

中文題目：Propranolol 可以改善晚期肝癌存活

英文題目：Propranolol improves survival in advanced hepatocellular carcinoma – a population-based study

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Background:

Beta-blocker usage is demonstrated to reduce metastasis recurrence and mortality in various kinds of cancers. Adrenergic receptor β_2 (ADRB2) has been reported to be upregulated in HCC. Propranolol is reported to reduce hepatocellular carcinoma (HCC) risk in patients with cirrhosis. This study investigated the impact of propranolol on the outcome of advanced HCC.

Methods:

Between January 1, 2000 and December 31, 2011, a patient cohort was extracted from the Longitudinal Health Insurance Database 2000, a subset of the Taiwan National Health Insurance Research Database. The index date of HCC was the initial date of the palliative treatment with TACE, radiotherapy, chemotherapy or sorafenib. A propranolol cohort (propranolol usage > 1 year) and non-propranolol cohort were matched using a propensity score. Cox proportional hazards models were used to estimate the hazard ratio (HR) and 95% confidence intervals (CI) of cancer associated with propranolol treatment.

Results:

We identified 1,560 patients with advanced HCC using propranolol and 3,120 HCC patients (2-fold propensity score matching) without propranolol were selected as control group. In the Cox regression multivariate analysis of HCC mortality, propranolol significantly reduced the risk of mortality about 22% (adjusted HR (aHR); 0.78, 95% CI: 0.72-0.84). In the stratified cox-regression analysis, propranolol also reduced risk of mortality in HCC patients with HBV (aHR: 0.92; 95% CI: 0.85 - 0.99), HCV (aHR: 0.85; 95% CI: 0.78 - 0.92), liver cirrhosis (aHR: 0.78; 95% CI: 0.72 - 0.85) and DM (aHR: 0.87; 95% CI: 0.81 - 0.94).

Conclusion:

This study supports the notion that propranolol can improve the survival of advanced HCC. A further prospective study is necessary to confirm these findings.