EFFECTIVENESS OF DIRECT-ACTING ANTIVIRAL TREATMENT FOR HEPATITIS C AMONG PEOPLE WITH HEPATOCELLULAR CARCINOMA: A SYSTEMATIC REVIEW AND META-ANALYSIS

He S[1,2], Hajarizadeh B[1], Lockart I[2], Alavi M[1], Danta M[2], Dore GJ[1]

[1] The Kirby Institute, UNSW Sydney, Sydney, NSW, Australia; [2] St Vincent's Clinical School, Faculty of Medicine, UNSW Sydney, Sydney, NSW, Australia

Introduction: In contrast to interferon-containing treatment, direct acting antiviral (DAA) treatments for hepatitis C virus infection (HCV) are safe and tolerable among people with hepatocellular carcinoma (HCC). Data of efficacy of DAA treatment in these patients are limited. This systematic review aimed to evaluate response to DAA treatment among patients diagnosed with HCV infection and HCC.

Methods: Bibliographic databases and conference abstracts were searched for studies assessing sustained virologic response (SVR) following DAA treatment in patients with HCV infection and current or prior HCC. SVR was estimated, using the principles of intention to treat analysis. Meta-analysis was conducted to pool estimates.

Results: Forty-one studies with 4797 participants were included. Overall SVR was 87.7% (95% CI 85.2-90.3). In stratified analysis by HCC management before DAA therapy, SVR was 86.9% (95% CI 83.5-90.2) in studies with all participants receiving curative HCC treatment (n=24), 88.6% (95% CI 84.2-93.0) in studies with participants receiving either curative or non-curative treatment (n=13), and 88.0% (95% CI 74.7-100.0) in studies with participants receiving non-curative or no HCC treatment (n=4). Thirteen studies included patients with HCC and patients without HCC, in which SVR was 86.7% (95% CI 82.2-91.1) among patients with HCC and 92.6% (95% CI 91.3-93.9) among patients without HCC. SVR was significantly lower in HCC groups compared to non-HCC groups (odds ratio: 0.48, 95% CI 0.36-0.64, p<0.001). In 8 studies with all participants in HCC and non-HCC groups having cirrhosis, SVR remained significantly lower in HCC groups (odds ratio: 0.56, 95% CI 0.35-0.88, p=0.019).

Conclusion: Response to DAA treatment was significantly lower in patients with HCC compared to those without HCC. Among HCC patients, SVR was comparable between patients receiving curative HCC treatment and those receiving non-curative HCC treatment.

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