APOPTOTIC CELLS AS A DIAGNOSTIC FACTOR IN BREAST CANCER PATIENTS

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The aim of this study was to observe the correlation between the amount of apoptotic cells and chemotherapy treatment in breast cancer patients. Biopsy cells were stained with fluorochromes – Hoechst 33342 and propidium iodide. The cells were stained and incubated for 10 min at 37ºC in a wet chamber. The preparations were observed using a Nikon E600 fluorescence microscope. The apoptotic cells had a blue colour and the necrotic cells a red colour.

The level of apoptotic cells was recorded as the apoptotic index (IA). A high apoptotic index level was observed for patients after chemotherapy treatment (IA = 3.7). A decreased apoptotic index was observed for pre-mastectomy patients without chemotherapy (IA = 2.8).

The same results were observed using the comet method.

The cause of tumour diseases may be the inhibition of apoptosis processes. It is connected with a high level of damaged cells. The effect of these processes is the proliferation of cells with mutated DNA. The chemotherapy treatment (CMF) increased the level of apoptotic tumour cells. The results of this study may be a very important diagnostic factor for patients with breast cancer.