

Abstract

A New Approach: Treatment with Sodium Vanadate and Cisplatin Combination for Human Hepatocellular Carcinoma [†]

Müge Gülcihan ÖNAL ^{1,2}

¹ Halil Bayraktar Vocational School of Health Services, Erciyes University, 38280 Kayseri, Turkey; mgonal@erciyes.edu.tr; Tel.: +90 542 353 6101

² Betül Ziya Eren Genome and Stem Cell Center, Erciyes University, 38280 Kayseri, Turkey

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Abstract: The most common primary liver malignancy is hepatocellular carcinoma. Various chemotherapy drugs are used for treatment. These drugs have high toxicity to liver tissue. More effective, less toxic options should be preferred for treatment. The aim of this study is to investigate the cytotoxic effect of cisplatin and sodium vanadate combination (NaV) in hepatocellular carcinoma. The hepatocellular cancer cell line (HepG2) was used in this study. Increased concentration of cisplatin and a selected concentration of sodium vanadate were treated to HepG2 cells for 24- and 72-hours incubation times. The proliferation of HepG2 cells decreased with the combination of NaV and cisplatin. While cisplatin was effective in 10^{-4} M concentration in the proliferation of HepG2 cells, 10^{-4} M cisplatin with 10^{-3} M NaV in combination was less effective in the proliferation of HepG2 cells. According to these results, NaV and cisplatin show toxic effects on hepatocellular carcinoma cells. However, the combination of cisplatin and NaV has a less toxic effect than cisplatin and NaV on hepatocellular carcinoma cells.

Keywords: cisplatin; hepatocellular carcinoma; sodium vanadate; toxicity



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