

Ovarian and endometrial cancer after breast cancer – three primary malignancies in a single patient

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Summary

The authors present a case of a 56-year-old patient diagnosed with ovarian cancer and endometrial cancer who reported a breast cancer in her medical history.

Key words: Ovarian cancer; Endometrial cancer; Breast cancer.

Introduction

Multiple primary tumors were first described by Billroth at the end of the 19th century [1]. For the accurate classification of multiple primary tumors, each tumor must exhibit a definite picture of malignancy, each tumor must represent a distinct clinical entity, and the probability that one is a result of metastatic spread from the other must be reliably excluded. The incidence of multiple primary cancer is 2-6.3% of all cancers and female reproductive tract represents 1-6% [2]. The exact incidence of patients presenting with at least three primary tumors remains unknown. It has been estimated that approximately 2-12% of patients with two tumors go on to develop a third or fourth neoplasm [3].

Case Report

A 56-year-old patient was admitted to Poznań Gynecological and Obstetrical Hospital, Operative Gynecology Division because of cystic tumor located in the pelvic and abdominal cavity. The patient reported left radical mastectomy and neoadjuvant chemotherapy (cyclophosphamide, adriablastin) 12 years prior because of breast cancer. BRCA1 and BRCA2 mutations did not confirm the genetic basis of the disease.

Transvaginal ultrasound showed: normal size of the uterus (5.3 × 3.1 cm), 5 mm endometrium and 13 × 11-cm cystic tumor connected with the uterus, with no evidence of ascites. Abdomen-pelvis CT confirmed the presence of 12.5 × 13.0-cm cystic tumor extending probably from the ovary, connected with the bowels. CA-125 level was 54.2 U/ml and CEA 1.8 ng/ml. Surgery revealed left ovarian tumor and total abdominal hysterectomy with omentectomy was performed and six peritoneal swabs were collected. Final histopathological examination showed an ovarian cancer G3 FIGO IA (pT1a) and endometrial cancer G1 FIGO Stage IA (pT1a) with atypical cells on the swab from the spleen area. An undamaged 10-cm ovarian tumor and 1.0-cm mass in the uterine cavity near the uterine horn infiltrating the myometrium

below 1/2 thickness were found. Immunophenotype of ovarian tumor was WT1-negative, p53-positive, and GCDFP15-negative. The morphological and immunohistochemical picture of tumors indicated independent ovarian and endometrial pathologies. Actually the patient was treated with adjuvant chemotherapy with carboplatin and paclitaxel.

Discussion

Multiple primary tumors were first described by Billroth at the end of the 19th century [1]. In 1932 Warren and Gates on the basis of reported 1,259 cases proposed three criteria for the diagnosis of a second primary cancer that are still followed by the authors: each tumor should show specific malignant findings, the tumors should differ in site, and one tumor should not be a metastatic from the other [4].

Data collected from Italian Cancer Registries revealed that patients with one cancer had an approximately 10% statistically significant increase in the risk of cancer of all sites in comparison with the general population [5].

Multiple primary cancers are uncommon and limited data are available on cases of more than three multiple primary cancers in one patient. National Cancer Institute reported that number of second or higher-order malignancies is increasing, accounting for approximately 16% of all incident cases registered in 2003 in the Surveillance Epidemiology and End Results database [6]. Despite this increase the evidence of triple or more malignancies in the same patient is rare.

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