

ABSTRACT

THE COMBINATION EFFECT OF PIROXICAM, GEMCITABINE AND CARBOPLATIN ON APOPTOTIC IN UROTHELIAL CARCINOMA CULTURE CELL

- OBJECTIVE:** Gemcitabine and carboplatin chosen for unfit patients but survival rate was lower compared to gemcitabine and cisplatin. COX inhibitors is potential drug for antitumor that enhance the efficacy of chemotherapy agents. COX inhibitors mechanism of antitumor effect is by inducing apoptosis and necrosis. The purpose of this study was to determine the combination effect of gemcitabine, carboplatin, and piroxicam on bladder cancer culture cell.
- METHODS:** This is an in-vitro experimental using urothelial carcinoma culture cell type 5637. Thirty cell type 5637 were divided into 2 main groups and divided again into 3 each groups. Culture cell, cell with gemcitabine and carboplatin, and gemcitabine, carboplatin, and piroxicam was observed in 48 and 72 hours. The dosage and time of observation chosen by the results from MTT assay. Apoptotic index was calculated using TACS 2 TdT-DAB in situ apoptotosis detection kit.
- RESULTS:** It was found that the gemcitabine carboplatin and gemcitabine carboplatin piroxicam group compared to control group had significant increase of apoptotic index not only on 48 hours but also 72 hours. It was statistically significant with p value <0.05. In the gemcitabine carboplatin and piroxicam group, it was found to have a slight increase of apoptotic index compared to gemcitabine carboplatin group. From this research it was also found that necrosis mechanism was more have a role than apoptosis mechanism in decreasing the cancer cells.
- CONCLUSION:** Combination of piroxicam, gemcitabine and carboplatin increase apoptotic index in bladder cancer culture cell type 5637 compared to other group. This need to be evaluated further with invivo study to know the efficacy and toxicity effect.
- KEYWORDS:** Culture cell, Apoptosis, Necrosis, Gemcitabine, Carboplatin, Piroxicam.