Brief Report
Volume 14:01, 2024

Transplantation Technologies & Research

ISSN: 2161-0991 Open Access

Hepatocellular Carcinoma: Current Status of Drug Therapy, Progress and Obstacles

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Introduction

Hepatocellular Carcinoma (HCC) is the most common type of primary liver cancer and a major global health burden. Despite advances in diagnosis and treatment, HCC remains a challenging disease to manage, with limited treatment options and poor prognosis, especially in advanced stages. This article provides an overview of the current status of drug therapy for HCC, including the progress made in recent years and the obstacles that remain to be overcome. Hepatocellular Carcinoma (HCC) is a primary liver cancer that arises from hepatocytes and accounts for approximately 75% of all liver cancers. It is the sixth most common cancer worldwide and the fourth leading cause of cancer-related death. The main risk factors for HCC include chronic hepatitis B and C infections, alcohol abuse, Non-Alcoholic Fatty Liver Disease (NAFLD), and aflatoxin exposure. The treatment options for HCC depend on the stage of the disease and include surgical resection, liver transplantation, locoregional therapies, and systemic therapy with drugs [1-3].

Description

Systemic therapy for HCC has evolved rapidly in recent years, with several targeted therapies and immunotherapies approved for the treatment of advanced HCC. Sorafenib, a multikinase inhibitor, was the first targeted therapy approved for HCC and remains a standard first-line treatment option. Subsequent trials have led to the approval of other targeted therapies, such as lenvatinib, regorafenib, and cabozantinib, as well as the immune checkpoint inhibitors nivolumab and pembrolizumab. These drugs have improved overall survival and progression-free survival in patients with advanced HCC, although their efficacy is still limited, and resistance often develops. Recent advancements in drug therapy for HCC have focused on identifying new targets and developing combination therapies to overcome resistance [4,5]. The use of immune checkpoint inhibitors, alone or in combination with other drugs, has shown promise in improving outcomes for patients with HCC. Other approaches, such as targeting the tumor microenvironment, epigenetic modifications, and metabolic pathways, are also being investigated. Additionally, efforts are underway to develop predictive biomarkers to identify patients who are most likely to benefit from specific therapies [6].

Conclusion

Despite the progress made in drug therapy for HCC, several obstacles and challenges remain. One of the major challenges is the heterogeneity of HCC, both at the molecular and clinical levels, which makes it difficult to predict treatment response and develop effective therapies. Resistance to current therapies is also a significant issue, highlighting the need for new treatment strategies. Additionally, access to advanced therapies is limited in many parts of the world, particularly in low- and middle-income countries, where the burden of HCC is highest. Drug therapy for HCC has made significant progress in recent years, with several targeted therapies and immunotherapies approved for the treatment of advanced disease. However, challenges remain in overcoming resistance, improving patient outcomes, and ensuring access to these therapies for all patients. Further research is needed to develop new treatment strategies and biomarkers to personalize therapy and improve outcomes for patients with HCC.

Acknowledgement

None.

Conflict of Interest

None.

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How to cite this article: Liu, Shunzhen. "Hepatocellular Carcinoma: Current Status of Drug Therapy, Progress and Obstacles." *J Transplant Technol Res* 14 (2024): 261.

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Received: 02 March, 2024, Manuscript No. jttr-24-133668; **Editor Assigned**: 04 March, 2024, PreQC No. P-133668; **Reviewed**: 16 March, 2024, QC No. Q-133668; **Revised**: 22 March, 2024, Manuscript No. R-133668; **Published**: 29 March, 2024, DOI: 10.37421/2151-0991.2024.14.261