SAS Journal of Surgery
Abbreviated Key Title: SAS J Surg
ISSN 2454-5104
Journal homepage: https://www.saspublishers.com

OPEN ACCESS

Visceral Surgery

Unusual Cause of Intestinal Obstruction: Lobular Carcinoma of the Breast with Ileal Metastasis

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DOI: https://doi.org/10.36347/sasjs.2025.v11i03.016 | **Received:** 28.01.2025 | **Accepted:** 05.03.2025 | **Published:** 11.03.2025

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Abstract **Case Report**

Breast cancer is the most common malignancy diagnosed in women worldwide. Metastatic spreading disease to the gastrointestinal tract is very rare. Common sites of invasive ductal carcinoma metastasis are the liver, lungs and bones, whereas invasive lobular carcinoma more readily metastasizes to the peritoneum, retroperitoneum and the genitourinary system, in addition to the gastrointestinal tract. Lobular carcinoma, representing only 10% of breast cancers is more likely to metastasize to the gastrointestinal tract. In this case report, we describe a case of small bowel obstruction in our hospital, which was diagnosed as metastatic adenocarcinoma of the small intestine caused by primary invasive lobular breast cancer.

Keywords: breast cancer, metastatic adenocarcinoma, small bowel obstruction, invasive lobular carcinoma, gastrointestinal tract.

INTRODUCTION

Breast cancer is the most common cancer affecting women and the first-leading cause of cancer death. Commun métastatic locations of infiltrative breast cancer are the skeletal system, the liver, the lung, the brain and the ovaries [1].

Breast cancer metastasis to the gastrointestinal (GI) tract is rare and occurs more frequently in invasive lobular carcinoma [2].

Since metastases to GI from breast cancer are uncommon and peculiar, the main problem is to recognize them in patients affected by breast cancer and with GI symptoms, like nausea and vomiting, diarrhoea, and abdominal pain. These symptoms may be considered treatment related or secondary to other GI diseases, or to peritoneal carcinomatosis, and this can delay the definite diagnosis and treatment of GI involvement by breast cancer. Here we report a case of bowel metastasis as the initial presentation of lobular breast carcinoma.

CASE:

A 55-year-old women presented to Emergency Department complaining of intermittent abdominal pain, vomiting and weight loss. She had past medical history including right total mastectomy and concurrent chemoradiotherapy (CCRT) for breast cancer, T3N1M0, 2 years previously, without clinical recurrence during the follow-up period. Histopathological examination (HPE) of the mastectomy specimen showed lobular infiltrating carcinoma (LIC) which was positive for estrogen (ER) 85%, negative for progesterone receptors (PR), and equivocal for human epidermal growth factor receptor 2 (HER2). Physical exam revealed a tender abdomen with involuntary guarding and hyperactive bowel sounds.

An abdominal CT scan was requested, showing obstruction at the level of the terminal ileum with proximal loop dilatation. An urgent intervention is carried out. Laparotomy revealed a hardening and narrowing of the small bowel at the junction of the jejunum and ileum, with signicant expansion proximal to the jejunum and a large volume of intestinal contents.

Small bowel resection and anastomosis surgery were performed on the narrow section, the postoperative pathology indicated the presence of a poorly differentiated carcinoma of the small intestine, which was considered to have arisen from breast cancer.

Immunohistochemical analysis showed that the tumor cells were positive for cytokeratin (CK) (+), estrogen receptor (ER) (+), but stained negative for E-cadherin. These findings were consistent with metastatic lobular breast carcinoma to the small intestine. The

patient was proposed for palliative therapy, but after 2 cycles the treatment, was stopped for haematological, gastrointestinal toxicity and disease progression.

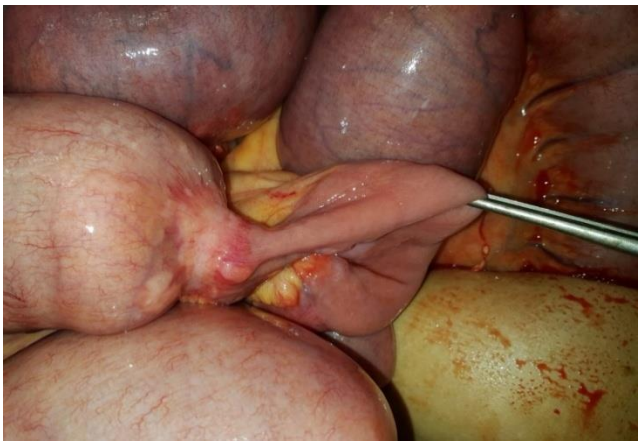

Figure 1: Intraoperative picture of the surgical

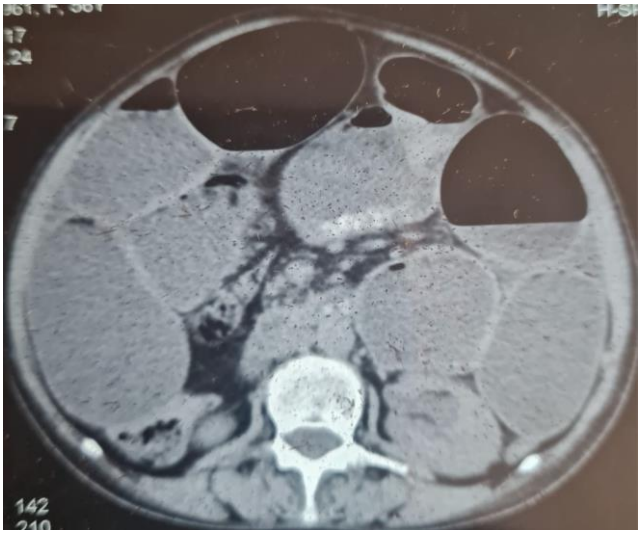

Figure 2: Obstruction at the level of the terminal ileum with proximal loop dilatation

DISCUSSION

Small bowel obstruction in an oncology patient is common. Intra-abdominal adhesions constitute the majority of cases, followed by abdominal hernia and malignancies. Small bowel metastasis may occur more frequently than primary small bowel malignancy.

The terminal ileum is involved more often than the proximal small bowel [2]. Breast cancer accounts for 19% of cancer deaths in women [3]. The common sites for breast cancer metastasis are bone, lung, liver, and brain. Metastasis to the gastrointestinal tract is uncommon and when it does occur, it mainly involves the stomach (60%), osophagus (12%), colon (11%), small bowl (8%), and rectum (7%) [1].

Metastasis to the small bowel is very rare, comprising approximately 0.08% of metastatic breast cancers [1, 5].

Among cancer patients, small bowel obstruction is usually caused by peritoneal carcinomatosis or postoperative adhesion, whereas isolated intestinal obstruction secondary to tumor metastasis to the small bowel is rare, among which lobular breast cancer and melanoma are the most frequent primary malignancies that metastasize to and obstruct the small intestine [9].

Invasive lobular carcinoma is relatively rare, compared with other types of invasive breast cancer. Tubular and mucinous carcinomas have a lower incidence of metastases and a better prognosis [4].

Although the gastrointestinal tract is a less common site for metastatic involvement by breast cancer, Lobular carcinoma, though less common and by mechanisms that are not clear, is more likely to metastasize to the gastrointestinal tract [2, 4].

The clinical manifestations of gastrointestinal metastasis are non specific and include abdominal pain, diarrhea, vomiting, gastrointestinal bleeding, intestinal obstruction and intussusception. Other complaints included weight loss, anemia, ascites, early satiety and dysphagia.

Small intestine involvement is very rare and diagnosed very late, frequently at autopsy. This clinical presentation may be aspecific: abdominal pain and diarrhoea, intussusception or pain- simulating appendicitis; bleeding may be the only clinical manifestation of jejunum involvement.

The clinical symptoms and signs of small intestine metastatic tumors have no identiable features when compared with other diseases of the small intestine, leading to certain dificulties in the diagnosis. As a consequence, doctors and patients have a tendency to ignore the signs and symptoms of intestinal metastasis of invasive lobular cancer.

This case reinforced the fact that it is necessary to consider the possibility of metastasis when diagnosing gastrointestinal diseases, and that there is potential for gastrointestinal tract metastasis in cases of invasive breast lobular carcinoma [5].

A CT scan can provide evidence of obstruction or exclusion of other causes. Enteroscopy can identify obstructive lesions [8]. The clinical symptoms and signs of small intestine metastatic tumors have no identiable features when compared with other diseases of the small intestine, leading to certain difculties in the diagnosis.

These cases can occur after patients have been in remission and can be the first site of disease presentation. Because of its rarity, recurrent metastatic disease as the cause of small bowel obstruction in patients who have been in remission for their primary canceur was not immediately suspected.

Although it is a relatively rare occurrence, It is worth considering the possibility of small bowel obstruction caused by tumor metastasis from the breast cancer. Early investigation and establishment of the diagnosis are vital in ensuring prompt and adequate treatment.

The treatment for metastatic breast cancer with GI tract involvement is systemic treatment with chemotherapy, endocrine therapy or signal transduction inhibitors. Palliative surgery is necessary in patients with complications such as intestinal obstruction, perforation or hemorrhage. Remissions are observed in 32–53% of patients [4].

CONCLUSION

In patients with a history of breast cancer, clinicians should consider the possibility of small intestinal obstructive tumor metastasized from the breast even after a long cancer-free latency.

Metastases to GI tract can be the first manifestation of breast cancer metastases, as well as it can represent relapse even after many years from the diagnosis of the primary tumor. Surgery is often needed for diagnosis and treatment of complications, like intestinal obstruction or bleeding.

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