

# Diabetes doubles liver cancer risk for patients with advanced hepatitis C

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Patients who have chronic hepatitis C with advanced fibrosis have twice the risk of developing liver cancer if they also have diabetes. These findings are published in the June issue of *Hepatology*, a journal published by John Wiley & Sons on behalf of the American Association for the Study of Liver Diseases (AASLD).

Recent studies have suggested that diabetes increases one's risk for hepatocellular carcinoma (HCC), also known as liver cancer, possibly because diabetes often occurs as part of the metabolic syndrome, which increases the risk of non-alcoholic steatohepatitis (NASH), which can lead to liver cancer. Chronic hepatitis C also increases the risk of liver cancer, so patients who have both diabetes and hepatitis C have two pathways through which HCC might develop.

Researchers led by Bart Veldt and Harry Janssen of the Erasmus MC University Medical Center in the Netherlands, aimed to quantify the liver cancer risk of patients who have both diabetes mellitus and advanced hepatitis C. They used data from five large hepatology units in Europe and Canada and included 541 consecutive patients between 1990 and 2003 who had chronic hepatitis C and advanced liver fibrosis or cirrhosis as shown by liver biopsy. For each patient, they gathered demographic, clinical, biochemical and virological data, along with fibrosis assessment and details of hepatitis C treatment.

Eighty-five of the 541 patients included in the study had diabetes. Patients with more severe fibrosis were more likely to be diabetic. "The

prevalence of diabetes mellitus was 10.5 percent for patients with Ishak fibrosis score 4, 12.5 percent for Ishak-score 5 and 19.1 percent for Ishak-score 6,” the authors report.

During the median follow-up time of four years, 11 patients (13 percent) with diabetes vs. 27 patients (5.9 percent) without diabetes developed hepatocellular carcinoma. The 5-year occurrence was 11.4 percent and 5.0 percent, respectively. Male gender and older age were significantly associated with elevated HCC risk. “In addition, there was a strong trend towards a higher incidence of HCC among patients with diabetes mellitus,” the authors report. Multivariate Cox regression analysis of patients with Ishak 6 cirrhosis showed that diabetes was independently associated with the development of HCC.

Interestingly, among patients with diabetes, there was a trend towards higher risk of HCC as fasting glucose levels increased. The authors hypothesize that resulting hyperinsulinemia might help explain the increased risk of HCC among diabetic patients.

Whatever the mechanism, the risk is clear. “For patients with chronic hepatitis C and advanced cirrhosis, diabetes mellitus increases the risk of developing HCC,” the authors conclude.

Source: Wiley

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