

Case Report

Late peritoneal relapse of endometrial carcinoma: a case report

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Late relapse of endometrial carcinoma occurring more than 10 years after the initial treatment is rare. Laparoscopic resection of such a late recurrent lesion has not been reported to the best of our knowledge. We herein report a case of successful laparoscopic management of a late peritoneal relapse of endometrial carcinoma in a postmenopausal 77-year-old woman. At 67 years of age, she had undergone initial surgery with adjuvant chemotherapy. At a routine visit after treatment of her cancer, computed tomography revealed an enhanced heterogeneous solitary mass at the right paracolic gutter. The mass was laparoscopically resected sparing the resection of other organs. This case study demonstrates that for successful and definitive treatment of endometrial carcinoma, it is important to detect potentially recurring lesions through regular surveillance and as early as possible after the initial treatment. In addition, when treating late recurrent endometrial cancer, laparoscopic surgery is useful not only for exploration of the abdominal cavity but also for resection of the tumor.

Keywords

Endometrial carcinoma; Laparoscopy; Late relapse

1. Introduction

Endometrial carcinoma is a common cancer in women. About 80% of relapses are evident within the first three years after treatment initiation. Relapse of endometrial carcinoma occurring more than 10 years after the initial treatment is rare. Indeed, only five cases of relapse that occurred more than 10 years after the initial surgery have been reported in the English language literature [1–5]. Laparoscopic resection of a late relapsed lesion has not been reported. We herein report a case of successful laparoscopic management of a late peritoneal relapse of endometrial carcinoma.

2. Case report

A postmenopausal 77-year-old Japanese woman visited our hospital for regular surveillance after cancer treatment. She was asymptomatic. At 67 years of age, she had been diagnosed with endometrial carcinoma and had undergone total abdominal hysterectomy, bilateral salpingo-oophorectomy, and retroperitoneal lymphadenectomy (pelvic and paraor-

tic) with adjuvant chemotherapy. The abdominal incision type was a midline incision. Peritoneal cytology was positive. The final pathological examination confirmed endometrioid carcinoma G1, International Federation of Gynecology and Obstetrics (FIGO2009) stage IB. Neither lymphovascular infiltration nor lymph node metastasis was found.

The patient underwent close follow-up with no evidence of relapse until the age of 77 years. Computed tomography (CT) of the abdomen revealed an enhanced heterogeneous mass at the right paracolic gutter; this mass had not been found on CT one year prior (Fig. 1). Recurrence of endometrial carcinoma or another primary tumor was suspected. Colonoscopy showed no lesions. Exploratory laparoscopy was performed. Camera port was inserted on the umbilicus by the open method. Two operation ports were inserted at the left lower abdomen and left lateral abdomen, respectively (left parallel). Intraoperative examination revealed a 2-cm mass at the right paracolic gutter (Fig. 2). The omentum was adhered to the mass. The ascending colon was not adhered to the mass. Adhesion around the mass was dissected. Mass resection was performed, and no residual disease remained. The resected mass was placed in a polyurethane bag in the abdominal cavity and removed through an umbilicus wound. Peritoneal cytology was negative. The estimated blood loss was minimal, and the operation time was 79 minutes.

The patient's postoperative course was uneventful. The histopathologic examination demonstrated the presence of adenocarcinoma cells with enlarged nuclei that formed non-squamous nests and glandular structures. Estrogen receptor was positive upon immunohistochemistry. These findings of the resected mass were compatible with peritoneal relapse of endometrial carcinoma (Fig. 3). Because complete resection was performed and peritoneal cytology was negative, adjuvant chemotherapy was not performed. After surgery of this relapsed endometrial carcinoma, the patient has undergone regular surveillance every three months with CT every six months. No evidence of recurrence has been found for almost a year.

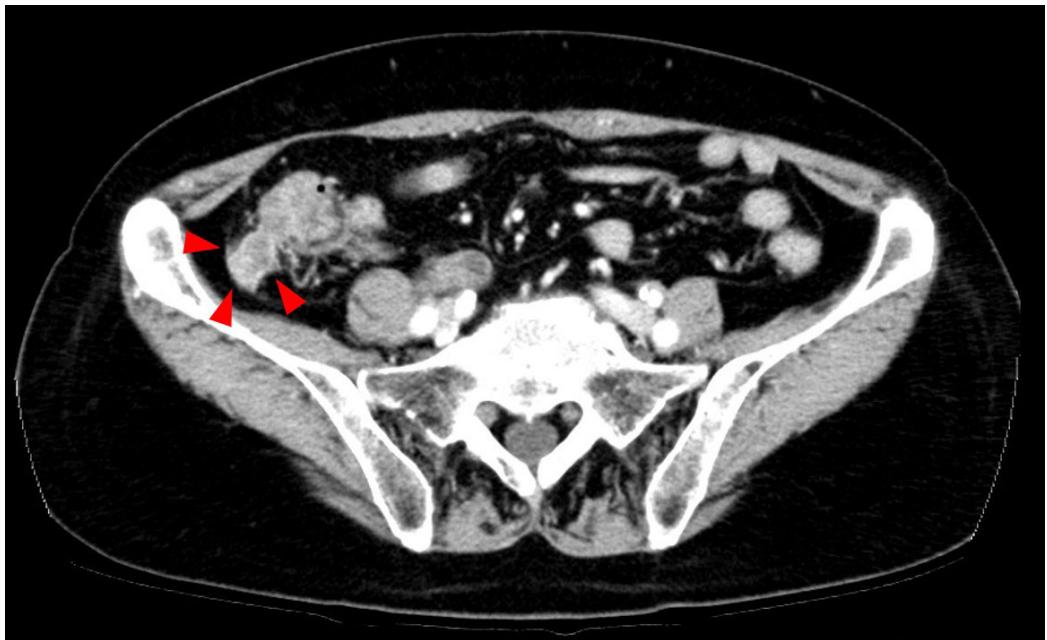


Fig. 1. Abdominal computed tomography. An enhancing heterogeneous mass was found at the right paracolic gutter (Arrow heads).

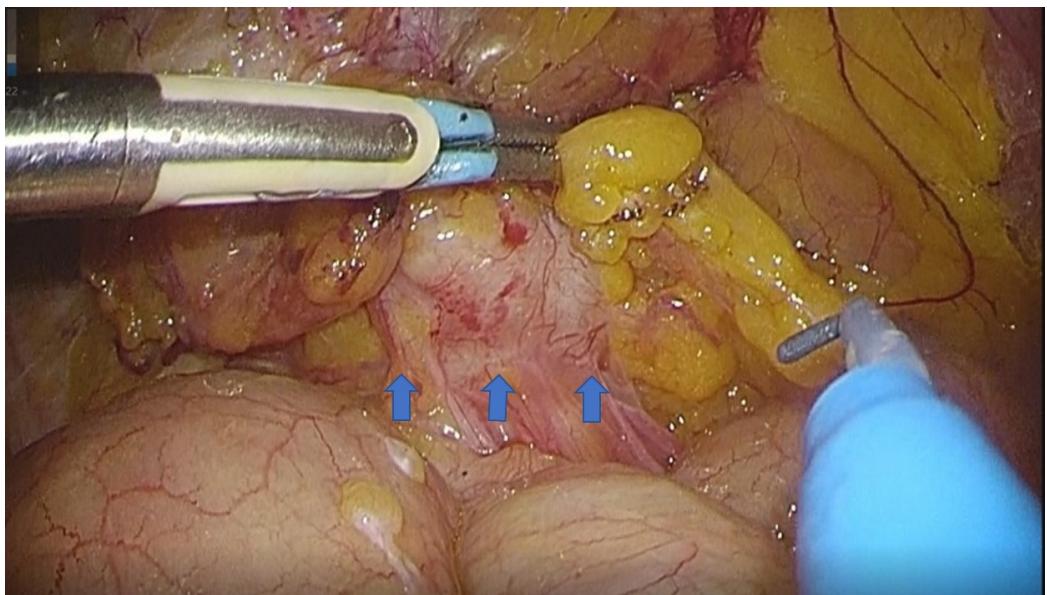


Fig. 2. Laparoscopic findings. The omentum was adhered to the mass at the right paracolic gutter (Arrows). No other organs were adhered to the mass.

3. Discussion

Of the five cases of relapsed endometrial carcinoma that have been reported in the English language literature more than 10 years after the initial surgery [1–5], the sites of recurrence in two cases were the lower vagina and vaginal cuff, respectively [1, 2]. These recurrences were treated by radiation therapy. In the other three cases, the sites of relapse were the abdominal wall scar, upper urinary tract, and pelvis, respectively, and these relapses were treated by surgical resection [3–5]. In all five cases, the recurrent lesions were isolated and curable by local therapy. No evidence of recurrent disease was reported. Although the prognosis of recurrent endome-

trial carcinoma is generally poor, previous case reports of late relapse of endometrial carcinoma have shown a good prognosis after salvage therapy. Definitive radiotherapy has been recommended for the management of isolated vaginal recurrences. Surgical resection of a solitary recurrent lesion at a site other than the vaginal vault contributes to a better prognosis in patients with recurrent endometrial carcinoma.

Minimally invasive surgery such as laparoscopic or robotic surgery has been integrated into the initial treatment of endometrial carcinoma. However, the utility of laparoscopic management for treatment of recurrent endometrial carcinoma remains unclear. One report has described laparo-

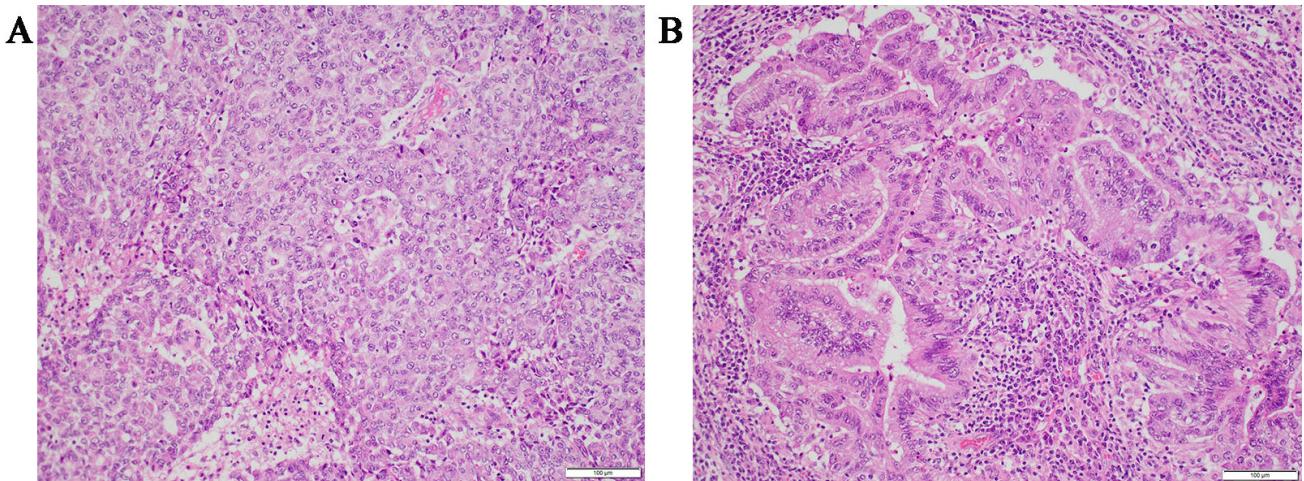


Fig. 3. Histopathology of resected tumor. Adenocarcinoma cells with enlarged nuclei that formed non-squamous nests (A) and glandular structures (B) (hematoxylin-eosin stain, $\times 200$).

scopic resection of an isolated recurrent lesion [6], but laparoscopic resection of a late recurrent lesion has not been reported. When surgically treating a recurrent tumor, complete or optimal surgery is generally required. When a gynecologist resects recurrent endometrial cancer of the peritoneal cavity, laparoscopy is useful for the identification of patients who can undergo optimal surgery. For instance, laparoscopy may show small dissemination which preoperative imaging cannot detect. A recurrent tumor may invade adjacent organs. In such cases, combined resection of adjacent organs may be required for laparoscopic management of recurrent endometrial cancer. If laparoscopic resection is difficult, the procedure should be converted to laparotomy. In our case, the recurrent tumor did not invade any important adjacent organs, and combined resection was not required. For the successful and definitive treatment of late recurrent lesions of endometrial carcinoma, it is important to detect the recurrent lesions through regular surveillance as early as possible after the initial treatment.

Following surgery of the relapsed endometrial tumor, regular surveillance including CT was performed in our patient. CT is useful for detecting asymptomatic recurrence. Early detection of the recurrent lesion by CT enabled our patient to be treated by tumor resection alone without resection of adjacent organs. However, the role of CT for routine follow-up after the initial treatment remains debatable. Connor *et al.* found no difference in survival when subclinical recurrence was found by CT [7]. National comprehensive care network (NCCN) guidelines recommend that imaging such as CT should be performed as clinically indicated [8]. CT as routine postoperative surveillance for asymptomatic patients is not recommended. However, Ueda *et al.* reported that the prognosis was better for patients who were asymptomatic at the time of recurrence detection than for patients in whom the tumor was symptomatic [9]. In their study, all participants were Japanese. In our case, we discussed the follow-up

plan with the patient. We decided with the patient that annual CT was to be included in the follow-up examinations despite an excess cost and increased radiation exposure.

It should be noted that the patient's tumor at initial presentation was classified as stage IIIA based on positive peritoneal cytology; the disease was otherwise confined to the uterus. Positive peritoneal cytology is a highly predictive survival factor in many kinds of gynecological malignancies. In 2009, the International Federation of Gynecology and Obstetrics (FIGO) removed peritoneal cytology as a staging criterion from the endometrial cancer staging system; however, the collection of pelvic washings for cytology is still recommended. Some recent studies have concluded that positive peritoneal cytology is associated with a decreased overall survival of women with FIGO stage I/II endometrial cancer, including low-grade endometrioid endometrial cancer [10].

Matsuo *et al.* reported that abnormal peritoneal cytology in patients with stage I/II endometrioid endometrial cancer did not increase the risk of recurrence in the vagina or pelvis [11]. In contrast, the authors found that abnormal peritoneal cytology increased the risk of peritoneal, lymphatic, or hematogenous recurrence. Therefore, regular surveillance after the initial treatment for stage I/II endometrioid endometrial cancer probably should include CT if peritoneal cytology is positive. On the other hand, postoperative chemotherapy after the initial surgery was reported to be significantly associated with a decreased risk of peritoneal recurrence among women with abnormal peritoneal cytology. In our case, the patient developed peritoneal recurrence in spite of her history of postoperative chemotherapy. Decision-making regarding appropriate surveillance after the initial treatment for endometrial cancer remains difficult. Further study is required for the selection of patients in whom CT should be performed as routine follow-up examinations after initial treatment.

Author contributions

MM, HS and MH designed the research study. MM and HS performed the research. MM and HS analyzed the data. MM, HS and MH wrote the manuscript. All authors contributed to editorial changes in the manuscript. All authors read and approved the final manuscript.

Ethics approval and consent to participate

All subjects gave their informed consent for inclusion before they participated in the study. The study was conducted in accordance with the Declaration of Helsinki, and the protocol was approved by the Ethics Committee of Hyogo Prefectural Amagasaki General Medical Center (approval number: 1-95).

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Conflict of interest

The authors declare no conflict of interest.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

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