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Case report

An isolated vaginal metastasis from rectal cancer

Ai Sadatomo*, Koji Koinuma, Hisanaga Horie, Alan K. Lefor, Naohiro Sata

Department of Surgery, Jichi Medical University, 3311-1 Yakushiji, Shimotsuke, Tochigi, 329-0498, Japan

HIGHLIGHTS

- Isolated vaginal metastasis from colorectal cancer are extremely rare.
- Synchronous isolated vaginal metastasis from rectal cancer is reported.
- To evaluate gynecological symptoms of female patient is important.
- MRI study is useful to detect and diagnose vaginal lesion.

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ABSTRACT

Introduction: Isolated vaginal metastases from colorectal cancer are extremely rare. There are only a few reported cases in the English literature, and the characteristics of such cases of metastasis remain relatively unknown.

Presentation of case: We present a case of isolated vaginal metastasis from rectal cancer in a 78-year-old female patient. The patient had no symptoms related to vaginal tumor. Magnetic resonance imaging (MRI) showed thickening of the middle rectum and a vaginal tumor. Biopsy from the vaginal tumor showed adenocarcinoma, similar to the rectal lesion. Low anterior resection with ileostomy, hysterooophorectomy, and transvaginal tumor resection was performed. After nineteen months, computed tomography scan revealed multiple lung metastases and recurrent tumor in the pelvis. The patient refused chemotherapy and is alive three months after developing recurrent disease.

Discussion: Most cases of primary vaginal carcinoma are squamous cell carcinoma. Other histologic types such as adenocarcinoma are usually metastatic lesions. Primary lesions associated with metastatic vaginal adenocarcinoma are most often the uterus, and are very rarely from the colon or rectum. We review previous case reports of isolated vaginal metastases from colorectal cancer and discuss their symptoms, treatments, and outcomes.

Conclusion: We should keep the vagina within the field of view of pelvic MRI, which is one of the preoperative diagnostic tools for colorectal cancer. If female patients show gynecological symptoms, gynecological examination should be recommended. Isolated vaginal metastases are an indication for surgical resection, and adjuvant chemotherapy is also recommended.

1. Introduction

Vaginal metastases from colorectal cancer are very rare entities, and most of these patients also have other metastatic lesions in locations such as the liver or lung. Isolated vaginal metastases are extremely rare, with very few previous reports in the literature.

2. Presentation of case

A 78-year-old female visited her local physician complaining of constipation and abdominal fullness for two months. The patient denied any gynecologic symptoms. Her past medical history included diabetes mellitus, hyperlipidemia, and hypertension treated with oral medication. Digital rectal examination revealed a rectal tumor 10 cm from the anal verge. Colonoscopy demonstrated a type-2 tumor occupying the full circumference of the middle rectum. Biopsy revealed a well-differentiated adenocarcinoma. She was referred to Jichi Medical University Hospital for further treatment.

* Corresponding author. Tel.: +81 285 58 7371; fax: +81 285 44 3234.
E-mail address: r0626as@jichi.ac.jp (A. Sadatomo).

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Laboratory data showed hemoglobin of 10.8 g/dl and elevated carcinoembryonic antigen (CEA) at 13.9 ng/ml. Abdominal computed tomography (CT) scan revealed a large rectal tumor. No lymphadenopathy or distant metastases were observed. Magnetic resonance imaging (MRI) revealed the rectal tumor as well as suspected direct invasion to the uterus. A 16 mm vaginal tumor separate from the rectal tumor was also identified (Fig. 1). The vaginal tumor was hyper-intense on T2w (T2-weighted) images. A gynecological examination revealed a papillary tumor at the posterior wall of the vagina, 4 cm from the vaginal fornix. Biopsy showed adenocarcinoma similar to the rectal lesion. Rectal cancer with direct invasion to the uterus and an isolated vaginal metastasis were diagnosed. We discussed the treatment strategy with gynecologist, medical oncologist and radiologist. Total vaginectomy or total pelvic exteration, which is high invasive and high morbidity, would not reduce a risk of distant metastasis and not improve prognosis of this patient. So, we had plan of transvaginal tumor resection if direct tumor invasion to uterus and vagina would be denied at operation.

At surgical operation, low anterior resection with covering ileostomy and hystero-oophorectomy were performed. We then examined the vaginal tumor, which was 16 mm in size, 3 cm from the vaginal edge. The posterior wall of the vagina could be separated from the rectum surgically. No direct invasion from the rectum to the vagina was identified. No cancer dissemination was detected in the pelvis or peritoneum. Transvaginal tumor resection was performed. The postoperative course was uneventful and she was discharged on the 24th postoperative day. She took times to master ileostomy care, so stayed in hospital longer than usual cases. Pathological examination of the resected rectum showed a well-differentiated and mucinous adenocarcinoma with a tumor in the Pouch of Douglas (T4a), lymphatic channel invasion (ly1), severe venous channel invasion (v3), and lymph node metastases (N1a). No direct invasion to the uterus was observed. The vaginal tumor showed well-differentiated adenocarcinoma similar to the rectal lesion (Fig. 2). Thus, rectal cancer with lymph node metastasis and an isolated vaginal metastasis was diagnosed. The patient did not want to receive adjuvant chemotherapy. Nineteen months after resection, multiple lung metastases and recurrent tumor in the pelvic cavity was detected on CT scan. The patient refused chemotherapy and has received palliative care. She is alive three months after the identification of the recurrent tumor.

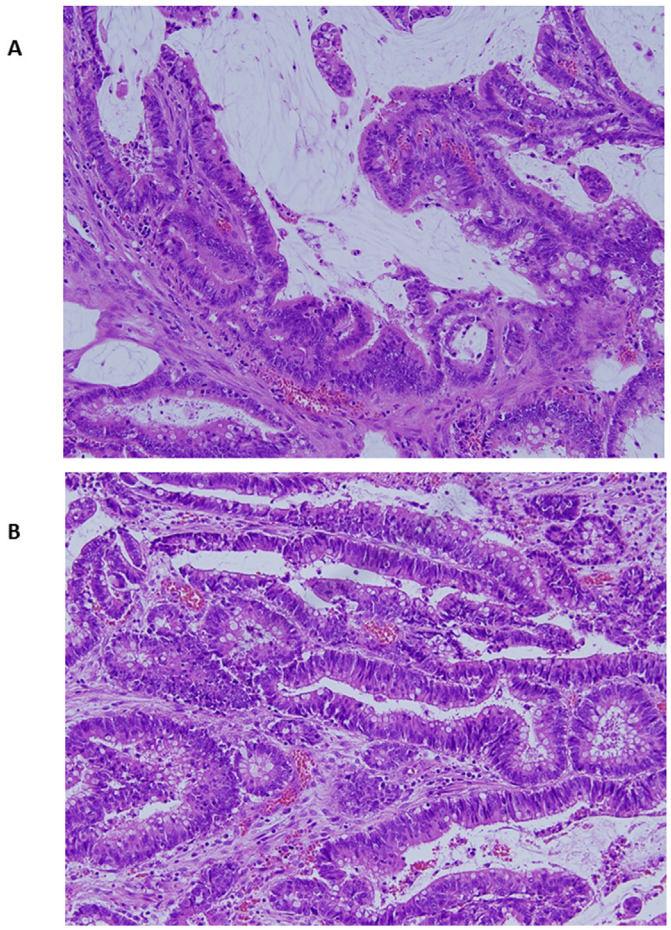

Fig. 2. Pathological findings of resected rectum (**A**) and vaginal tumor (**B**). (HE staining × 20). The vaginal tumor reveals well-differentiated adenocarcinoma, similar to the rectal lesion.

3. Discussion

Primary vaginal carcinoma accounts for only 1% of all gynecologic malignancies [1]. Most cases of primary vaginal carcinoma are

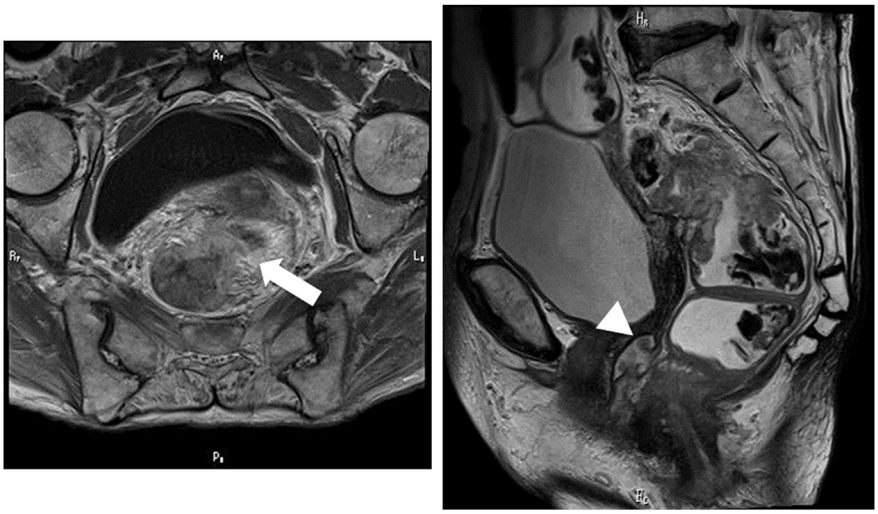

Fig. 1. T1-weighted oblique coronal MRI image demonstrates a tumor in the rectum with suspected invasion to the uterus (arrow). T2-weighted sagittal MRI image reveals a papillary hyperintense tumor (arrowhead).