Solitary Small Bowel Metastasis from Breast Cancer

Jung Eun Choi, Shin Young Park, Myung Hoon Jeon, Su Hwan Kang, Soo Jung Lee, Young Kyung Bae¹, Min Kyoung Kim²
Departments of Surgery, ¹Pathology, and ²Internal Medicine, Y eungnam University College of Medicine, Daegu, Korea

INTRODUCTION

Breast cancer is the second most common malignancy in Korean women, and metastasis occurs in 20-30% of these patients [1]. The common sites of metastasis of breast cancer are bone, lung, liver, and brain, but solitary gastrointestinal metastasis from breast cancer is extremely rare [2]. We experienced a case of solitary ileal metastasis from breast cancer.

CASE REPORT

A 45-years-old woman presented with melena for several weeks. She showed no other abdominal symptoms. Colonoscopy findings showed an ulcerative mucosal lesion in the terminal ileum, and biopsy was performed. Pathologic examination revealed metastatic carcinoma, originated from breast. The tumor cells were positive for estrogen receptor and negative for Cdx-2. She had had a previous medical history of bilateral breast cancer and undergone breast conserving surgery with sentinel lymph node biopsy for both breasts. The torso positron emission tomography scan at 19 months after surgery showed mildly increased uptake in the terminal ileum which was considered as inflammation. Finally, she was diagnosed with solitary ileal metastasis from breast cancer at 22 months after surgery.

Key Words: Breast, Gastrointestinal tract, Neoplasm metastasis

Correspondence: Soo Jung Lee
Department of Surgery, Y eungnam University College of Medicine, 317-1 Daemyeong 5-dong, Nam-gu, Daegu 705-717, Korea
Tel: +82-53-620-3587, Fax: +82-53-624-1213
E-mail: crystalle@med.yu.ac.kr
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and enlargement of multiple lymph nodes around them (Figure 4C). She wanted to have an operation in other hospital and was transferred. We heard that she underwent hand-assisted laparoscopic ileocecectomy, and then received chemotherapy.

**DISCUSSION**

Small bowel malignancies make up only 1.1-2.4% of all gastrointestinal malignancies, and primary adenocarcinoma is the most common of all the small bowel malignancies [3]. Most small bowel metastases are from primary tumors such as malignant melanoma, colon cancer and cervical cancer, and metastasis from breast cancer is uncommon [4]. However, autopsy of patients with breast cancer revealed 15-16% of metastasis was found in gastrointestinal tract and the most common site of gastrointestinal metastasis was the stomach followed by the large bowel and small bowel [4]. Almost all the signs and symptoms of gastrointestinal diseases, including abdominal pain, diarrhea, gastrointestinal bleeding, intestinal obstruction, in-

**Figure 1.** Colonoscopy showed ulcerative mucosa (arrow) in the terminal ileum.

**Figure 2.** (A) Microscopic findings of terminal ileal wall showed tumor emboli infiltrations (arrows) in lamina propria lymphatic spaces, but intact mucosal epithelium (H&E stain, ×100). (B) The tumor cells (arrows) were positive for estrogen receptor; (C) negative for Cdx-2, a critical nuclear transcription factor for intestinal development (immunohistochemical staining, ×100).

**Figure 3.** (A) Microscopic findings of both breast revealed infiltration of malignant ductal cells. The primary invasive ductal carcinomas of breast shows well differentiation and no lymphovascular invasions (H&E stain, ×200). (B) The malignant cells are positive for E-cadherin (immunohistochemical staining, ×200).
tussusceptions and more, can be present in patients with metastatic small bowel malignancies [5-7]. This creates problems for making the differential diagnosis from other benign gastrointestinal diseases. A delayed diagnosis makes the treatment of metastatic cancer more difficult. In our case, if further examination, such as endoscopy, was performed when PET showed mild uptake in terminal ileum, more immediately, we may be get better result, now. If there are suspicions of breast origin in diagnosis, breast specific IHC stains such as ER or PR and intestinal specific IHC stains such as Cdx-2 can be helpful.

In our case, primary breast cancer was invasive ductal carcinoma. But lobular carcinoma rather than ductal carcinoma and tumor with PR positivity rather than ER positivity has a propensity for gastrointestinal metastasis in patients with breast cancer [8,9]. The treatment options for small bowel metastasis from breast cancer are surgery, chemotherapy, hormonal therapy and radiation therapy depending on the cancer status.

In patients with breast cancer, metastasis to gastrointestinal tract is uncommon and its clinical manifestations are non-specific, which makes it hard to diagnosis correctly in one swoop. Yet having a suspicion of gastrointestinal metastasis from breast cancer and making an early diagnosis are the most important keys for the prognosis of metastatic breast cancer. Although it is uncommon for breast cancer to metastasize to the gastrointestinal tract, we should always keep in mind the possibility of such metastasis in patients with a previous history of breast cancer.

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