

Late metastatic endometrial carcinoma at the repair site of an abdominal wall incisional hernia

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ABSTRACT

يعتبر جدار البطن من المواضع النادر انتشار أورام الرحم الثانوية إليها، و حصوله يدل على تقدم مرحلة الورم وانتشاره و انذار بعدم الشفاء منه. نستعرض هنا حالة سيدة في العقد الخامس من عمرها والتي تم لها استئصال ورح سرطان بالرحم في عام 2009م. ولكن حصل لها فتاق بجدار البطن بعد 4 سنوات من عملية الأستئصال. وقد تم اصلاح هذا الفتق جراحياً ألا أنها عند المتابعة اشتكت من ألم شديد و تورم في موضع العملية. و بعد أخذ عينات من موضع التورم تبين وجود تليفات و كذلك خلايا سرطانية ثانوية من ورم الرحم الأولي. بدأت المريضة علاجاً كيميائياً ألا أن تجاوب الورم كان ضعيفاً، و لذلك تم أستئصال الورم الموجود في جدار البطن جراحياً. بقيت المريضة في حالة جيدة حتى بعد مرور عام كامل. تسلط هذه الحالة الضؤ على حقيقة ظهور أورام ثانوية في جدار البطن بعد سنين من استئصال الورم الأولي في عضو من أعضاء البطن أو الحوض، و كذلك توضح أهمية التأكد تماماً من عدم وجود أية أورام ثانوية قبل عملية اصلاح أي فتق في جدار البطن قد يحدث بعد عملية الأستئصال الأولية.

The abdominal wall is a very rare site for endometrial cancer metastases. Its appearance generally indicates advanced cancer with poor prognosis. We report a case of a 55-year-old female who presented with an incisional hernia 4 years after abdominal panhysterectomy for endometrioid adenocarcinoma in 2009. Open hernia mesh repair was performed but on follow-up, she complained of pain and a swelling at the repair site. This was radiologically diagnosed as fibromatosis, but tru-cut biopsy confirmed presence of fibromatosis as well as a metastatic endometrial carcinoma. She was started on neoadjuvant chemotherapy, but had poor response, and therefore, radical excision was performed. She remained well with no metastatic recurrence at 12-month follow-up. This case illustrates late appearance of abdominal wall metastasis from abdomino-pelvic malignancies and highlights the need to exclude the presence of recurrence or metastases prior to surgical repair of incisional hernia occurring after the resection of abdominal or pelvic malignancy.

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Spread of endometrial carcinoma (EC) may occur by direct invasion, lymphatic, or hematogenous dissemination. Retrograde spread may also occur through the fallopian tubes into the abdominal cavity.¹ Although the anterior abdominal wall has a rich arterial supply and lymphatic drainage, it is an uncommon site of metastatic dissemination of endometrial cancer cells.² We report a case of an unusual late metastatic EC appearing in the para-umbilical area following an open mesh repair of an incisional hernia. It illustrates the late appearance of abdominal wall metastasis from EC that was surgically resected some years earlier. It also highlights the need to thoroughly exclude the presence of recurrence or metastases prior to surgical repair of any incisional hernia occurring after the resection of any abdominal or pelvic malignancy.

Case Report. A 55-year-old female underwent abdominal panhysterectomy for EC in June 2009. She also received adjuvant chemotherapy, external beam radiation, and vaginal vault brachytherapy. She presented 3 years later with an incisional hernia in the para-umbilical area, and open mesh repair was

performed in November 2012. Postoperatively, she developed wound infection with skin edge necrosis, which was treated by regular dressings and antibiotics. Vacuum assisted dressing was also used until the wound healed completely. At 9-month follow-up, she complained of pain and a swelling at the operative site. Clinically, the swelling was confined to the site of repair and slightly tender and irreducible. Routine blood tests were within normal. Computed tomography of the abdomen (Figure 1) revealed right rectus abdominis soft tissue mass with peri-umbilical postoperative changes consistent with fibromatosis. A tru-cut biopsy revealed fibromatosis and therefore, she was treated conservatively. However, the symptoms persisted and 3 months later, a repeat tru-cut biopsy targeting the rectus muscle lesion revealed findings consistent with metastatic EC. Based on this, combined 18F-fluorodeoxyglucose-positron-emission tomography and CT (FDG-PET-CT) scan was performed. This showed increased uptake in the right rectus muscle lesion. The multidisciplinary tumor board recommended chemotherapy, but while on chemotherapy, repeat PET-CT scan (Figure 2) revealed an increase in the lesion size with increased avid FDG uptake (SUVmax: 10.5 versus previously 8.3). Therefore, she underwent wide resection of the abdominal wall metastatic mass (Figure 3). The exploration of the abdomen and pelvis revealed no other metastatic lesions. The resultant defect was reconstructed using a composite mesh. The postoperative recovery was non-

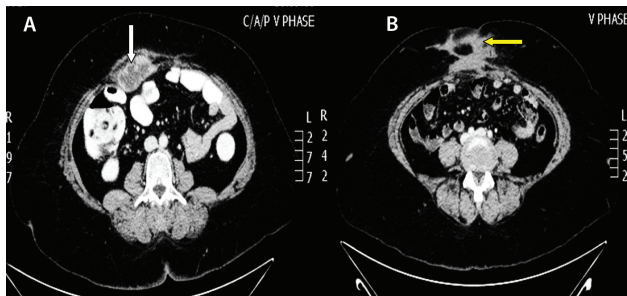


Figure 1 - Computed tomography of the abdomen revealing A) right rectus abdominis muscle soft tissue mass suspicious of metastasis (white arrow) with peri-umbilical postoperative changes consistent with B) fibromatosis (yellow arrow).

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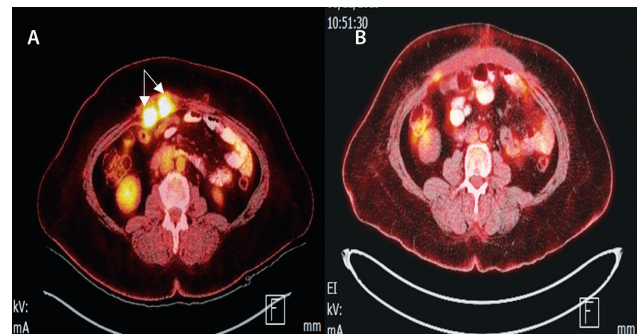


Figure 2 - Positron-emission tomography-CT scan showing A) increased uptake in the right rectus muscle mass SUVmax up 10.3 while on chemotherapy (arrows) and B) 6 months after surgical resection of the metastatic lesion showing absent avid uptake.

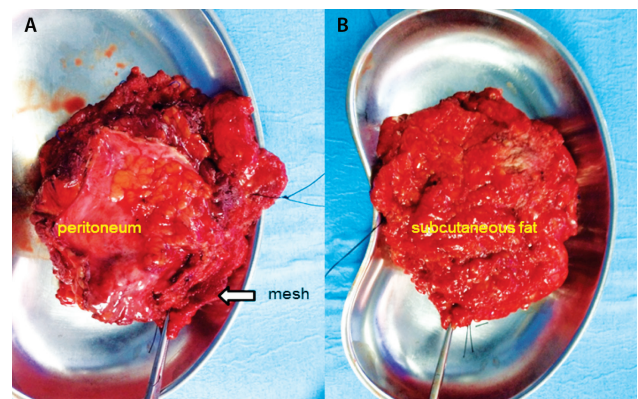


Figure 3 - The excised metastatic abdominal wall lesion showing A) the peritoneal surface of the lesion. It also shows the excised synthetic mesh of previous incisional hernia repair (arrow) and B) the superficial (anterior) surface of the excised lesion.

eventful and repeat PET-CT scan was negative after 6 months (Figure 2). She remained well at 12-month follow-up with no recurrence or metastases.

Discussion. Abdominal wall metastasis is relatively uncommon, accounting for only 1-3% of all abdominal wall metastases from gastrointestinal or genitourinary malignancies.² Its presence generally indicates advanced cancer with poor prognosis. Metastatic lesions may appear at any time after treatment of EC and may occur in unusual sites such as abdominal wall, spleen, central nervous system, extra-abdominal lymph nodes, and, less commonly adrenals, appendix, and pancreas.³⁻⁶ Moreover, abdominal wall metastases to surgical incisions and port sites after laparoscopic surgery for EC have also been described.⁷ Park and Hwang⁸ reported a case of abdominal wall metastasis 8 months after surgical

resection in a patient with EC. It was treated by surgical excision and chemotherapy, and no sign of recurrence at 3-year follow-up. In the present case, the metastasis appeared late; more than 4 years after surgical resection. Luz et al⁹ reported a case of an isolated abdominal wall metastasis after vaginal rather than abdominal hysterectomy for EC just over 6 months after surgery. She underwent surgical excision, and the defect was repaired using a synthetic mesh as in this case. This was followed by chemotherapy, and no recurrence appeared at one-year follow-up. This indicates that the spread may have occurred via the blood stream or lymphatics rather than contamination during abdominal surgery. Hence, it seems that abdominal wall metastasis is most likely due to hematogenous spread to the site of surgical incision. Other methods of spread include seeding of neoplastic cells after direct contact between the tumor and the surgical wound, and 'the aerosol effect' of pneumoperitoneum in laparoscopic procedures. This is supported by the fact that most cases reported in the literature are related to surgical incisions or laparoscopic port-sites. In this current case, it is hard to speculate the exact time of the metastatic appearance. The implantation of malignant cells in the surgical incision may have occurred during the index operation and remained dormant. Moreover, it may have been missed during the open repair of the incisional hernia, or it appeared shortly after the mesh insertion. Nevertheless, there was no preoperative radiological evidence of soft tissue mass presence prior to the hernia repair. It was the pain produced by the intense fibromatosis that brought the metastatic nodule to attention. The first tru-cut biopsy revealed no evidence of malignancy. However, second targeted biopsy was very informative and this 'clinched' the diagnosis allowing a management plan to be drawn.

Treatment should be individualized but, radical surgical resection of isolated metastasis should be considered in any patient with good performance status, provided that other distant metastatic foci are excluded by PET-CT scan. Most treatment guidelines only support surgical resection and adjuvant therapy in selected patients with good performance status. This treatment may improve survival, but the prognosis is believed to be generally poor and palliative care may be the only feasible treatment option in some cases.² Chemotherapy can be considered in unresectable or disseminated metastases. Combination regimens with paclitaxel and carboplatin or cisplatin are frequently used for recurrent endometrial cancer. As in this case, neoadjuvant chemotherapy is sometimes offered and this is considered by some authors as the mainstay

of treatment. However, the response to neoadjuvant chemotherapy in this case was disappointing and the lesion increased in size whilst the patient was on chemotherapy. This necessitated a change in the management plans and to proceed with surgical resection. Unfortunately, it is generally believed that once diagnosed, distant metastases from EC carry an overall poor prognosis with a median survival of one year only.¹⁰

In conclusion, this case illustrates that the abdominal wall is an unusual location for the late appearance of a solitary metastasis of EC that was surgically resected some years earlier. It also highlights the need to thoroughly exclude the presence of recurrence or metastases prior to surgical repair of any incisional hernia occurring after the resection of any abdominal or pelvic malignancy.

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