

中文題目:治療前血糖值決定C型肝炎輕病患者病毒成功清除後產生肝癌風險

英文題目: Pretreatment glucose status determines HCC development in HCV patients with mild liver disease after curative anti-viral therapy

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### **Background/Aims**

Although diabetes mellitus (DM) is known to increase the risk of hepatitis C virus (HCV)-related hepatocellular carcinoma (HCC), the impact of dynamic glucose status on HCC occurrence in chronic hepatitis C (CHC) patients receiving antiviral therapy is unclear.

### **Methods**

In total, 1112 biopsy-proven patients treated with peginterferon/ribavirin were enrolled in this study. Both pretreatment and post-treatment glucose status, including 75g oral glucose tolerance test (OGTT), were measured to evaluate the association between glucose status and the development of HCC.

### **Results**

Of the 1112 patients evaluated, 93 (8.4%) developed HCC over 5183.8 person-years of follow-up (annual incidence rate: 1.79%). DM only influenced the risk of developing HCC in patients with mild liver disease (F0-2) and a sustained virological response (SVR) but not in other patient subpopulations. Cox-regression analysis demonstrated that the strongest factor associated with HCC in patients with mild liver disease and SVR was the presence of DM (hazard ratio [HR]/95 % confidence intervals [CI]:3.79/1.420-10.136, P=0.008), followed by age (HR/CI:1.06/1.001-1.117, P=0.046) and platelet count (HR/CI:0.989/0.979-1.000, P=0.05). The percentages of SVR patients with F0-2 with normoglycemia, pre-DM, sub-DM (pre-sDM) and DM before treatment were 45.3 % (n=267), 29.9 % (n=176), 15.6 % (n=92), and 9.2 % (n=54), respectively. The percentages of HCC in patients with normoglycemia, pre-sDM, and DM were 1.1 %, 3.7 %, and 11.1 %, respectively (trend  $p < 0.001$ ). Sixteen of the 19 (84.2 %) HCC patients possessed a glucose abnormality (including 6 patients with DM and 10 patients with pre-sDM) before antiviral therapy. Compared to patients with normoglycemia, the incidence of HCC increased gradually from pre-sDM (HR: 3.6, P=0.05) to DM (HR: 11.6, P=0.001) (adjusted trend P=0.004)

### **Conclusions**

DM is a critical determinant for the development of HCC in SVR patients with mild liver disease. Pre-sDM status carried an additional risk for HCC, and these patients should also be carefully monitored for HCC after viral eradication.

**Key words:** *HCV; DM; HCC; treatment; SVR; OGTT; Pre-DM*