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P62. ROLE OF THE KAEMPHEROL ON THE ANTI TUMORAL EFFECTS OF DOXORUBICIN IN HEPATOCELLULAR CARCINOMA (HCC)

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Hepatocellular carcinoma (HCC) is the most common primary malignant tumor of the liver. This cancer heads the list of cancer-releated deaths in the world. Doxorubicin (Dox) is anti-tumor drug frequently useds in the treatment of various cancers, especially liver cancer. However, Dox have organo toxic effects and is also resistant to many cancer cells including HCC. Therefore; Dox's clinical applications are limited. Kaempferol (Kæmp) as a natural polyphenol component has broad pharmacological activity. Consumption of food with Kæmpe reduces the risk of many diseases such as cancer and leads to apoptosis in various cancer cells.

In this study; independent and combined effects of the Kaemp were investigated on the Dox's anti-cancer (cytotoxicandapoptoticect.) effects in hepatocellular carcinoma cells (Hep-G2). Cytotoxic effects of the Dox, Kaemp and combination were determined by MTT assay. Apoptotic effects were determined by a morphological assay as Acridin Orange/Ethidıım Bromide (AO/EB) double staining. As apoptosis markers, changes in enzyme activitiesof Caspase 3 and Caspase 9 were analysed.

The viability of the Dox-treated Hep-G2 cells were decreased, in a dose-and time-dependent,at 48 hours and the IC50 value was determined to be 0,5 µM. Kæmp's IC50 value found to be approximately 100 µM at 48 and 72 hours. As compared with Dox, the cytotoxic effect of the Kæmp was observed at approximately 100-fold weaker in Hep-G2 cell lines. As a result of the AO/EB double staining; 100 and 150 µM Kæmand 0.5 µm Dox caused apoptosis. In combination treated cells early apoptotic cells was observed and when applied Kζmp 150 µM, a significant increase was observed in the number of necrotic cells. In addition, changes in enzyme activation of Caspase 3 and 9 were determined in Hep-G2 cells.