



Case Report

Subcutaneous metastasis from endometrial cancer; case report and literature review

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Abstract

Subcutaneous metastases from endometrial cancer are rare situations, only few cases being described so far. The main incriminated mechanisms leading to the apparition of such lesions include hematogenous and lymphatic spread. We present the case of a 66-year-old patient known with previous history of stage IIIA endometrioid endometrial carcinoma initially treated by surgery and adjuvant chemotherapy who developed at 18 months follow-up a distant subcutaneous oligometastasis. At this time the patient was resubmitted to surgery, the lesion being successfully removed. The histopathological result confirmed the endometrial cancer origin of this lesion.

Subcutaneous and cutaneous metastases from endometrial cancer are rare eventualities which are usually diagnosed as part of systemic dissemination of this malignancy; in these cases, the patient is only candidate for oncological treatment with palliative intent. In some cases, in which the lesions occur as oligometastatic disease, surgery might be performed with curative intent. In our case the diagnostic of the subcutaneous lesion as oligometastatic disease transformed the patient in a perfect candidate for curative oncological surgery.

Keywords : endometrial cancer, distant metastasis, subcutaneous lesion

- Highlights**
- ✓ Endometrial cancer rarely metastasizes to cutaneous/ subcutaneous levels, such localizations being usually the consequence of multiple systemic disseminations.
 - ✓ However, when cutaneous/ subcutaneous metastases occur as isolated/ unique tumors, surgery might be performed with curative intent.

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Introduction

Endometrial cancer remains one of the most common gynecological malignancies reported worldwide, with a rather favorable prognostic especially in cases diagnosed in early stages of disease (1, 2). However, in certain cases, especially when diagnosed in advanced stages, this malignancy might recur via various pathways of dissemination including lymphatic or hematogenous route (3). In this way, the most common sites of relapse include bones, liver, lungs and lymphatic system. In rare cases distant metastases might develop in atypical locations such as heart, eye, breast, kidney or skin. When it comes to the skin and subcutaneous metastases, this represents a rare eventuality, being most often reported in lung cancer (in male) and in breast cancer respectively (in female) (4, 5). In the meantime, cutaneous and subcutaneous metastases from endometrial cancer represent a very rare condition, only few cases being reported so far (5-7).

Case Report

A 66-year-old patient, with previous history of stage IIIA moderately differentiated endometrioid endometrial carcinoma who had been submitted to surgery consisting of total hysterectomy, bilateral adnexectomy, pelvic and para-aortic lymph node dissection followed by nine cycles of adjuvant chemotherapy (Sindaxel and Carboplatin) presented for the apparition of a tumoral mass at the level of the anterior wall of the abdomen 18 months after ending the adjuvant treatment. The tumoral mass developed at 5 cm distance from the previous laparotomy line, was fix to the adjacent skin and relatively mobile with the deep layer of the anterior aponeurosis of the rectus abdominis muscle. In the meantime, the biological tests revealed the presence of increased levels of CA 125 (of 76U/ml) while the biopsy of the parietal lesion demonstrated its metastatic origin from endometrial cancer. After performing a full body computed tomography in order to exclude other distant metastases, the patient was submitted to surgery, the lesion being successfully removed. The final aspect after resection of the tumoral mass is presented in Figure 1, and the specimen can be seen in Figures 2 and 3. The histopathological studies confirmed the presence of a 3/4/3cm subcutaneous metastasis invading the skin, with endometrial cancer origin.



Figure 1. The final aspect after resection of the tumoral mass. The aponeurosis of the rectus abdominis muscle was entirely preserved



Figure 2. The specimen – the tumoral mass modifying the adjacent cutaneous tissue



Figure 3. The specimen – large subcutaneous tumor invading the adjacent cutaneous area

Discussion

Whenever a patient with previous history of endometrial adenocarcinoma presents for the apparition of cutaneous lesions, the first answer which should be answered is if these lesions are metastases or paraneoplastic lesions. Paraneoplastic lesions are usually induced by various substances released by the

tumor (such as growth factors, cytokines or hormones) while skin metastases are produced by the tumoral dissemination via hematogenous, lymphatic route or even via contiguity. In order to distinguish between these two pathological entities, biopsy and histopathological examination are mandatory (6, 8, 9).

Skin metastases from endometrial cancer are a rare eventuality, with an estimated incidence of 0.8% (10) which usually occurs as part of systemic disease. Therefore, most patients diagnosed with such lesions are amenable to palliative oncological treatment consisting of radiotherapy or systemic chemotherapy (5, 11); moreover, the prognostic of such cases remains poor due to the systemic neoplastic impregnation irrespective of the type of performed treatment. In such cases the overall survival usually does not surpass one year (11).

Cutaneous and subcutaneous metastases from endometrial cancer might develop in various sites including the abdominal wall, the perineal surface as well as in distant sites like scalp or toes (5, 12, 13); when it comes to the number of lesions, they can present as unique lesions (as in our case) or disseminated lesions (leading to the apparition of large tumoral placards) (5). Another type of cutaneous metastasis from endometrial cancer is represented by umbilical metastasis (14). Although umbilical area is frequently involved in cases diagnosed with stomach, ovarian or pancreatic cancer, only few cases of endometrial cancer origin have been reported so far (15). In this case the main patterns of spread leading to the apparition of umbilical metastases also consist of contiguous, lymphatic or hematogenous route (14).

When it comes to the clinical aspect, cutaneous metastases with endometrial cancer origin usually present like solid, partial movable, painless tumors. In certain cases they can associate an inflammatory aspect, due to the presence of a rich vascularity; other lesions might associate the aspect of plaques or disseminated nodules, these characteristics being highly suggestive in order to predict the pattern of dissemination (5). Therefore, disseminated lesions are usually associated with the hematogenous pattern of spread while unique lesions usually occur via lymphatic route or via contiguity (16). Another incriminated mechanism which might be responsible for the apparition of such a lesion might consist of intraoperative neoplastic implantation; however, in our case the long disease-free survival interval as well as the location of the lesion (at distance

from the previous scar line) could not confirm this hypothesis.

When it comes to the prognostic factors influencing the long term outcome of such patients, it seems that the overall survival is most commonly influenced by the disease free survival between the treatment of the initial endometrial lesion and the apparition of the skin lesions as well as by the number of lesions diagnosed at this moment; patients presenting skin metastases as oligometastatic disease can be successfully submitted to surgery with curative intent; however, this situation is rarely seen. In cases in which skin or subcutaneous metastases develop as part of the systemic neoplastic dissemination palliative oncological treatment might be proposed; however, the results are rather poor.

For example, a recent report coming from the surgeons from Virginia, United States of America (17) presented a case of a 62-year-old postmenopausal woman who initially presented for the apparition of an erythematous rash and nodules on the lower abdomen, vulva and neck; the biopsy of one of these lesions demonstrated a papillary serous carcinoma while the computed tomography showed the presence of a thickened endometrial lining which was also biopsied, the same histopathological aspect being revealed. Although the patient was submitted immediately to carboplatin and paclitaxel chemotherapy in association with palliative radiotherapy she died at 10 months after initial presentation (17).

In the meantime, the surgeons from Konya, Turkey, (18) presented the case of a 51-year-old patient who had been previously diagnosed with a stage I_A endometroid endometrial carcinoma in association with a stage I_B ovarian endometroid type adenocarcinoma, at that time radical surgery followed by adjuvant chemotherapy being performed; however, at 34 months following surgery the patient was diagnosed with skin metastases. Due to the local extension of the disease at that time the patient was only amenable to palliative radio chemotherapy and died four months later (18).

However, in certain cases in which the lesions present as oligometastatic disease, surgery might be taken in consideration with curative intent. Bassir and co. (19) reported the case of a 60-year-old patient who had been previously submitted to surgery for a stage II_B endometrial cancer, at that moment a total hysterectomy with bilateral adnexectomy being performed. At six

months follow-up the patient was diagnosed with a solitary lesion measuring 6/3 cm in the proximity of the previous laparotomy line so she was resubmitted to surgery, the lesion being removed with negative resection margins. The histopathological studies confirmed the metastatic origin of the lesion; therefore, the patient was submitted to adjuvant radio chemotherapy (19).

In our case the diagnostic of the subcutaneous lesion as oligometastatic disease transformed the patient in a perfect candidate for surgery with curative intent.

Conclusions

Subcutaneous and cutaneous metastases from endometrial cancer are rare eventualities which are usually diagnosed as part of systemic dissemination of this malignancy; in these cases, the patient is only candidate for oncological treatment with palliative intent. In certain cases in which the lesions occur as oligometastatic disease, surgery might be performed with curative intent.

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