中文題目：C 型肝炎導致之肝細胞癌於 DAA 世代之預後

英文題目：Outcomes of hepatitis C virus -related hepatocellular carcinoma in direct-acting antiviral era

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Background: It remains controversial whether hepatocellular carcinoma (HCC) recurrence in hepatitis C virus (HCV)-infected patients can be suppressed by the elimination of the virus using direct-acting antivirals (DAAs). This study aimed to evaluate the sustained inhibitory effect on HCC recurrence following radical treatment in different era of HCV treatment (non-DAA (2001-2015) and DAA (2016-2019)).

Method: This single center retrospective study included 708 radical resection cases of hepatitis C virus (HCV)-related HCC (HCV-HCC) in early stage (BCLC stage 0/A) between 2001 and 2019 at Kaohsiung Chang Gung Memorial Hospital. Regarding to the timing of surgery, patients were classified into the non-DAA era group (2001-2015, n = 491) and the DAA era group (2016-2019, n = 217)(Figure 1). Recurrence free survival (RFS) following radical resection in each group was analyzed using the Kaplan Meier method and log rank test. A Cox proportional hazards model was used to analyze the factors that affected RFS and OS.

Results: In non-DAA era, 141 patients (28.7%) were treated by interferon, while in DAA era, 118 patients (54.4%) received DAAs treatment ($p < 0.05$)(Table 1). The cumulative incidence of HCC recurrence was significantly lower in the DAA era than in non-DAA era ($p<0.001$), but there was no statistically significant difference in OS(Figure 2). After excluding 29 patients who received antiviral therapy after HCC recurrence, recurrence rate was significantly lower in the antiviral therapy group (interferon-based or DAA) than in the non-antiviral therapy group ($p<0.001$)(Figure 3). In multivariate analysis, antiviral therapy was independently associated with reduced HCC recurrence (HR:0.63; $p =0.003$)(Table 2). We further analyzed subgroup in timing of HCV treatment(before or after operation). There was no statistically significant difference in RFS between IFN and DAA group(before OP), while recurrence rate was significantly lower in DAA group than no treatment group(after OP)($P=0.001$)(Figure 4).

Conclusion: In HCV related early-stage HCC, antiviral treatment is associated with lower risk of HCC recurrence. Furthermore, with the use of DAA therapy, an increasing of proportion of HCV-related HCC have been successfully treated, resulting a significant reduction in the risk of HCC recurrence in the DAA era than in non-DAA era.