Cytotoxic Chemotherapy as an Alternative for Systemic Treatment of Advanced Hepatocellular Carcinoma in Developing Countries

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Abstract:

Systemic therapy options nowadays for advanced hepatocellular carcinoma (HCC) are either immunotherapy with immune checkpoint inhibitors or targeted therapy. As the incidence of liver cancer is much higher in developing countries, these new medications are not readily accessible for most of the patients. Cytotoxic chemotherapy agents are more available and affordable in developing countries. We are trying to explore the effectiveness of the newer cytotoxic agents in the systematic treatment for advanced HCC. This is a systematic review of all randomized controlled trials since 1997 that utilized systemic cytotoxic chemotherapy agents in the systemic treatment for advanced HCC using Scopus, PubMed, and Cochrane library up to February 2020. Six randomized trials were found. Different drugs and dosages were used, so it was statistically inappropriate to conduct a meta-analysis. No Phase III trial showed statistically significant overall survival (OS) benefit for cytotoxic chemotherapy, except subgroup analysis of Chinese patients in one study who had leucovorin, fluorouracil, and oxaliplatin (FOLFOX) regimen. There was no significant progression-free survival (PFS) or response rate in the Phase II trials. There are not enough data to infer the actual benefits of systemic cytotoxic chemotherapy in advanced HCC. However, oxaliplatin-based regimens may give feasible results. Health systems with limited access to targeted therapy and immunotherapy agents may use oxaliplatin-based regimens in clinical trials for advanced HCC. These results should be confirmed in multiple future randomized clinical trials.

Keywords:

HCC; oxaliplatin; randomized trials; sorafenib.

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