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Dual Primary Endometrial and Ovarian Tumors - A Case Report

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Abstract: ***Patient R. A. was treated gynecologically for postmenopausal vaginal bleeding. Diagnostic screening: MRI findings and ultrasound findings describe, in addition to the previously known myomatous uterus, some free fluid, small cystic changes in the ovaries and thickened endometrium. For further diagnostic and therapeutic treatment, instrumental revision of the uterine cavum is indicated. The pathohistological finding of the curettings tissue of cavum of the uterus describes poorly differentiated adenocarcinoma, G2/G3, and the patient is being prepared for operative treatment. During the operation, an adnexectomy was performed on the left, as well as biopsy of the peritoneum. Pathohistological analysis describes serous high - grade adenocarcinoma (G3) of ovaries and peritoneum biopsies. The further course of treatment of the patient's disease takes place under the supervision of an oncologist. Synchronous (dual) primary tumors of the genital organs, although rare, are most often of the endometrial type and occur most often on the endometrium of the uterus and on the ovaries, the isolation of both entities or the metastatic etiology of one or the other has not yet been elucidated in detail.***

Keywords: postmenopausal bleeding, myomatous uterus, adenocarcinoma, adnexectomy, dual primary tumors

1. Introduction

Synchronous occurrence of primary dual tumors of the endometrium and ovary (SPEOC) is the most common combination of a primary dual tumor in the female reproductive system. The simultaneous presence of two primary tumors, ovarian and endometrial, is very rare and occurs in 10% of women with ovarian tumors. It has been insufficiently investigated whether it is a matter of two independent, primary tumors or whether it is a metastasis from the ovary to the endometrium or vice versa, from the endometrium to the ovary (1). According to WHO, ovarian tumor is the seventh most common form of tumor in women, and the eighth leading cause of death from tumors among women in the world (2). A primary double tumor is in most cases misdiagnosed as a metastatic tumor in clinical practice, which presents a challenge to clinicians and pathologists to properly distinguish between primary and metastatic cases. Accurate classification is crucial for clinical management, treatment decisions, and patient prognosis. The histological type of tumor in SPEOC can be the same or different, but the most common form that occurs in both places is the endometrioid tumor subtype, with a representation of 50 - 70% of cases, and the primary tumors are often grade I or II (3).

High - grade ovarian serous adenocarcinoma accounts for 90% of ovarian tumors. It most often occurs in women > 65 years old. From a genetic point of view, these tumors are characterized by P53 mutation and genomic instability due to defects in DNA strand repair pathways (4).

2. Case Presentation

Patient R. A., 64 years old, comes in for vaginal bleeding. Anamnestically, she states that she has not been regularly gynecologically monitored, that her last menstruation was 6 years ago, and that for the last month she has had pain and a feeling of heaviness in the lower parts of the abdomen. Submits diagnostic findings; MRI of the small pelvis showing a smaller amount of free fluid, the uterus enlarged and myomatously changed, with the largest myomatous node measuring 49x45 mm, endometrium measuring 16 mm. The left ovary is described as of regular size with small cysts up to 7 mm, the right ovary is of regular size with small cysts up to 4 mm in size, and the iliac lymph nodes en larged on both sides. Tumor markers – Ca 125 211.9 U/ml, HE4 215.5 pmol/L, ROMA index 80.5. After an ultrasound examination, which confirmed the thickening of the endometrium with the presence of bleeding, an abrasion of the uterine cavum was performed. The pathohistological finding of uterine tissue describes adenocarcinoma of medium to poorly differentiated grade G2/G3. With the obtained pathohistological findings, the patient is presented to the gynecological - oncology council, which indicates radical surgical treatment. The intraoperative finding describes the uterus with numerous adhesions to the surrounding structures, closely fused to the bladder in the front, and with the coils of the intestine in a block at the back. The right adnexa is fixed to the right wall of the pelvis, measuring approx.7x7 cm. Left adnexa, approx.3x3 cm in size, with fine - grained changes, and numerous adhesions in communication with the coils of the intestine. The peritoneum is finely grained altered. Omentum is high, fixed, approx.5 - 6 cm thick. On palpation, the liver is enlarged, nodularly changed. In view of the finding and for further pathohistological processing, an adnexectomy was performed on the left side, sa well as biopsy of the peritoneum. The pathohistological findings of the left ovary are described as adenocarcinoma serosum high grade (G3) ovarii l. sin and biopsy tissue of the peritoneum – high - grade serous adenocarcinoma. After the completion of the postoperative course, the patient was again presented at the gynecological - oncology council, which indicated further oncological treatment due to the inoperability of the findings, and systemic oncological therapy was started.

3. Discussion

The frequency of SPEOC is 10% of women with ovarian tumors and 5% of women with endometrial tumors. Due to slow symptomatology and insufficient knowledge of the entity, SPEOC is often detected in FIGO stage III endometrial tumor and FIGO stage II ovarian tumor (5). The age group of women with the most diagnosed SPEOC is from 41 to 54 years old, 40% of patients have not given birth (3). The most common symptom for which patients come to a gynecologist

is uterine bleeding, accompanied by pelvic pain or a palpable tumor mass.

The study by Zaino R. and others from 2001, prospectively from 1985 to 1991. included 85 patients, of which 64 patients (86%) had adenocarcinoma in both the endometrium and ovary, and endometriosis was found in 23 (31%) patients. The concordance of the histological grade of the tumor in the ovary and endometrium was determined in 51 (69%) patients. Histological grades of ovarian and endometrial tumors also distinguished groups of patients with different probability of recurrence after 5 years: 8.0% (95% CI: 2.8 - 21.3%) for those patients with no more than stage 1 disease at any site and 22.4% (95% CI: 11.8 - 38.4%) for those with higher grade in the ovary or endometrium (hazard ratio = 3.1, P = 0.047). The estimated overall probability of survival at 5 years is 85.9% and the probability of survival at 10 years is 80.3% (1). Hormonal activity in female patients has a strong influence on the possibility of developing multiple primary tumors, along with the activity of exogenous and endogenous factors. Patients with an endometrial tumor have a higher risk of developing, in connection with multiple primary tumors, an ovarian tumor than a colorectal cancer (6). Eisner et al examined 3863 female reproductive tract tumor patients between 1955 and 1986 and recorded 26 cases (0.7%) of primary double tumor, including 11 cases of SEOC (0.3%) (7). A study conducted in Turkey showed that SEOC accounted for approximately 0.89% (8). By searching the literature on the treatment and outcome of the treatment of patients with SPEOC, there is a lack of guidelines for adjuvant therapy, and based on the reported cases, the opinion can be accepted that in the case of ovarian tumors, except when it comes to stage IA/B, chemotherapy should be indicated, while in case of endometrial tumors, the same is indicated when there is a high risk for distant metastases (9). Given that our patient's pathohistological findings showed grade II/III, she was referred for further adjuvant oncological treatment.

4. Conclusion

Looking at the available literature, the number of reported cases of postmenopausal patients with synchronous primary tumors of the endometrium and ovaries, we come across a small sample that cannot indicate the exact etiological sequence of the development of dual tumor entities. The occurrence of serous adenocarcinoma of the ovary is most common at the age of over 65, which could potentially imply that it could primarily be a tumor process of the ovary, but due to the scarcity of registered patients, we are talking about synchronous primary tumors of the female genital organs, most often describing the endometrial subtype of ovarian and endometrial tumors. In order to make an accurate diagnosis and determine the clinical stage of the disease, a detailed pathohistological analysis, complete with cytological findings and immunocytochemical analysis, is important. In the future, genetic testing and determination of the molecular characteristics of primary endometrial and ovarian tumors will greatly improve the detection of endometrial and ovarian cancer at the same time.

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