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Chapter 4 - Therapeutic options for the management of hepatocellular carcinoma

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Abstract

Hepatocellular carcinoma (HCC) remains a major global health crisis because its diagnosis at an advanced stage leads to high mortality. The incidence rate and HCC-related death have increased in the past years and the therapeutics available for liver cancer are very limited. The best options available for the treatment of liver cancer are liver resection and the transplantation. The medical treatments include sorafenib, a systemic therapy but it only increases the survival by few months. Other treatment used are immunotherapy and chemotherapy, but new approaches for the treatment are much needed to increase the overall survival rate and limit the adverse effect of chemotherapeutic drugs. Use of nanomedicines and phytochemicals are emerging therapeutic approaches for the treatment of HCC with good results in overall and disease free survival, show less toxicity and very few side effects. Many novel approaches such as the nanomedicines conjugated with different phytochemicals have also been tested and have shown to be of good therapeutic effect. Although various researches have been done to develop the therapeutics for HCC and few of them have reached the clinical trials but their toxicity and adverse side effects still remain major problem. Several other approaches such as adding an adjuvant to decrease the toxicity are also being employed. The present review summarizes the various chemotherapeutic-, immunotherapeutic-, nanomedicine-, and phytochemical-based therapeutics for liver cancer treatment.

Keywords

Hepatocellular carcinoma; immunotherapy; chemotherapy; molecular target therapy; phytochemicals

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