SUMMARY

Sonodynamic therapy is a promising new cancer therapy which ise used in combination with low intensity ultrasound and sonosensitizer or chemotherapy drugs and causing cell death in tumor cells.

In this study, effects of docetaxel and AICIPc-mediated SDT were investigated on Ehrlich ascites tumor cells (EAT). For this, taken into phosphate buffered saline, EAT cells were exposed for 60 seconds to 1 MHz ultrasound .Cell viability was assessed by trypan blue staining tests. Both AICIPc and docetaxel-mediated SDT appeared to increase cell death. For the evaluation of apoptosis HO / PI staining was performed and the cells examined in the fluorescence microscope. Ater two hours of AICIPc and docetaxel-mediated SDT application, cells had apoptotic bodies. İnbspite of this, ammong the cells wich treated with AICIPc or docetaxel alone, such an effect was not detected. In addition, to assess the level of caspase-3 were made Western immunoblotting. Caspase-3 activity in the cells treated with SDT, was found to be increased.

As a conclusion SDT aplication induced cell death on EAT cells was observed. İn adition SDT application been shown to increase the amount of caspase-3 and induce apoptosis on EAT cells. However, it is concluded that there is a need on the different cell lines and in vivo studies to explain the effects of AICIPc and docetaxel mediated-SDT applications on tumor cells in more detail.

Keywords: Chloroaluminum phthalocyanine, Docetaxel, Ehrlich Ascites Tumor, Sonodynamic Therapy, apoptosis