

7.2. Streszczenie w języku angielskim

Among all of the gynecologic cancers it is the ovarian cancer that has the highest mortality rate. The early stage of the disease is difficult to detect due to both, lack of characteristic symptoms and specific confirmatory screening tests. Despite advanced cytoreductive surgery procedures and the use of subsequent combination chemotherapy, many patients relapse and most of them die. It is therefore extremely important to determine early-stage biomarkers of the disease in order to introduce new personalized therapeutic strategies. Nowadays, the insulin-like growth factor (IGF) signalling pathway continues to attract rising interest as it is involved in the pathogenesis of many neoplastic diseases. Its components may prove to promote the growth and invasiveness of the cancer cells.

The aim of the study was to evaluate the IGF-1 and IGFBP-3 concentrations in serum and peritoneal fluid within the course of serous ovarian cancer. They were assessed in the serum of healthy women (n = 52) and in the serum and peritoneal fluid in the group of cancer patients (n = 48). The concentration of IGF-1 and IGFBP-3 in the tested fluids was analyzed in terms of the cancer's clinical stage, its histological differentiation, the extent of cytoreduction expressed by the size of the remaining tumor, the volume of ascites and the patients' age. The immunoenzymatic ELISA method was used for their determination. The study was approved by the Bioethics Committee of the Medical University of Białystok No. R-I-00/286/2017. The obtained results allowed to draw the following conclusions:

1. The IGF-1 and IGFBP-3 serum levels in women with serous ovarian cancer are statistically significantly lower than in healthy women.
2. The IGF-1 levels present in serum and peritoneal fluid in women with serous ovarian cancer are not statistically considerably different.
3. The IGFBP-3 concentrations in peritoneal fluid compared to serum concentrations in ovarian cancer patients are statistically markedly lower.
4. With the lower histological maturity of the serous ovarian cancer, the IGF-1 concentration in the tested fluids significantly decreases.
5. The IGFBP-3 concentrations statistically markedly decrease corresponding to the cancer's clinical stage, ascites volume and size of the tumour left, in both serum and peritoneal fluid.

The IGFBP-3 concentrations in serum and peritoneal fluid may have a potential prognostic value in serous ovarian cancer patients and may be implemented in further development of tools to arrive at more accurate prognosis.