

Subcutaneous metastasis of endometrial adenocarcinoma: Case report of an incidental diagnosis during abdominal sonography

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Summary

A rare case of subcutaneous metastasis from endometrial adenocarcinoma detected incidentally on the anterior abdominal wall during routine abdominal sonography is reported. A 62-year-old woman with clinical FIGO Stage IA, grade 2 endometrial mixed type (endometrioid and mucinous) adenocarcinoma was found with a subcutaneous mass located in the abdomen 18 months after initial surgery.

Key words: Endometrial adenocarcinoma; Subcutaneous metastasis.

Introduction

Cutaneous metastasis of visceral carcinomas is relatively rare. The prevalence of skin metastases from internal malignancy is reported to be 1-5% [1-3]. In a review of 2,279 autopsy studies of patients who had died from internal neoplasms, Gates [1] found 58 cases of skin metastasis (2.5%), in which the majority of lesions were noted to be located on the trunk and extremities.

Review of the literature [3-6] revealed cutaneous metastasis from endometrial adenocarcinoma to be associated with generalized dissemination into different organs and a high level of malignancy of the original neoplasm in the majority of cases. Cutaneous metastasis from endometrial carcinoma has been reported to occur at different sites, including the scalp, trunk, knee, and toe [3-9]. A case of endometrial carcinoma metastasis to the tongue has also been reported [10].

We report a rare case of a moderately differentiated mixed type endometrial adenocarcinoma limited to the endometrium metastasizing to the subcutaneous tissue without evidence of other organ system involvement.

Case

A 62-year-old nulliparous woman presented with a history of vaginal spotting for a few days. She had experienced menopause ten years before and had not utilized hormone replacement therapy. The patient had no significant medical history except for obesity and diabetes mellitus which was diagnosed during routine preoperative evaluation and regulated by diet and oral antidiabetic preparations. She had conceived only once and this resulted in a spontaneous abortion. Histologic examination of endometrial curettings revealed mixed type (endometrioid and mucinous) endometrial adenocarcinoma with histopathologic grade 2. She underwent an extrafascial hysterectomy plus bilat-

eral salpingo-oophorectomy. Peritoneal washings were obtained for cytologic examination. A Pfannenstiel incision was used for exploration. Pelvic and para-aortic lymph node sampling was not performed as the tumor was limited to the endometrium. There was no evidence of extrauterine disease at the time of surgical exploration.

Pathologic examination of endometrial sections demonstrated mixed type (endometrioid and mucinous) endometrial adenocarcinoma and a leiomyoma nodule. The tumor was 1.7 cm in the largest diameter without myometrial invasion and a histopathologic grade of 2. Immunohistochemical evaluation was negative for estrogen and progesterone receptors, p53, and c-Erb-2 gene expression, but positive for Ki-67 gene expression (40%). Peritoneal washings were negative for malignancy. She was then followed regularly for three-month intervals and was doing well on routine laboratory evaluation, pelvic examination and abdominal sonography.

After 16 months of regular follow-up, a subcutaneous mass 3.0 x 3.5 cm in diameter, localized on the anterior abdominal wall below the umbilicus just lateral to the midline was detected incidentally on abdominal ultrasonography performed as a routine follow-up procedure and confirmed by computerized tomography. There was no other evidence of metastasis in any other organs. A wide local excision of the mass was performed and endometrioid type adenocarcinoma metastasis to the subcutaneous tissue with invasion to the rectus muscles was shown after histologic examination of the tissue (Figure 1). She has been doing well clinically since the surgery and scheduled to receive abdominal radiotherapy.

Discussion

Cutaneous metastasis from internal malignancy is uncommon and carries a poor prognosis. The mean life expectancy in patients with skin metastasis associated with nonmammary carcinoma was reported to be 11 months [1]. The primary tumors that most often metastasize to the skin are breast (69%), colon (9%), melanoma (5%), and ovary (4%) [11]. Endometrial adenocarcinoma is the most common gynecological cancer, but cutaneous

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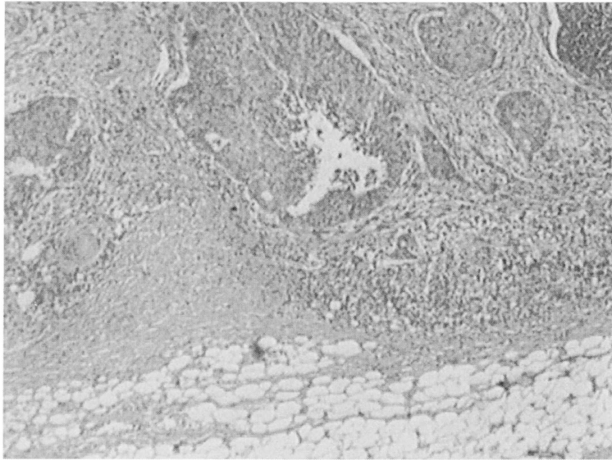


Figure 1. — Subcutaneous metastasis of endometrial adenocarcinoma (Hematoxylin & eosin x 40).

metastasis is uncommon. An incidence of 1.1% was described by Rasbach *et al.* [3] and Damewood *et al.* [8] after their review of all postmortem examinations, where they identified one case of cutaneous metastasis in 86 cases of documented endometrial cancer. Endometrial adenocarcinoma was reported to be responsible for about 1.4% of cases of umbilical metastases (Sister Mary Joseph's nodule) [12, 13].

A variety of mechanisms have been proposed to explain the spread of carcinoma to cutaneous and subcutaneous tissues and include: direct extension from peritoneal surface, lymphatic or hematogenous spread, and iatrogenic implantation in surgical scars. Partial or complete blockage of the lymphatic channels that would interfere with the normal lymph flow may be caused by surgical procedures. These may result in lymph flow through alternative channels or even in the possibility of retrograde flow which could explain the unusual dissemination [14]; and deductively, the alteration of the lymphatic vessels comparable to what is seen in cases of inflammatory breast cancer. The route of spread from endometrial cancer is thought to be a contiguous extension from the peritoneal surface rather than hematogenous. Although a Pfannenstiel incision was used for exploration during laparotomy in the present case, the possibility of an iatrogenic mechanism (secondary to transplantation of tumor cells during surgery) was considered as hypothesized by Charpman *et al.* [15]. In addition to this, a contiguous extension from the peritoneal surface was also regarded as the possible route of spread.

Three definitive factors that influence the aggressiveness of a tumor and therefore its ability to metastasize include: the depth of myometrial invasion, grade of tumor and cellular type [16, 17]. Reported cases of skin metastases arising from endometrial adenocarcinoma have been associated with at least an invasion of the myometrium [5, 11, 17] or disease extension outside the uterine corpus, with cellular grading varying from a moderate degree of differentiation to anaplastic tumors. The present case

demonstrates that a moderately differentiated adenocarcinoma limited to the endometrium has the ability to metastasize to subcutaneous tissue. This signifies the need for screening the abdominal wall for this possibility even in a very early stage disease with sonography.

With regards to other authors [5-8, 18] skin metastases appear clinically in several forms such as inflammatory lesions, discrete nodules, or plaques, and may vary in number from single nodules to greater than 20 lesions. The presence of a subcutaneous lesion may explain the beginning of a cutaneous lesion which is readily detectable clinically. Subcutaneous lesions, when not very large, may not be easily recognized by patients and thus not brought to clinical attention but may be detected incidentally during routine follow-up procedures such as abdominal sonography performed for evaluation of internal organ metastasis, as in the present case.

The prognosis is poor for these patients [3-6] and to date, no effective treatment has been demonstrated. However, strategies have been based on experience with other presentations of recurrent endometrial cancer. Current recommendations include local excision if feasible and combination chemotherapy with doxorubicin and cisplatin, cyclophosphamide or 5-fluorouracil and melphalan [3, 6]. Spencer *et al.* [18] reported the administration of megestrol acetate for a cutaneous metastasis of endometrial adenocarcinoma in the abdominal skin with a decrease in area to less than 10% of the pretreatment surface area correlating with a marked histopathologic decrease in adenocarcinomatous glandular structures. Megestrol acetate has been said to be successful in the treatment of endometrial carcinoma metastatic to the skin as well as in the treatment of other progesterone-sensitive metastatic cutaneous carcinomas. In the present case a wide local excision followed by radiotherapy was used since there was no evidence of other organ system involvement.

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