Ovarian cancer with the metastatic deposit in the cervix as rare case: a case report and literature review

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INTRODUCTION

Ovarian cancer is still the fifth leading cause of cancer death for women worldwide. According to available data, 21,290 new epithelial ovarian cancer cases were diagnosed in the United States, with 14,180 deaths in 2015. Although various efforts have been made to obtain the influence of surgical procedures and chemotherapy as the primary modalities of treatment of ovarian cancer, the survival rate was only 30%, mainly due to diagnosis at an advanced stage. Indeed, the diagnosis of ovarian cancer at an advanced stage would cause various uncomfortable symptoms such as abdominal pain, fullness, vomiting, difficulty defecating, and urinating, so it was often mistaken and considered digestive.\textsuperscript{1,2}

Sixty-nine percent of all patients with ovarian carcinoma received 19 percent of those with breast cancer. The high mortality caused by these tumors showed the majority (75%) of patients came for treatment when the disease had reached stage III-IV so that the disease had spread to the pelvis, especially to the organs such as the uterus, fallopian tubes, ovaries, and sigmoid colon through the passive spread and different hematogenous routes. This study aimed to review malignant disease in gynecologic oncology, supporting examinations and management.

Case Report: A woman, 52 years old, presented with abdominal pain one month before entering the hospital. She complained about difficulty urinating, not having a smooth bowel movement. From ultrasound examination showed an intra-abdominal mass measuring 14.3 cm x 11.2 cm x 11.1 cm, and the origin of the mass remains unclear. From contrast, pelvic CT scan showed a solid mass had spread to the uterine cervix, vagina and spread to the uterine body, infiltrated to the bladder, attached to the rectum part without intestinal obstruction, with a mass size of 7.7 cm x 7.1 cm x 16.6 cm. The procedure for this patient was an abdominal hysterectomy of total and salpingo-oophorectomy of both ovaries. The histopathology result was serious ovary adenocarcinoma.

Conclusion: The spreading of ovarian cancer is a mechanism that involves the interaction of many things, such as cancer cells from the primary tumor, which spread to the peritoneal cavity or spread hematogenously or lymphatically and enter the omentum. In this case, we had metastasis of ovarian cancer with cervical adhesions and a suspected mass in the sigmoid colon on intraoperative findings. With increasing knowledge about ovarian cancer, ovarian cancer pathogenesis, and metastases can be found and developed to treat disease and prevent spread.

Keywords: Bilateral salpingo-oophorectomy, Diagnostic imaging, Serous ovary adenocarcinoma, Total abdominal hysterectomy.


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ABSTRACT

Introduction: Although ovarian cancer incidence is lower than the cases of cancer of the uterine cervix and endometrial, the incidence of ovarian cancer is high. The mortality rate is highest among all gynecological malignancies. The patients often come for treatment at an advanced stage that has spread to the pelvis, especially to the organs such as the uterus, fallopian tubes, ovaries, and sigmoid colon through the passive spread and different hematogenous routes. This study aimed to review malignant disease in gynecologic oncology, supporting examinations and management.

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细胞癌，内膜样癌。这些癌症起源于卵巢表面的上皮，尤其是包涵性卵巢囊肿。这不仅基于持续性排卵的理论，也基于输卵管的伞部的上皮。

**CASE REPORT**

一位52岁，妊娠4次，流产1次的女性，主诉腹部不适一个月前入院，腹部疼痛偶尔发生，呕吐恶心否认，但她感到胃部肿大。没有从生殖道出血，也没有延长的月经周期。没有出现有气味的阴道分泌物。患者抱怨尿液很难排出，因为当她按压她的胃部时，尿液才能够流出，排便也不顺畅。

患者有子宫肌瘤手术史，但当手术时，很难识别并被切开。

患者没有高血压或糖尿病史。否认哮喘或心脏病史，乳腺癌或结肠癌也被排除。患者初潮年龄在12岁，规律，6-7天，2-3次更换卫生巾或卫生棉条。

从实验室血液测试中，发现血红蛋白含量为13.9 g/dl，血细胞比容为43%，血小板计数为314,000 /µL，WBC为6,900/µL，RBC为3.4/µL。 fasting blood glucose为69 mg/dl。电解质血液测试，如钠为147 mEq/L，钾为4.50 mEq/L，氯化物为110 mEq/L，CA 125血液测试为10.70 U/ml。CT扫描显示一个吸收对比的固态肿块，涉及子宫颈，阴道，达到子宫体，侵入膀胱，附着于直肠部分，未伴随肠道梗阻；肿块大小为7.7 cm x 7.1 cm x 16.6 cm。它出现标准的胰腺形状，均质的实质，没有可见的局灶性病变，胰腺导管未被压瘪，主动脉和左髂动脉有钙化，没有可见的淋巴结肿大（图1）。

在这些患者中，手术以俯卧位在全麻下进行。泌尿外科进行了膀胱镜检查，但未见膀胱中存在肿块。妇科手术继续，进行了操作区域的无菌和无菌处理，进行垂直切口直到肚脐。从探索中，发现子宫大小为9.1 cm x 5.9 cm x 5.1 cm，找到一个在子宫颈后壁的可触及肿块，延伸到Douglas pouch。肿块的起源仍然不明确。然后我们决定咨询消化外科。消化外科手术的探索发现肿块不是来自GI tract，妇科手术继续。决定进行双侧输卵管切除术和子宫切除术。在操作过程中，我们没有遇到任何显著的困难，移除子宫和卵巢，操作过程没有任何并发症（图2）。

**DISCUSSION**

在女性的一生中，卵巢癌可以出现在任何年龄。上皮性卵巢癌起源于卵巢表面的上皮。卵巢癌患者通常在疾病扩散到周围组织如盆腔组织，包括肠系膜，输卵管时才来就诊。
There are many modalities for screening and diagnosing ovarian cancer at an early stage. Indeed, screening for ovarian cancer at an early stage is usually tricky. Therefore gynecological examination alone is inadequate and requires various other supporting modalities to make the diagnosis. Thus, even the medical center is also equipped with modern technology to diagnose and treat different types of cancer. Multiple modalities are urgently needed, including CT Scan tools, radiotherapy rooms, chemotherapy drugs, PET Scan tools, operating rooms, fully equipped laboratories, radiology rooms, and medical rehabilitation rooms. Laboratory assessment and imaging are used to monitor clinical responses, as practiced conventionally. Ovarian cancer patients are considered cured if all evidence of tumor is lost, either by CT Scan or PET Scan and also CA 125 as a tumor marker below 35 U/ml, and two separate assessments can prove this within two weeks. In addition, if necessary and appropriate, radiological instruments such as PET scans, MRI, and USG can be used to treat gynecological-oncological diseases to assess tumor loss. Other secondary examinations comprise examination of ESR (erythrocyte sedimentation rate), proteins of C-reactive with high sensitivity, ferritin, LDH (lactate dehydrogenase), HbA1c (hemoglobin A1c), CEA (carcinoembryonic antigen), tumor marker including CA19-9, CA15-3 can be helpful for assessment and confirmation of response to chemotherapy. Ovarian carcinoma is heterogeneous, and the disease develops through several changes in molecular.6,7 Basically, the pathogenesis of ovarian cancer happened in three different parts of the ovaries, namely the surface of the epithelium, which is the majority of malignancy that occurs and can be seen in various types of histology. For example, serous-type ovarian cancer cases are the most frequent and familiar in the elderly, according to the findings in these patients with advanced age and menopause, which makes it easier for a person to develop epithelial cancer of the ovary. Young women are more likely to create endometrioid ovarian cancer, similar to mucinous types of ovarian cancer and clear cell ovarian cancer. In addition, other areas that have the potential to become ovarian cancer are germ cells and stroma.8 During the female's reproductive life, the causes of damage to epithelial surface cells are associated with inflammation of cytokines with cells on the surface of the epithelium and reactive oxygen, causing damage to DNA and increasing their susceptibility to transformation.9

DNA damage to epithelial cells will be caused the cells to change and mutate, resulting in an invagination process to the ovarian stroma. The method of entering cells into the stroma and trapping will form a scope of epithelial cells in the cortical stroma to produce benign tumors, namely inclusion cyst. When hormones immediately stimulate the epithelial cells in the ovary, cell proliferation occurs and develops as cancer cells.10

The National Comprehensive Cancer Network reported the essential things in the staging of ovarian cancer to know the prognosis and follow-up treatment of patients. Ovarian cancer was generally classified into stage 1 to stage 4 based on FIGO (International Federation of Gynecology and Obstetrics).11

Ovarian cancer surgery is a procedure to remove the uterine, uterine cervix, ovaries, fallopian tubes, and the omental or adipose tissue lining. In this operation, it was also possible to remove the lymphatic system (lymph nodes). Debulking surgery was a procedure to remove the entire tumor mass. The surgery was considered optimal if we could remove the whole tumor mass, including the tumor mass that spreads to the liver, spleen, and small intestine, mass biopsy on the diaphragm, peritoneal biopsy. Debulking surgery for ovarian cancer could be complicated and required considerable time and intensive care.12

Surgery was an essential choice to manage ovarian cancer with advanced stages.10 The most crucial goal of surgery was to resection all diseases that were visible macroscopically. Although after complete resection in the patient still relapses, chemotherapy was needed to improve treatment results. Paclitaxel and carboplatin combined were reported below a standard value (AUC) of 5 or 6 given by intravenous infusion once every three weeks. Ovarian cancer therapy has always begun with first-line chemotherapy for epithelial ovarian cancer and became the standard treatment for more than
15 years. There were two large and randomized clinical trials in 1990 that showed that combined paclitaxel and cisplatin administration was more effective than cyclophosphamide combined with cisplatin. Then, there were still three other randomized clinical trials that confirmed if cisplatin were replaced with carboplatin combined with paclitaxel, it would have the same effect. Still, it will be safer for patients, especially for the liver and kidneys. The average length of time a patient had recovered from cancer was not as expected, with an average time of 12–18 months, because it was affected by residual disease after the surgical procedure.12,13

The diagnosis of ovarian cancer by physical examination could be found by palpating the mass in the adnexal area. In addition, abdominal and transvaginal ultrasound was one of the most important diagnostic tools for ovarian cancer screening. Most of them were not malignant, and only 13% to 21% of patients who had been suspected of being malignant after surgery were malignant. Recommendations for surgical procedures depend on the degree of suspicion of malignancy in the tumor mass. These factors were patient age, menopausal condition, history of the disease, tumor mass size, complaints and symptoms, serum CA 125 levels, evaluation of whether the mass hit one ovary or both, and performed characteristic assessments on ultrasound. Follow-up procedures included observations with repeated examinations, advanced radiographic imaging, laparoscopic and laparotomy procedures, and the patient's clinical condition.14

The accuracy of surgical staging could be improved with high-resolution imaging tools such as a CT scan or transvaginal or abdominal ultrasound which could mark the disease macroscopically, making it easy to intervene in surgical techniques. Indeed, the biological features of high-grade serous ovarian carcinoma were correlated with extending to the peritoneum. This type of cancer played an essential role in cancer recurrence in women whose initial disease was prominent. Otherwise, early-stage clear cell and mucinous-type ovarian cancer were not associated with peritoneal expansion. Usually resolves after a surgical resection procedure. Standard doses of primary chemotherapy such as carboplatin and paclitaxel were well accepted by the body and considered effective therapeutic interventions. Currently, there were no definite possibilities regarding the administration of a higher dose intensity of platinum (whether or not added to the hematopoietic growth factor), the combination of additional chemotherapy drugs, and changing chemotherapy drugs with second-line chemotherapy would promote long-term recovery for women with high-grade serous ovarian carcinoma. Giving paclitaxel every week as a single drug would be more effective if given paclitaxel every three weeks to treat ovarian cancer. This was related to the effect of each week's therapy on angiogenesis. In early phase trials, it had been shown that administering paclitaxel at a weekly dose of 40 mg per body area provided a more effective response compared to high doses that were still tolerated by the body at a weekly dose of 80-100 mg per body area as a single drug. Weekly administration of paclitaxel was also associated with better outcomes when given together with platinum-based primary chemotherapy without the addition of bevacizumab. The most commonly used weekly dose in randomized trials was 80 mg per body area (solid amount), which here was intentionally not using high doses, changing the dose, adjusting for clinically significant anemia, and giving additional hematopoietic growth factors when needed.15

Regarding the clinical benefits of chemotherapy, it was closely related to the administration every week. The strength of the dose at 240 mg per body area per cycle has not been determined yet. However, the side effects and benefits of paclitaxel apparently due to different ways of administering the drug and the length of the infusion, whereas the link between clinical service and dose intensity seemed less intense.16

Taxane and platinum were chemotherapy drugs currently used as an adjunct therapy in cancer of the ovary. Resistance to chemotherapy drugs would limit the use of chemotherapy drugs and other drugs, even though the drugs work differently. The mechanism of chemotherapy was by stimulating the death of cancer cells. It was known as apoptosis. The development of chemotherapy-resistant was depended on several factors, including the entry or the release of chemotherapy drugs that would reduce the build-up of platinum in cancer cells, increasing levels of GSH and GST, increased regulation of anti-apoptosis proteins like as Bcl-2, disappearance of necrosis factors of ligand-receptor tumors that induced cell death program and enlarged DNA repair.16

CONCLUSION
Ovarian cancer is a malignant disease in gynecologic oncology. It remained the most common cause of death for 15 years after the diagnosis in women. This disease was often diagnosed late due to complaints inpatients and general complaints in the digestive tract so that most of the patient was always diagnosed late.

PATIENT INFORMED CONSENT
Before the author collected and published the data, the patient had received a complete explanation and agreed to continue the publication of a case report.

COMPETING INTEREST
In this case report, we proclaimed that there was no conflict of interest with other authors.

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REFERENCES