
Fatty Liver, Heart Disease Link in Obese People



Non-alcoholic fatty liver disease (NAFLD) can increase risks of cardiovascular disease and heart failure in obese individuals, according to a new study published in the journal *Radiology*. Investigators say the findings add more support to the importance of dietary interventions in such patients.

NAFLD — also known as hepatic steatosis — is the most common liver disease, affecting up to 30 percent of the general population. It is prevalent in 70 to 90 percent of obese individuals and those with type 2 diabetes. NAFLD is considered to be a manifestation of the metabolic syndrome, a group of risk factors like high blood pressure, excess abdominal fat and unhealthy cholesterol levels that raise the risk of heart attacks, strokes and other health problems.

“One of the unique aspects of our study is that we took all of the individual components of the metabolic syndrome into account as possible confounders in this association, as the metabolic syndrome is associated with NAFLD and with cardiovascular disease,” says lead author Ralph L. Widya, MD, from the Leiden University Medical Center in Leiden, the Netherlands.

For the study, Dr. Widya and colleagues used proton magnetic resonance spectroscopy to noninvasively measure hepatic triglyceride content, a measure of fat in the liver, and cardiac MRI to assess left ventricular diastolic function in 714 men and women aged 45 to 65 years. Of the 714 patients, 47 percent were categorised as overweight, and 13 percent were classified as obese.

Diastolic function refers to the phase of the heartbeat when the heart relaxes to fill with blood. Abnormalities of diastolic function, represented by inefficient filling of the heart, play a major role in exercise intolerance in patients presenting with heart failure.

According to the results, an increase in hepatic triglyceride content was associated with a decrease in mean left ventricular diastolic function in the obese subgroup of the study population. The association between hepatic triglyceride content and left ventricular diastolic function existed independently of the metabolic syndrome, suggesting that fatty liver itself could, at least in obese people, pose a risk of heart dysfunction above and beyond known cardiovascular risk factors that are clustered within the metabolic syndrome.

“Our results may be of importance in cardiovascular risk stratification in obesity, because there is a large variation in the degree of hepatic steatosis in obesity,” Dr. Widya explains. “Also, more emphasis should be put on dietary interventions to reduce or prevent hepatic steatosis.”

The reasons for the link between fatty liver and heart function are unknown, Dr. Widya notes, but could be related to several factors, including the presence of infection-fighting white blood cells called macrophages or increased expression in the liver of small proteins known as cytokines.

Source: [Radiological Society of North America](#)

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Published on : Thu, 28 Jan 2016