Case Report

Isolated Incisional Recurrence in a Patient with Early-Stage Endometrial Cancer: A Case Report and Review of the Literature

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Abstract

Isolated incisional recurrence in a patient with early-stage endometrioid carcinoma is extremely rare. The mechanism of this recurrence also remains unclear. We describe a case of an isolated incisional recurrence of endometrioid carcinoma from the uterine corpus 4 years after the primary surgery. We review the previous literature and discuss the possible mechanism of isolated incisional recurrence. A 56-year-old woman diagnosed with the International Federation of Gynecology and Obstetrics Stage IA and Grade 2 endometrioid carcinoma in the uterine corpus showed an isolated cystic mass in the abdominal wall 4 years after the primary surgery. She underwent resection of the abdominal tumor, and the pathological findings showed endometrioid carcinoma, which was the same as the primary tumor. She received chemotherapy and remained disease free 8 months after chemotherapy. Long-term follow-up is required to detect recurrence, even in patients with early-stage uterine corpus carcinoma.

Keywords: Endometrioid cancer, isolated incisional recurrence, metastasis

Introduction

Endometrioid carcinoma is one of the most common female genital cancers and is well known for its good prognosis. The 5-year overall survival (OS) rate is approximately 80% in the developed countries.[1] In cases of the International Federation of Gynecology and Obstetrics (FIGO) Stage IA, the 5-year OS rate is higher than 90%.[2] Furthermore, in the pathological aspect, patients with endometrioid carcinoma show better prognosis (5-year OS: 83%) than those with clear cell carcinoma (62%) and serous carcinoma (53%), regardless of the FIGO stage.[1] Recurrence mainly occurs locoregionally, such as in the vaginal stump or pelvic sidewall,[3] and an incisional recurrence occurs in approximately 0.1% of patients with endometrial carcinoma.[4] In addition, isolated incisional recurrence in a patient with early-stage endometrioid carcinoma is extremely rare.[4] Therefore, the mechanism of this recurrence remains unknown.

Here, we report a patient with endometrioid carcinoma in the uterine corpus diagnosed with FIGO Stage IA and Grade 2 through histological findings, who showed isolated incisional recurrence 4 years after the primary surgery. We review the previous literature and discuss the possible mechanism of the isolated incisional recurrence.

Case Report

A 56-year-old woman, gravida 3, para 2, underwent total abdominal hysterectomy, bilateral salpingo-oophorectomy, and pelvic lymphadenectomy for endometrial cancer at the

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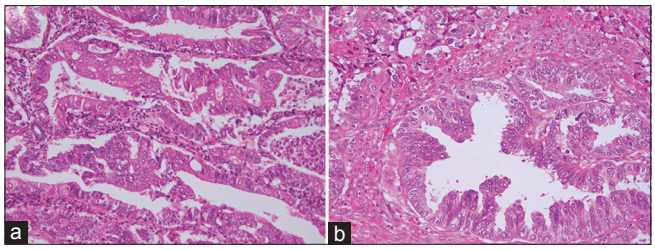

Figure 1: Pathological findings. (a) H and E staining revealing Grade 2 endometrioid carcinoma (H and E, ×200), (b) abdominal wall recurrent tumor: same histology (H and E, ×200)

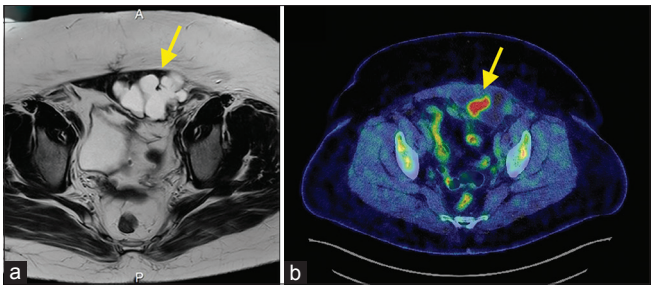

Figure 2: Tumor appearance. (a) Contrast-enhanced magnetic resonance imaging, T2-weighted axial aspect, showing polycystic mass arising from the abdominal wall (arrow), (b) 18F-fluorodeoxyglucose-positron emission tomography/computed tomography showing an increased uptake in the mass (maximum standardized uptake value: 15.69) (arrow)

age of 52 years. The pathological findings revealed a Grade 2 endometrioid carcinoma in the uterine corpus [Figure 1a]. The depth of myometrial invasion was <1/2, and no lymphovascular space invasion was noted. Although there was no evidence of extrauterine metastases, the cytology on peritoneal ascites was positive. The tumor was classified as FIGO Stage IA, Grade 2 endometrioid carcinoma, and the patient received five courses of adjuvant chemotherapy with paclitaxel (150 mg/m^2), doxorubicin (40 mg/m^2), and carboplatin (area under the curve = 4) every 3 weeks in accordance with our algorithm. After the treatment, the patient was routinely followed up; she underwent testing for the levels of the tumor marker cancer antigen (CA) 125 every 3 months and underwent computed tomography (CT) annually. Forty-eight months after the last chemotherapy session, her CA125 level was found to have elevated rapidly and suddenly; magnetic resonance imaging (MRI) revealed a 9 cm × 7 cm polycystic mass arising in the abdominal wall [Figure 2a], and 18F-fluorodeoxyglucose-positron emission tomography/CT (FDG-PET/CT) showed an increased uptake in the mass (maximum standardized uptake value: 15.69) [Figure 2b]. No other lesion that was suspicious for metastasis was found. Resection of the abdominal wall mass and repair of the abdominal wall defect were performed using the fascia lata. During the laparotomy with incision of the primary surgery, the abdominal wall mass was found in the rectus abdominis muscle, and it invaded the fascia lata but not the intra-abdominal cavity macroscopically. Similarly, the recurrent tumor found in the muscle did not penetrate the peritoneum and did not reach the abdominal cavity microscopically. No other recurrent tumor was observed in the abdominal cavity. Histopathology of the resected mass revealed an endometrioid carcinoma metastasis [Figure 1b], and the surgical margins were negative. Cytology of ascites was positive. The patient received six courses of adjuvant chemotherapy with paclitaxel (175 mg/m^2) and carboplatin (area under the curve = 5) every 3 weeks. The patient remained disease free 8 months after completing chemotherapy.

Discussion

The recurrence of uterine corpus cancer mainly occurs in the vaginal stump or pelvis, and isolated incisional recurrence is extremely rare.[4] We could only find 43 cases of this recurrence pattern in the literature; among them, only 18 cases involved isolated abdominal wall recurrence. Moreover, only 9 cases were classified as FIGO Stage IA [Table 1],[5-13] and the patients were thus at low risk for recurrence, which is similar to that in our case. Since isolated incisional recurrence of uterine corpus cancer is extremely rare, the mechanism and pathway of recurrence remain unknown. Most previous reports suggest possible mechanisms such as hematogenous metastasis, intraperitoneal spread, and tumor implantation during surgery. In cases of advanced-stage cancer, hematogenous or lymphogenous metastasis or implantation in the abdominal wall could occur. However, the reason why the recurrence did not occur in the vaginal stump or pelvis but in the solitary abdominal wall in our case, as well as in those cases described in Table 1, cannot be explained. All these cases were classified as early-stage endometrial cancer with the patients exhibiting a low risk of recurrence. In our case, because the cytology of ascites during the primary surgery was positive, the mechanism of isolated incisional recurrence might be tumor implantation during the primary surgery. This means that cancer cells implanted in the abdominal wall during the primary surgery remained dormant for 4 years but were later activated because of some triggering factors. There is an interesting hypothesis that explains the causes of its activation from dormancy, namely inflammatory oncotaxis. It is an alternative recurrent mechanism proposed by DerHagopian *et al.*[14] and suggests that mechanical trauma or stress leads to the proliferation of preexisting dormant micrometastases, allowing for angiogenesis, formation of supportive stroma, and immune evasion through inflammatory cytokines and some growth factors.[15,16] In our case, although the episode causing trauma or stress was unclear, the patient had been receiving treatment for diabetes. It means that she was in an immunosuppressed state. One of the two patients with inflammatory oncotaxis reported by Walter *et al.* also had diabetes.[6] That is to say, in our case, the immunosuppressed state caused by diabetes

Table 1: Characteristic of FIGO Stage I A endometrial carcinoma patients with isolated incisional recurrence

Reference	Age	Primary treatment	Grade	Ascites cytology	DFI (months)	Surgical approach	Treatment for recurrence
Barter *et al.*[5]	64	Surg	1	−	15	Open	Resection + RT + HT
Kotwall *et al.*[6]	65	Surg	1	+	84	Open	Resection
Khalil *et al.*[7]	58	Surg + RT	2	−	36	Open	Resection + CT
Muntz *et al.*[8]	58	Surg	2	+	21	Laparo	Resection
Lorenz *et al.*[9]	73	Surg + RT	2	NA	168	Open	Resection
Chen *et al.*[10]	56	Surg	2	NA	6	Open	Resection + CT
Palomba *et al.*[11]	66	Surg + RT	2	NA	24	Laparo	Resection + CT
Santeufemia *et al.*[12]	60	Surg	1	NA	120	Open	Resection
Grabosch *et al.*[13]	56	Surg	1	NA	13	Robo	Resection
Present case	52	Surg + CT	2	+	53	Open	Resection + CT

CT: chemotherapy, DFI: disease-free interval, HT: hormone therapy, Laparo: laparoscopic surgery, NA: not available, Open: open surgery, Robo: robotic surgery, RT: radiation therapy, Surg: surgery

could have contributed to the activation of the implanted cancer cells during primary surgery in the dormant state through inflammatory oncotaxis and resulted in the isolated incisional recurrence.

Bogani *et al.* showed that isolated incisional recurrence conferred significantly better OS than nonisolated incisional recurrence.[4] In our case, since the cytology of ascites during the surgery was positive, we administered systemic chemotherapy after complete resection. The efficacy of adjuvant chemotherapy after the resection of isolated incisional recurrence has not been established yet. Therefore, long-term follow-up is required for the assessment of treatment.

Conclusion

Isolated incisional recurrence of early-stage endometrial cancer is extremely rare, and the mechanism of this recurrence is still unknown. Nevertheless, long-term follow-up is required even in patients with early-stage cancer to detect recurrence.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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