

# The correlation between incidental NAFLD and carotid atherosclerosis

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Nonalcoholic fatty liver disease (NAFLD) is often caused by abdominal obesity, which is also one of the main causes of insulin resistance and metabolic syndrome. The latter, in turn, is an important cardiovascular risk factor, and has been found to be associated with the presence of carotid atherosclerotic lesions. It is therefore understandable that an association may exist between NAFLD and carotid lesions. Although the association between NAFLD and carotid lesions is plausible and demonstrated, its practical implications have not been fully understood.

A research article to be published on October 14, 2009 in the *World Journal of Gastroenterology* addresses this question. The research team, led by Prof. Antonio Muscari from University of Bologna, S.Orsola-Malpighi Hospital, have prospectively examined a random group of consecutive outpatients undergoing abdominal US to establish whether those with NAFLD had an increased prevalence of early or advanced carotid lesions.

One hundred and fifty-four consecutive outpatients (age range 24-90 years, both sexes) referred by general practitioners for abdominal US, and drinking less than 20 g alcohol/day, underwent carotid US for an assessment of carotid intima-media thickness (c-IMT) and carotid plaque prevalence. Hepatic steatosis, visceral fat thickness and subcutaneous fat thickness were also assessed at ultrasonography.

The results showed higher c-IMT values were found in the presence of NAFLD (90 patients), even after adjustment for indices of general and

abdominal obesity and for the principal cardiovascular risk factors. The prevalence of carotid plaques was 57.8% in the patients with NAFLD vs 37.5% in the patients without this condition ( $P = 0.02$ ). The adjusted relative risk of having carotid plaques for patients with NAFLD was 1.85 (95% CI: 1.33-2.57,  $P$

The researchers drew a conclusion that hepatic steatosis is a marker of increased c-IMT and of the presence of carotid plaques in outpatients undergoing abdominal US. Any incidental US finding of hepatic steatosis should prompt medical practitioners not only to assess the metabolic risk, but also to consider the search for silent carotid lesions.

More information: Ramilli S, Pretolani S, Muscari A, Pacelli B, Arienti V. Carotid lesions in outpatients with nonalcoholic fatty liver disease. *World J Gastroenterol* 2009; 15(38): 4770-4774, [www.wjgnet.com/1007-9327/15/4770.asp](http://www.wjgnet.com/1007-9327/15/4770.asp)

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