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EVALUATION OF RISK FACTORS IN ENDOMETRIAL CANCER DEVELOPMENT

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Relevance. Uterine cancer ranks fourth among cancers in women worldwide, and first or second among malignant tumors of the female reproductive organs. Despite the existence of scientific studies examining risk factors for endometrial cancer, further exploration of a set of prognostic factors may facilitate the early detection of endometrial cancer.

Aim: to conduct a comprehensive assessment of anthropometric data, ultrasound examination data and somatic history to determine the most informative risk factors for the development of endometrial cancer.

Materials and methods. A retrospective cohort study was conducted, including 116 women with endometrial pathology, observed at the 1st Minsk City Clinical Hospital in 2024-2025. The study group consisted of 58 patients with confirmed endometrial cancer, the control group consisted of 58 women without malignant diseases of the uterine body. Inclusion criteria were the presence of abnormal uterine bleeding (AUB) or endometrial pathology based on ultrasound results; exclusion criteria were pregnancy-related bleeding, juvenile AUB, and cervical cancer.

Results and their discussion. The analysis of the performance indicators of the gynecological hospital of the State Healthcare Institution "1st City Clinical Hospital" of Minsk for 2024 was conducted. According to the results, it was revealed that EC occurred in 42% of cases of newly diagnosed malignant neoplasms of the reproductive system in women, occupying a leading position and amounted to 2.9% in the structure of gynecological morbidity. The average age of patients in the main group was 67 (61.5-72.5) years, exceeding the age of the control group – 54 (47-64) years ($p < 0.001$). BMI in patients with EC was also higher, amounting to 33.9 (29.7-37.1) kg / m² relative to the control group − 26.9 (24.2-32.2) kg / m² ($p < 0.00001$). When analyzing the parity of pregnancy, it was revealed that the absence of a history of pregnancy was observed in 9 women (15.5%) in both groups ($p = 0.79$, $X^2 = 0.07$). The somatic history was noteworthy. Thus, diabetes mellitus (DM) was suffered by 25 women (43.1%) in the main group and 13 women (23.4%) in the control group ($X^2 = 5.64$, $p = 0.017$); arterial hypertension (AH) was suffered by 34 women (58.6%) and 20 women (34.5%) in the main and control groups, respectively ($X^2 = 6.79$, $p = 0.01$). AUB was the leading symptom in women with EC (74.1%) compared to the control group (13.7%) ($X^2 = 40.45$, $p < 0.0001$). The endometrial thickness (M-ECHO) in women of the main group exceeded that in patients of the control group and was 13.8 (7.8-23) mm versus 7.85 (6-9.3) mm ($p < 0.00001$), correlating with the development of EC ($R = 0.383$, $p = 0.0002$). Using ROC analysis, the threshold value of endometrial thickness (M-ECHO)> 10.5 mm was determined (Se – 62.1%, Sp – 86.2%), which can be used as a predictor of EC development (OR = 11.9 (4.72-29.86), $p < 0.0001$). BMI>30 kg/m2 (OR=15.5 (4.96-48.4), p< 0.0001); age>55 years (OR=8.36 (3.25-21.49), p<0.0001) also have prognostic significance. Based on the logistic regression method, a model for predicting ER was constructed, which included M-ECHO, BMI and age as risk factors, the area under the curve of which was 0.87 (0.795-0.925) , Se – 75.86%, Sp – 74.14%.

Conclusions. EC occupies a leading position among newly diagnosed malignant neoplasms of the reproductive system in women (42%). The following factors influence the risk of developing EC: endometrial thickness (M-ECHO) > 10.5 mm (OR 11.9; 95% CI 54.72-29.86; p<0.0001), BMI> 30 kg/m2 (OR=15.5, 95% CI 4.96 -48.4, p<0.0001), age> 55 years (OR=8.36, 95% CI 3.25 -21.49, p<0.0001).