中文題目：B 型肝炎表面抗原陽性帶原者的肝癌發生風險評估:肝硬化或肝癌發生風險分數

英文題目：Risk assessment of hepatocellular carcinoma among hepatitis B surface antigen carriers: liver cirrhosis or HCC risk score

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Introduction: Hepatitis B surface antigen (HBsAg) carrier is well-known high risk group for hepatocellular carcinoma (HCC) in Taiwan and the world. Risk of each HBsAg carriers should be different. In American association for the study of liver disease (AASLD) HCC practice guideline, sex, age and viral load were mentioned as determine factor of HCC risk. Based on the large-scaled community-based longitudinal study in Taiwan, REVEAL study, published a HCC risk score among HBsAg carriers, and were well validated by hospital-based patients from Hong Kong and Korea. There were 5 parameters, including age, sex, Alanine Aminotransferase (ALT) level, HBeAg and HBV DNA concentrations. On the other hand in the Asian-Pacific association for the study of the liver (APASL) and the Japan society of hepatology (JSH) HCC practice guideline mentioned that patients with HBV related liver cirrhosis (LC) are super high risk group and should undergo HCC surveillance more frequently. However, LC was not included in the HCC risk score.

Aim: We conducted a community-based prospective study to elucidate the relationship between risk score and LC in HCC development.

Methods: From 2003 to 2010, a total of 7643 person-times were screening for HBsAg in Yujing township, where had population around 15000. A total of 360 HBsAg carries were detected. And 17 of them were co-infected by hepatitis C using indicator of anti-HCV. In 2011, all 343 cases with HBV monoinfection (HBsAg(+) anti-HCV(-)) were call back and 180 (52.5%) responded. All items for generating HCC risk score were obtain. Ultrasonography (US) and liver stiffness measure (LSM) by Fibroscan ® were used to diagnose of LC. We define HCC risk score >12 as high risk for HCC and also define liver parenchyma score >7 or LSM >10 kPa as LC. All subjects received HCC surveillance by US and alpha-fetoprotein (AFP) with interval of 3 months for LC patients and 6 months for others.

Results: The median (range) of HCC risk score was 9.3±3.2 (3~17), and 51 (28.3%) cases were 12 or higher. It was 5.8±4.0 (2.2~26.6) kPa for LSM. Twenty-seven (15%) subjects were diagnosed as cases of LC by US (n=11), LSM (n=9) and both (n=7)). For the 51 patient with higher score (>=12), 14 (27.5%) were LC. While 14 (51.9%) of 27 LC cases had HCC risk score (>=12). Four patients received oral antiviral agent-entercavir for their active hepatitis. After median 10.5±3.5 (1.4~16.7) months follow up, a case of HCC detected. She was a 64 year-old lady with a HCC score as high as 15 and LC diagnosed by both US and LSM. Before HCC development, she received entecavir treatment for 13 month.

Conclusions: In this aged population, we found that half of LC patients had high HCC risk score, and one-fourth of patients with high HCC score were LC. Preliminary results implied that patients defined as high risk by both HCC risk score and LC had highest risk of developing HCC, despite of antiviral treatment. This prospective study will deliver more solid evidence of this issue.