

VAGINAL METASTASIS OF SEROUS OVARIAN ADENOCARCINOMA - A CASE REPORT

MARIO PULJIZ¹, DANKO VELIMIR VRDOLJAK², DAMIR DANOLIĆ¹, ILIJA ALVIR¹,
ROBERT ZORICA³, DARKO TOMICA¹, IVICA MAMIĆ¹, MELITA PERIĆ BALJA⁴,
IVKA DJAKOVIĆ⁵, INES BILOKAPIĆ⁵ and IVANA BOGDAN⁵

¹Department of Gynecologic Oncology, ²Department of Surgical Oncology,
³Department of Medical Oncology, ⁴Department of Clinical Pathology,
University Hospital for Tumors, University Hospital Center Sestre milosrdnice, Zagreb, Croatia
⁵Department of Gynecology, University Hospital Center Sestre milosrdnice, Zagreb, Croatia

Summary

Patients with high-grade serous carcinoma most frequently present at an advanced clinical stage and have a very poor overall survival. A characteristic feature of the disease is the absence of early phase symptomatology in many patients. Ovarian cancer spreads primarily by intraperitoneal implantation of exfoliated cancer cells, by lymphatic dissemination, and rarely by hematogenous spread. Very rarely it metastasizes to the vagina. We are reporting a case of a patient who developed a vaginal metastasis as the first sign of the disease. The patient underwent total abdominal hysterectomy with partial resection of the vagina, bilateral adnexectomy, omentectomy, pelvic and paraaortic lymphadenectomy, peritoneal biopsies, resection of the rectum with termino-terminal anastomosis and hepatectomy of the 5th and 6th segments. Pathohistological analysis confirmed the diagnosis of high-grade serous ovarian adenocarcinoma with a vaginal metastasis, cancer-free resection margins, and hepatic cystic echinococcosis as accidental finding. The patient underwent 6 cycles of adjuvant chemotherapy (paclitaxel and cisplatin). A 30-month follow-up did not reveal any relapse of the disease.

KEY WORDS: *ovarian cancer, vaginal metastasis*

VAGINALNA METASTAZA SEROZNOG ADENOKARCINOMA JAJNIKA

Sažetak

Pacijentice s epitelnim karcinomom jajnika visokog gradusa najčešće imaju simptome u uznapredovalom stadiju bolesti. Zloćudni epitelni tumori jajnika šire se uglavnom implantacijom pojedinih stanica tumora po trbušnoj šupljini, limfogenim te rijetko hematogenim rasapom. Vrlo rijetko karcinom jajnika metastazira u rodnicu. Prikazali smo slučaj pacijentice kod koje je vaginalna metasaza bila prvi znak bolesti. Pacijentica je operirana radikalno, učinjena je potpuna abdominalna histerektomija s parcijalnom resekcijom rodnice, bilateralna adneksektomija, omentektomija, zdjelična i paraaortalna limfadenektomija, peritonealne biopsije, resekcija rektuma s termino-terminalnom anastomozom i resekcija 5. i 6. segmenta jetre. Patohistološkom analizom postavljena je dijagnoza seroznog adenokarcinoma jajnika visokog gradusa koji je metastazirao u rodnicu i ehinokokne ciste jetre, kao popratni nalaz. Pacijentica je primila 6 ciklusa kemoterapije (paklitaksel i cisplatin), a 30 mjeseci nakon operacije nema znakova recidiva bolesti.

KLJUČNE RIJEČI: *karcinom jajnika, vaginalna metastaza*

INTRODUCTION

Ovarian cancer is the fourth most common type of gynecological cancer. It is the most common cause of death from gynecological cancers in developed countries. The symptoms of ovarian cancer are non-specific and usually include vaginal spotting, bloating, abdominal or pelvic pain and possibly urinary symptoms. It usually spreads primarily by intraperitoneal implantation of cancer cells and by lymphatic dissemination. Vaginal metastases are very rare and represent a diagnostic challenge to the gynecologists and pathologists.

PATIENT REPORT

We are reporting a case of a 51-year-old woman with a history of breast cancer operated and treated with chemotherapy 20 years ago. In March 2010, the patient was admitted to the Department of Gynecologic Oncology, University Hospital for Tumors, Zagreb, Croatia, with symptoms of vaginal spotting and pelvic pain for the last five months. There was no family history of malignant diseases. Per speculum examination showed a mass in the posterior vaginal fornix. Bimanual pelvic examination revealed a tumor formation the size of two man's fists in the pelvis. A transvaginal ultrasound showed a solid cystic formation of the left ovary. No ascites was found. Biopsy of this suspicious vaginal mass revealed adenocarcinoma. A computed tomography (CT) scan showed a 13x10 cm pelvic solid cystic process infiltrating the right iliac muscle. The formation reached the uterus, suppressed the urinary bladder and probably infiltrated the rectum. An abdominal CT scan revealed a 3.8 x3.1 cm cystic lesion in the 5th and 6th liver segments which was suspected to be a metastasis of the primary process. Chest X-ray, esophagogastroduodenoscopy, breast ultrasonography and mammography did not reveal any characteristic malignancy or metastases. Colonoscopy revealed mild narrowing of the rectal lumen. Laboratory findings were all within the normal range, except for the elevated tumor markers, CA 125 (543.5 mU/L) and CA 15-3 (44.2 mU/L).

The patient underwent total abdominal hysterectomy with partial resection of the vagina, bi-

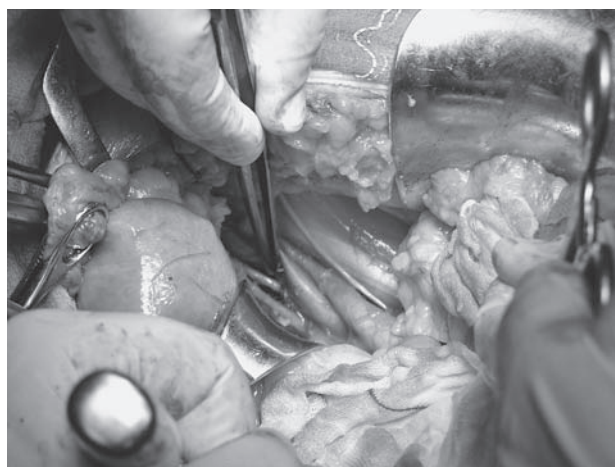


Figure 1. Pelvic lymphadenectomy



Figure 2. Paraaortic lymphadenectomy

lateral adnexectomy, omentectomy, pelvic (Figure 1) and paraaortic lymphadenectomy (Figure 2).

Peritoneal biopsies were taken from the pelvis, paracolic gutters and undersurface of the diaphragm. Resection of the rectum with termino-terminal anastomosis and hepatectomy of the 5th and 6th liver segments was also performed. Cytology analysis of peritoneal washing was negative for malignant cells. The post-operative period passed without any complications.

Pathohistological analysis confirmed the diagnosis of high-grade serous ovarian adenocarcinoma with a vaginal metastasis and cancer-free resection margins. Eighty-eight lymph nodes were sampled during surgery. All lymph nodes, omentum, peritoneal tissue and rectal tissue were nega-

tive. Immunohistochemistry showed positive reactions of tumor cells for cytokeratin 7, carbohydrate antigen 125 and carbohydrate antigen 19.9 and negative for carcinoembryonic antigen and cytokeratin 20. The pathohistological analysis of the hepatic tumor revealed cystic echinococcosis which was not expected. The patient underwent 6 cycles of adjuvant chemotherapy (paclitaxel and cisplatin). She has regular checkups. To this date, 30 months after surgery, the patient remains well. There has not been any evidence of local or distant recurrence.

DISCUSSION

Ovarian cancer is the fifth deadliest cancer among American women (1). It is the most common cause of death from gynecological cancers in developed countries. In Croatia in 2011, 642 women died from neoplasms of the reproductive system, and 44.85% of them died from ovarian cancer (2). Serous ovarian adenocarcinoma is the most common histological subtype, accounting for >50% of ovarian epithelial malignancies (3). In general, epithelial ovarian cancers metastasize predominantly by intraperitoneal implantation of exfoliated cancer cells. Because of its marked vascularity, the omentum is the most frequent site of the disease spread and is often extensively involved by tumor. Another primary mode of tumor cell dissemination is via the lymphatic system (4). Direct extension may result in confluent tumor involvement of the pelvic peritoneum and surrounding structures, including the uterus, rectosigmoid colon, fallopian tubes and vagina (4, 5). Most probably, due to local invasion, this was also true in our case. Vaginal metastases from ovarian cancer are usually located close to the uterine cervix, generally in the upper portion of the vagina (5, 6). Hematogenous spread is atypical. Cancers from distant sites that metastasize to the vagina through the blood or lymphatic system include colon cancer, renal cell carcinoma, melanoma, and breast cancer (7). During the preoperative examination, an abdominal CT scan revealed a hepatic cystic formation which was suspected to be a hematogenous metastasis of the primary process. The pathohistological analysis showed cystic echinococcosis. There have been several cases of cystic echinococcosis mistaken for metastases of differ-

ent primary tumors. Mehmet et al. describe the case of a 61-year-old woman with an isolated pelvic cystic echinococcosis resembling ovarian tumor diagnosed during operation (8). We would like to highlight the possibility of cystic echinococcosis in a differential diagnosis of hepatic cystic formations in patients with malignant disease (Figure 3).



Figure 3. Hepatic echinococcal cyst

There are few cases of vaginal metastases of ovarian carcinoma described in the literature. Batakhhi et al. described a case of an ovarian cancer with the initial clinical manifestation of a lesion of the vagina (5). Guidozi et al. showed a review of 148 patients with different gynecological metastases of primary ovarian cancer. Only one patient had a vaginal metastasis which confirms its rarity (6).

Post-operative residual tumor is the strongest independent parameter in prognosis after the disease stage. It is currently the only factor that can be effectively influenced. Patients with complete tumor resection survived an average of five years longer than patients with post-operative residual tumor (9). In our case, no post-operative residual tumor was found and 30 months after surgery our patient is well and without any evidence of local or distant recurrence.

CONCLUSION

We reported a patient who developed a vaginal metastasis as a first sign of serous ovarian adenocarcinoma. Vaginal bleeding might be the first

clinical manifestation of an occult primary carcinoma, but also a clinical sign of a widespread metastatic disease, as by our patient.

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Author's address: Mario Puljiz, M.D., Department of Gynecologic Oncology, University Hospital for Tumors, University Hospital Center Sestre milosrdnice, Ilica 197, 10 000 Zagreb, Croatia; E-mail: puljiz.kzt@gmail.com