ELECTROPORATION AS ENHANCEMENT OF CISPLATIN AND LEUCOVORIN CALCIUM TREATMENT ON PRIMARY CELL LINES FROM LUNG METASTASIS.

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Electroporation (EP) is a method involving the influence of an external electric field to increase the cell membrane permeability. Approximately one-third of patients diagnosed with a malignant tumors is burdened with lung metastasis. Total removal of the tumor is often difficult to perform, and in such cases, chemotherapy is the most common choice; however, many tumors are resistant to treatment. We used primary cell lines derived from lung metastasis of different origin. The aim of our study is to investigate the influence of EP in combination with cisplatin and leucovorin calcium on the cellular structure, proliferation and lipid peroxidation in cells. The effect of EP was assessed via MTT assay. The cell membrane state was visualized using a DHCC marker. Lipid peroxidation were measured with The Image-iT® Lipid Peroxidation assay. The different voltage values (from 0 to 1200 V/cm), an 8 pulse duration of 1 s intervals were used. Our results indicate that the combination of EP and chem**o**therapy can improve cancer cell destruction. These observations indicate the posiibility of individualized chemosensitivity testing in combination with EP *ex vivo*. The results can be useful in clinical practice.

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