequent presence of risk factors for cardiovascular disease in patients with NAFLD. Its pathogenesis is not completely understood; however, its close association with insulin resistance has been clearly demonstrated.

Is NAFLD a new risk factor for cardiovascular disease? A significant number of studies have related, in several forms, the NAFLD with cardiovascular disease. Nevertheless, limitations mainly related to design, sample and method of diagnosing, makes it hard to have a definitive conclusion. Prognostic studies showed significantly increased mortality in patients with NAFLD compared to the general population [1-4]. In these studies, cardiovascular disease was the leading [2,3] or at least the second leading cause of death, featuring an increased risk of death from cardiovascular disease in patients with NAFLD. However, most of these patients had overweight or obesity, impaired fasting glucose or impaired glucose tolerance or diabetes [1,2,4], hypertension and metabolic syndrome [2]. Case-control studies have demonstrated significant and independent relationship between NAFLD and carotid atherosclerotic disease suggesting that in this context, NAFLD is a risk factor [5,6]. Nevertheless, in these studies the NAFLD group had significantly more risk factors for cardiovascular disease than the control group [5,6]. By multislice computed tomography, cross-sectional study related NAFLD to remodeling lesions of the coronary artery and lipid core plaques significantly and independent of classic risk factors for coronary artery disease, suggesting that patients with NAFLD have an increased risk of developing vulnerable plaques [7]. Despite the limitations, the vast majority of these studies support to consider that NAFLD, in the presence of risk factors recognized for cardiovascular disease represents additional risk. Therefore, NAFLD should be taken into account in cardiovascular risk stratification and the best way to do it, needs to be defined.

While important issues such as the specific role of NAFLD in the atherogenic process, non-invasive diagnosis, pharmacological treatment and the relationship between the degree of liver involvement and cardiovascular prognosis are not properly clarified, multidisciplinary approach to these patients, to optimal treatment of metabolic disorders and related diseases, should be defined by means of an extensive collaboration between the specialties of interest, which is essential to this process.

References

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