

• Gynecologic Oncology •

A case of solitary spleen metastasis of endometrial carcinoma

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[Abstract] Spleen metastasis is rare, solitary spleen metastasis of endometrial carcinoma is extremely rare. In our hospital, a 54-year-old woman had undergone operation, chemotherapy and radiotherapy for poorly differentiated endometrial adenocarcinoma. One year later, B-ultrasound and CT scan discovered a spleen occupying lesion. Spleen fine needle aspiration biopsy showed metastasis from endometrial carcinoma. Splenectomy was performed to remove the spleen lesion from the peritoneal cavity and postoperative pathologic examination confirmed that the spleen metastasis was of endometrial origin. After splenectomy, the patient received six cycles of chemotherapy with paclitaxel. To date, 12 months after splenectomy, she is alive with no intraperitoneal disease and with no other metastases. Spleen metastasis is mostly caused by primary carcinoma of the breast, lung and ovaries, and mainly presents splenic pain and splenomegaly. B-ultrasound, CT, and MRI are the main diagnostic methods for spleen lesions. Once solitary spleen metastasis occurred, splenectomy-predominant treatment with postoperative adjuvant chemotherapy is recommended.

Key words: Endometrial neoplasm, splenic metastasis, case report

The spleen is not a common metastatic organ for malignant tumors, and the metastatic rate from cancers is even lower.¹ Solitary spleen metastasis of endometrial carcinoma is extremely rare, with only a few case reports in literature. Spleen metastasis of endometrial carcinoma is not yet fully understood. We analyzed the clinical data of one case of endometrial carcinoma with spleen metastasis treated in our hospital and reviewed relevant literature to investigate the features of its diagnosis and treatment.

Case description

The patient was a 54-year-old woman who underwent surgery and postoperative radiochemotherapy for endometrial carcinoma. One year later, the patient was hospitalized again because repeated examinations revealed a space-occupying lesion in the spleen.

In May 2007, the patient experienced post-menopausal

vaginal bleeding. She was diagnosed with endometrial carcinoma and underwent hysterectomy plus bilateral salpingo-oophorectomy in a local hospital, and had good recovery after operation. In July 2007, she was given a cycle of chemotherapy with paclitaxel and cisplatin in the local hospital. On July 30th 2007 in Nanjing Hospital of Thoracic Disease, she received pelvic CT scan, which showed post-operative changes of the pelvic cavity; soft tissue signals in the left vesicorectal pouch, possibly metastatic changes; local blurred boundary between the left bladder wall and adjacent soft tissue, indicating the possibility of bladder wall invasion.

From August 1st 2007 to September 6th 2007, the patient was hospitalized to our hospital. Routine examinations at admission revealed no metastatic lesions in other organs. Previous pathologic sections were reviewed and the diagnosis of poorly differentiated endometrial carcinoma with cancer tissue infiltrating into the muscular layer of the uterus, localized necrosis and cancer nodules was made. The patient was given concomitant radiochemotherapy. Pelvic radiotherapy was given at DT 50 Gy. Chemotherapy was given with 60 mg of THP on day 1, 100 mg of VP-16 on days 1–5 and 40 mg of cisplatin (DDP) on days 1–3. The patient was discharged from hospital after one cycle of chemotherapy.

From September 8th 2007 to September 27th 2007, the patient was admitted to our hospital again. Repeated chest X-ray and abdominal B-ultrasound examinations revealed normal results. Pelvic CT scan suggested that the mass had disappeared, with no obvious swollen lymph nodes. The patient

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This paper was translated from Chinese into English by Guangzhou Liheng Medical Translation and edited by Wei Liu on 2009-10-09.

The Chinese version of this paper is available at:

<http://www.cjcsysu.cn/cn/article.asp?id=15754>.

Received: 2008-12-18; Accepted: 2009-09-23

was given another cycle of chemotherapy with 800 mg of cyclophosphamide (CTX) on days 1 and 8, 40 mg of EAM on days 1 and 8, and 40 mg of DDP on days 1–3, and was discharged after the chemotherapy. Thereafter, the patient did not come back for subsequent chemotherapy as scheduled.

The patient had a clinic visit for re-examination on November 25th 2008, when she had no symptoms. Abdominal B-ultrasound examination and CT scan suggested a space-occupying lesion of 75 mm × 60 mm near the splenic hilum; based on previous history of disease, metastatic carcinoma was considered (Figure 1). On November 26th 2008, the patient was hospitalized again. Repeated chest X-ray and pelvic CT scan revealed no recurrence or metastasis. Needle aspiration biopsy on the splenic mass was conducted as guided by B-ultrasound, and the pathologic results indicated metastatic adenocarcinoma. On December 3rd 2008, the patient underwent laparotomy plus spleen resection under continuous epidural anesthesia. During the exploration, no metastatic lesion was seen in the liver, gall bladder, pancreatic gland and pelvic cavity, a firm mass of 6 cm × 5 cm was palpated in the upper polar of the spleen, with well defined boundary and nodular protuberance on the surface. The spleen was then resected. Postoperative macroscopic pathology showed that the spleen was 11.5 cm × 8.5 cm × 6 cm in size, a solid and soft nodule of 6.5 cm × 5 cm × 4.5 cm in pale and yellowish color was seen in the spleen. Adenoid and lamellar cancer tissues were seen in the spleen under microscope. Postoperative diagnosis was spleen metastasis of endometrial carcinoma (Figure 2). After operation, systemic chemotherapy was given. Currently, the patient is still receiving treatment and follow-up.



Figure 1 Upper abdominal CT scan shows a mass of 75 mm × 60 mm near the splenic hilum

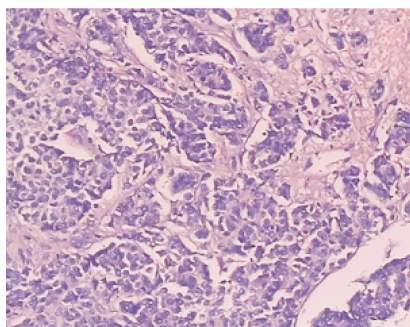


Figure 2 Morphology of spleen metastasis (HE ×200)
Adenoid and lamellar cancer tissues are seen in the spleen.

Discussion

Spleen metastasis is uncommon, and solitary spleen metastasis from endometrial carcinoma is even more uncommon. There are only case reports in literature, and clinical missed diagnosis (or misdiagnosis) is highly frequent.¹ Spleen metastasis has no specific clinical manifestation. Therefore, clinical diagnosis of spleen metastasis is often based on previous history of tumor and imaging findings. Spleen pain and splenomegaly are valuable diagnostic clues. Abdominal B-ultrasound, CT and MRI are common diagnostic methods. The use of imaging examinations, including CT and MRI, in the follow-up has gradually increased the detection rate of spleen metastasis.^{2,4} It was reported that spleen metastasis could represent as solitary nodule, multiple nodules, diffuse infiltration or cyst,² and nodule was the most frequently reported type in China.⁵ The cancer lesion mostly affects the upper polar, lower polar or hilum of the spleen, and in rare cases involves the upper polar (or lower polar), hilum and capsule of spleen.¹ Spleen metastasis has been reported for almost all types of common malignant tumors, prominently adenocarcinoma. It was reported that 30%–67% of spleen metastasis were from lung cancer and breast cancer, followed by colon cancer and ovarian cancer.^{6,7} Inconsistently, Liu *et al.*⁵ and Lam *et al.*² reported that spleen metastasis was mostly from ovarian cancer, lung cancer, nasopharyngeal cancer, gastric cancer and pancreatic cancer, suggesting that the prevalence, incidence and detection rate of spleen metastasis were different among different areas.

In our patient, the endometrial carcinoma was poorly differentiated and highly malignant. At two months after operation, re-examination revealed recurrent lesion in the pelvic cavity. The lesion disappeared after concomitant radiochemotherapy, indicating sensitivity to radiotherapy and chemotherapy, and that treatment was proper and effective. After another cycle of chemotherapy, the patient did not come back for subsequent chemotherapy as scheduled. At one year after the last treatment, abdominal B-ultrasound first revealed spleen lesion. CT scan revealed a low density lesion, and metastasis was confirmed by needle aspiration biopsy as guided by B-ultrasound. No metastasis was found in other organs, suggesting a solitary spleen metastasis. The patient underwent surgical resection. The lesion was a nodule located in the upper polar of the spleen, and postoperative pathology revealed metastatic adenocarcinoma from endometrial carcinoma. The pathologic features of the spleen metastasis were similar to those in literature. Spleen metastasis is developed by hematogenous metastasis, lymphatic metastasis and abdominal cavity implantation metastasis, or direct invasion from lesions in adjacent organs.⁸ Obviously, it was hematogenous metastasis in this case. It is generally considered that spleen metastasis indicates advanced tumor and poor prognosis. Therefore, aggressive treatment with multiple strategies should be adopted. In this case, the patient showed solitary spleen metastasis and was therefore given spleen resection. Chemotherapy was given after operation. The patient is

still receiving treatment and follow-up for the time being.

Based on this case, we suggest that the patients with poorly differentiated endometrial carcinoma should be given regular chemotherapy and follow-up after operation. The spleen is a possible metastatic site for endometrial carcinoma. Once a spleen lesion is identified, imaging and pathologic examinations should be adopted, so as to make early, timely and precise diagnosis of spleen metastasis. Once solitary spleen metastasis is identified, operation-predominant treatment with postoperative adjuvant chemotherapy should be given.

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