



# Ovarian Cancer Revealed by Perineal Tumor: A Case Report and a Literature Review

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## Abstract

**Background:** Cutaneous metastasis of ovarian epithelial adenocarcinoma is rare, and most cases present as cutaneous nodules, generally as periumbilical Sister Joseph's nodules. An uncommon presentation of cutaneous metastases from ovarian carcinoma is perineal tumor. **Case:** A 56-year-old patient has a serous adenocarcinoma revealed with a perineal tumor. After surgery, the patient started chemotherapy with bad evolution, and the patient died after 3 months. **Conclusions:** The prognosis of the cutaneous metastasis of the ovarian adenocarcinoma is poor, but palliative treatment is usually indicated that further studies evaluating the role of specific therapies are needed to guide treatment.

## Subject Areas

Gynecology & Obstetrics

## Keywords

Ovarian Carcinoma, Metastasis, Perineal Tumor

## 1. Introduction

Ovarian cancer remains the leading cause of death among gynecologic cancers [1]. Patterns of metastasis in ovarian carcinoma are well described [2]. A clinical presentation of ovarian cancer varies, but common modes of presentation are abdominal pain, distention, or ascites due to metastatic involvement of peritoneal cavity. Most tumors present at advanced stage, therefore, primary and metastatic disease is diagnosed simultaneously. The cutaneous metastasis from primary ovarian cancer is very rare but is found in advanced disease [2]. The skin metastases occur in 3.5% of patients with ova-

rian carcinoma [3].

The perineal metastasis is never reported in literature. We report a new case and revealing symptom was that the perineal tumor.

## 2. Case Report

A 56 years old female, no medical history, menopausal for 15 years, consulted for perineal tumor, lasting for three months. Clinical examination revealed perineal tumor 8 cm/9cm with necrotic purulent places, fixed, the vulva is normal (**Figure 1**). The rest of the clinical examination is normal, a peripheral lymph nodes are free, absence of palpable abdominal mass and a pelvic examination normal.

Biopsy of the lesion showed a secondary location of adenocarcinoma of unknown primary origin, immunohistochemistry (CK positive, KIG7 negative, estrogen receptor and progesterone negative).

Abdomino pelvic scanner objectifying ovarian cyst left 5 cm. CA 125 was normal.

A laparoscopy was indicated and left adnexectomy was realized, extemporaneous histological examination confirmed the diagnosis and the treatment were supplemented by a total hysterectomy and right adnexectomy. Histological examination of the surgical specimen confirmed the presence serous adenocarcinoma of the left ovary. Cytology ascites fluid revealed the presence of neoplastic cells question.

Balance sheet extension showed the presence of lung metastases (lesion of left lobe 3 mm). The neoplasm was classified as stage IV. The treatment was chemotherapy associated paclitaxel and carboplatin, but the patient decided after the third chemotherapy session.

## 3. Discussion

In 2012, an estimated 22,280 women were diagnosed with ovarian cancer and 15,500 died of the disease [4]. Approximately seventy-five percent of women diagnosed with ovarian cancer in the United States have stage III or more advanced disease at diagnosis [5].

Skin involvement from ovarian carcinoma is uncommon. The incidence of ovarian



**Figure 1.** Perineal tumor 8 cm/9cm with necrotic purulent places.

cancer metastasizing to the skin is variable ranging from 1.9% to 5.1% in different series, in a study of 220 patients with epithelial ovarian carcinoma treated at our unit between 1991 and 2001, the cutaneous metastases were found for 4% [6]. In an autopsy study on 381 epithelial ovarian cancer, 20 patients (5%) were found to have skin metastasis. On the other hand, in a clinical study on 255 patients, we found nine patients with skin metastases (3.5%), Bronstein *et al.* found that ovarian carcinoma was the most rare origin for skin metastases, presenting only in 4% of all different primary tumors [7] [8] [9].

Although most patients respond to initial treatment, the rate of recurrence after initial treatment of ovarian cancer is as high as 65% to 75%. The most common site of recurrence is within the peritoneal cavity. In a postmortem study, Rose *et al.* evaluated the patterns of ovarian cancer metastasis and found that the most common sites of metastasis were the peritoneal cavity, paraaortic lymph nodes, large intestine, pelvic lymph nodes, and liver [5]. Ovarian cancer can metastasize by direct extension and transport throughout the peritoneal cavity and, or through lymphatic or hematogenous spread.

The classic presentation with a “Sister Mary Joseph node” at the umbilicus from intra-abdominal extension via lymphatics is a well known example of skin metastases [10]. In Dauplat’s study, seven of nine patients had abdominal cutaneous nodules, five of them being peri umbilical Sister Joseph’s nodules. In their report, two of the nine patients presented with multiple nodules. Other sites for skin metastatic nodules were the chest wall, breast, and right buttock. Merimsky *et al.* presented three cases of skin metastases [11]. Two of the cases had multiple abdominal wall nodules, and one of these had a Sister Joseph’s nodule. In another report of a rare case, Traiman *et al.* presented a patient with advanced ovarian carcinoma who refused treatment and returned after 6 years with a large, 20-cm, cauliflower-type infected skin metastases [12]. An uncommon presentation of cutaneous metastases from ovarian epithelial carcinoma is the inflammatory pattern, which mimics herpetiform lesions to the skin [13]. In our study, the cutaneous metastasis was the origin of the revelation of serous adenocarcinoma ovarian. The location of the tumor in the perineal region is unique and it has never previously described.

Because skin metastases commonly present in the setting of advanced-stage, metastatic disease, the prognosis is poor [6] [10]. In the series of nine patients by Cormio, the median survival after presentation of skin metastasis was 4 months (range 2 - 65 months). The small numbers make comparison difficult between skin metastasis and other presentations of advanced ovarian cancer, but comparing to malignant small bowel obstruction, for example, with a median overall survival of 7 months [14], our patient is decided after 3 months of treatment, so skin metastasis could be seen as a marker of poor prognosis.

There are no published protocols for the treatment of isolated ovarian skin metastasis. In a case report from Turkey [15], a 43-year-old patient with isolated abdominal wall metastases was treated with 37.5 Gy in 2.5 Gy/day fractions of external beam radiation therapy. In follow-up she was noted to have tumor regression and was still alive at

7 months of follow-up.

Earlier studies suggested that electrocoagulation, electron beam therapy, and phototherapy may be effective in treating cutaneous lesions. At present, the topical Toll-like receptor 7 agonist imiquimod and electrochemotherapy are being studied for treatment of cutaneous metastases [16] [17]. The electro chemotherapy, historically used in the treatment of metastatic head and neck cancers, has been explored in the treatment of cutaneous disease in patients with chest wall recurrence of breast cancer. In electrochemotherapy, a local electrical current is applied to the lesion, which causes cellular membranes to become more permeable to the chemotherapy agent being used. In the case of bleomycin-based electrochemotherapy, the electric current increases permeability to the drug by 700-fold [18].

#### 4. Conclusion

Management of cutaneous metastases varies widely and remains a clinical challenge, the prognosis is poor, and the treatment strategies depend on the associated disease burden, but for treatment of the skin lesion itself, roles have been suggested for multi-modal therapy including surgical resection of skin lesion, systemic chemotherapy, and external beam radiation therapy to the site of metastasis.

#### Conflicts of Interest

No.

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