

Left Inguinal Adenopathy Two Years after Cytoreductive Surgery: A Rare Sign of Recurrence

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Key Words

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Abstract

Ovarian cancer is the second most common gynecological cancer in the Western world. Despite a good response to treatment, most patients with ovarian cancer will relapse. The abdominal, pelvic, and retroperitoneal cavities represent the most common sites of ovarian cancer recurrence, with inguinal lymph node involvement rarely reported. Herein we report the case of a 48-year-old Caucasian female who underwent successful surgical and chemotherapy treatment for ovarian epithelial cancer. Two years later, the patient was found to have painless left inguinal adenopathy, which was subsequently found to be metastatic ovarian cancer. CA-125 levels were elevated despite the lack of any foci of metabolically active tissue on imaging. Inguinal lymph node involvement is a rare sign of ovarian cancer. Despite that, it is essential to consider ovarian cancer in the differential diagnosis for inguinal lymphadenopathy in a female patient.

Introduction

Ovarian cancer comprises a group of malignancies originating from various cell lines, with the most common being epithelial carcinoma which has a peak incidence of around 60 years of age [1]. Ovarian cancer is the second most common gynecological cancer after breast cancer and the leading cause of gynecological cancer-related deaths [2]. Age, obesity, type 2 diabetes mellitus, early menarche, late menopause, endometriosis and genetic predisposition, including mutations in BRCA1 and BRCA2 are among the well-established

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risk factors for the occurrence of ovarian cancer [3]. Unfortunately, ovarian cancer lacks specific symptoms, which may explain the late diagnosis and unfavorable prognosis [4]. Cytoreductive surgery is the mainstay of treatment aiming to remove as much cancer as possible [4].

Ovarian cancer commonly metastasizes via the lymphatic system or direct spread with involvement of adjacent organs including the intestines and omentum [4]. We report a case of left inguinal metastasis in a patient who underwent successful surgical management with postoperative chemotherapy two years prior to this presentation. Relevant scientific literature will be reviewed and discussed.

Case Presentation

A 48-year-old G2-P2 premenopausal never-smoker non-Jewish Caucasian female with no past medical history sought medical attention two years ago because of a pelvic mass. Family history was significant for lung cancer in her father, who had occupational exposure to asbestos. Prior to this encounter the patient had regular Papanicolaou smears and mammograms, all of which were normal. The patient was not using hormonal therapy. CA-125, which is a tumor marker of epithelial ovarian cancer, came back markedly elevated. Abdominal/pelvic computed tomography (CT) which was performed in January 2010 showed left-sided complex pelvic mass (fig. 1). The pathology report was consistent with ovarian papillary serous adenocarcinoma (fig. 2). The patient was found to have stage III disease and underwent radical tumor cytoreductive surgery including total abdominal hysterectomy with bilateral salpingo-oophorectomy (TAHBSO), bilateral pelvic lymphadenectomy, total omentectomy and appendectomy. After the surgery, the patient received six cycles of chemotherapy consisting of carboplatin and paclitaxel. The patient was followed with serial CA-125 measurements and abdominal/pelvic CT imaging. The patient was negative for BRCA1 and BRCA2 mutations.

In October 2012, the patient was found to have painless left inguinal enlargement. Physical exam was otherwise unremarkable, with no abdominal and pelvic mass or enlargement. The most recent abdominal/pelvic CT performed in April 2012 was normal (fig. 1). The patient's CA-125 came back abnormal, in contrast to the previous one, which was done in December 2011. The patient underwent surgical left inguinal lymph node excision. The pathology report was positive for metastatic papillary serous adenocarcinoma (fig. 3). Positron emission tomography (PET) with CT were done, which did not show any abnormal focal metabolic activity. The patient was offered to undergo another cycle of chemotherapy, which she was reluctant to accept. After CA-125 was rechecked and came back more elevated, the patient agreed to undergo chemotherapy.

Discussion

Ovarian cancer is the second most common gynecological cancer in the Western world [2]. Despite a good response to treatment, most patients with ovarian cancer will relapse [5]. The abdominal, pelvic cavities and retroperitoneal cavities are the most common sites of ovarian cancer recurrence [5], with inguinal lymph node involvement being uncommon [6]. Lymphatic spread and direct peritoneal tumor seeding are the most common metastatic routes of ovarian cancer, whereas hematogenous spread occurs in a minority of cases [4].

Metastatic involvement of the inguinal lymph node is a rare manifestation of ovarian cancer. We will briefly review the scientific literature on this topic.

Shulman et al. [7] first reported a case of primary ovarian cystadenocarcinoma that underwent solitary metastasis to the contralateral inguinal lymph node. Unfortunately, it was impossible for us to retrieve the original article. McGonigle and Dudzinski [8] reported another case of a 59-year-old female who was found to have left inguinal lymph node metastasis from metastatic endometrioid ovarian cancer with no evidence of abdominal and pelvic involvement. Kehoe et al. [9] subsequently reported a case of a 66-year-old female who was found to have ipsilateral inguinal lymph node involvement which predated the diagnosis of ovarian cancer by 33 months. Scholz et al. [10] described a case of a 44-year-old female with ovarian cancer who was found to have inguinal lymph node involvement with no other identified metastatic focus. Mancini et al. [11] reported a case of 58-year-old female who presented with bilateral inguinal lymphadenopathy and was later found to have serous papilliferous carcinoma involving both ovaries. Ang et al. [12] published a case of a 59-year-old female with ovarian carcinoma who first presented with isolated contralateral inguinal lymph node metastasis. The patient was found to have left-sided ovarian cancer. These authors speculate that the contralateral lymph node involvement might be due to hematogenous spread of the primary ovarian malignancy. Overall, we found six case reports published of patients with ovarian cancer who were found to have lymph node involvement during the first presentation of disease.

Building on these previous reports, Togami et al. [13] reported a case of the 44-year-old woman with bilateral ovarian cancer and left breast metastasis who underwent surgical treatment including TAHBSO, omentectomy, splenectomy and left partial mastectomy. The patient then underwent six cycles of chemotherapy consisting of carboplatin and paclitaxel. Similar to our patient, two years later she was found to have a left inguinal mass. In contrast to our patient, her CA-125 was within normal limits. The patient underwent excisional biopsy of the left inguinal mass, which showed serous adenocarcinoma involving the left round ligament, with no evidence of lymph node tissue.

Thus, our report is the first case to show metastatic involvement of inguinal lymph node in a patient with a prior history of successfully treated ovarian cancer.

Conclusion

Inguinal lymph node involvement is a rare sign of ovarian cancer. Despite that, it is essential to consider ovarian cancer in the differential diagnosis for inguinal lymphadenopathy in a female patient.

Disclosure Statement

All authors have no conflict of interest.

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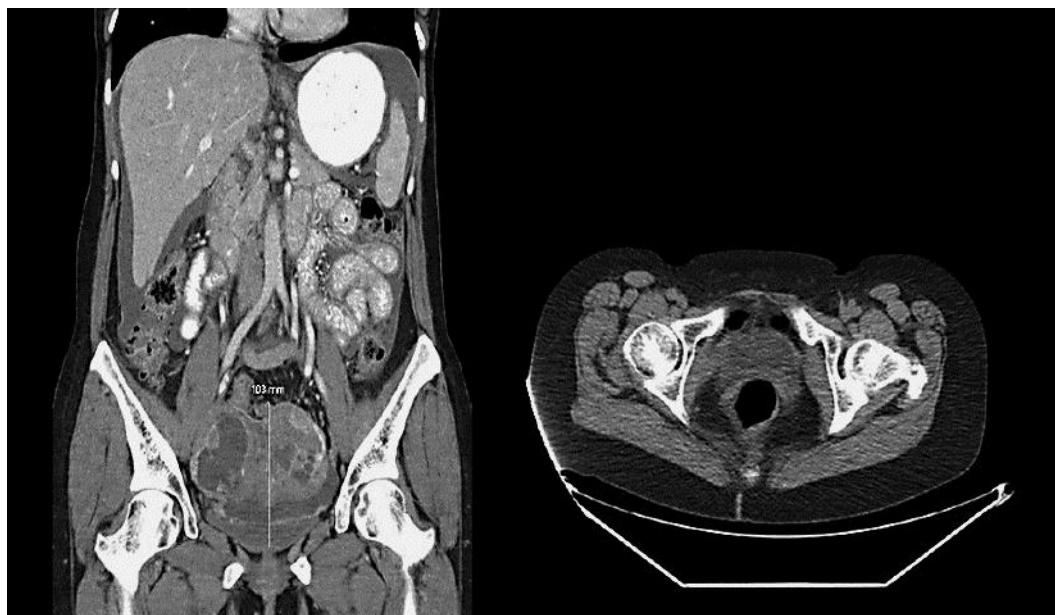


Fig. 1. Abdominal and pelvic CT: the left panel is a CT done in January 2010 showing complex pelvic mass with cystic changes; the right panel is a CT done in April 2012 showing no evidence of tumor recurrence.

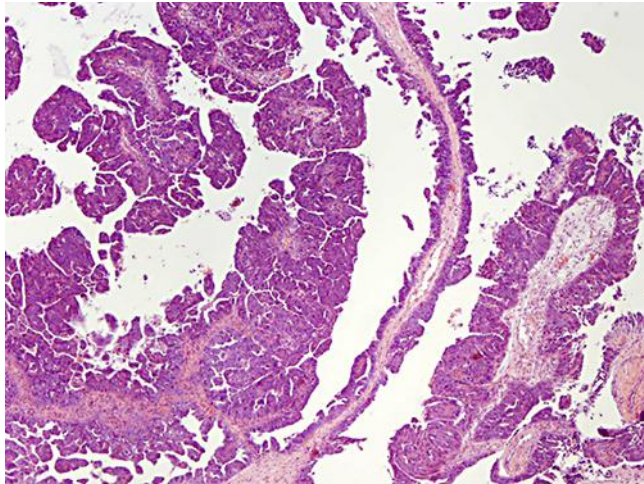


Fig. 2. Biopsy of the left ovary showing high-grade papillary serous carcinoma.

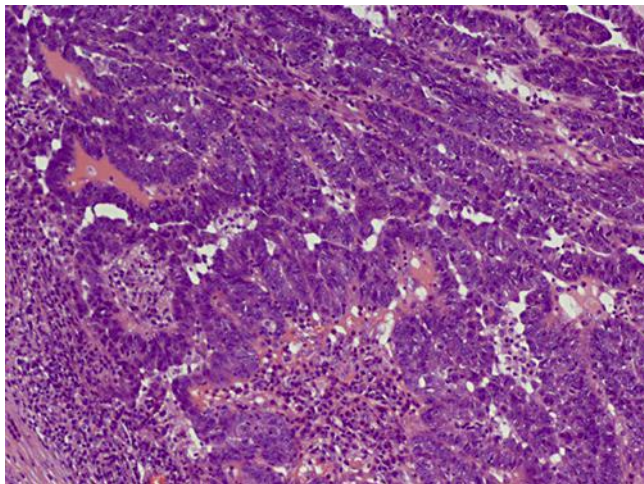


Fig. 3. Left inguinal node biopsy showing metastatic papillary serous carcinoma.