

Hepatic arterial chemotherapy for hepatocellular carcinoma



Sorafenib plus hepatic arterial infusion chemotherapy (HAIC) significantly improves overall survival for patients with hepatocellular carcinoma with portal vein invasion, according to new research.

Between May 1, 2016, and Oct 10, 2017, investigators of the phase 3, open-label trial randomly assigned 247 Chinese patients with hepatocellular carcinoma with portal vein invasion to receive either daily sorafenib monotherapy (sorafenib group; n=122) or daily sorafenib plus hepatic arterial infusion of oxaliplatin, fluorouracil, and leucovorin (sorafenib plus HAIC group) every 3 weeks (n=125). The primary endpoint was overall survival. Median age of the study population was 49 years.

Median overall survival for patients who received sorafenib plus HAIC was 13.37 months (95% CI 10.27–16.46) versus 7.13 months (6.28–7.98) for

those who received sorafenib alone: the hazard ratio for death was 0.35 (95% CI 0.26–0.48; $p < 0.001$). The overall frequency of adverse events was similar in both groups; however, patients in the sorafenib plus HAIC group did have a significantly higher occurrence of grade 3–4 neutropenia (12 [10%] vs three [2%]), thrombocytopenia (16 [13%] vs six [5%]), and vomiting (eight [6%] vs one [1%]), all of which were easily managed.

Helen Reeves (Cancer Research UK Hepatocellular Carcinoma Expeditor Network, Newcastle, UK) welcomed the findings. “To show such a dramatic impact on survival in patients with the worst prognostic disease is very encouraging”, she said. But she cautioned that translating the results outside China might not be straightforward. “Their patients are relatively young, with predominantly

hepatitis B, whereas UK patients tend to be around 20 years older and have cirrhosis related to alcoholic liver disease or non-alcoholic fatty liver disease; the combination therapy may not be as well tolerated”, explained Reeves.

Co-author of the study Ming Shi (Sun Yat-sen University Cancer Center, Guangzhou, China) commented that they have recommended the new combination treatment to be used in their institution. Shi added that the logical next step would be to evaluate HAIC plus a PD-1 inhibitor in patients with hepatocellular carcinoma with portal vein invasion. “When we optimise the chemotherapy, targeted therapy, and the immunotherapy combination, I think we might be able to improve overall survival to around 24 months”, he told *The Lancet Oncology*.

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