BMJ Case Reports

Unusual presentation of more common disease/injury

Rectal metastasis from breast cancer: an interval of 17 years

Aliasger A Amin,[1] Anil Reddy,[2] Madan Jha,[2] Kolanu Prasad[3]

[1]Department of Surgery, James Cook University Hospital, Middlesbrough, UK;
[2]Department of Colorectal Surgery, James Cook University Hospital, Middlesbrough, UK;
[3]Department of Histopathology, James Cook University Hospital, Middlesbrough, UK

Correspondence to Aliasger A Amin, docaaa@gmail.com

Summary

Metastasis to gastrointestinal (GI) tract from breast cancer is rare. Commonly affected organ in GI tract is stomach, followed by colon and then rectum. The authors report a case of a 61-year-old woman who had a mastectomy for lobular carcinoma of the breast 17 years ago and was referred to colorectal clinic with increased frequency of stools. Colonoscopy showed a stricture in the rectum, but biopsy was inconclusive. As she was symptomatic, she had a Hartmann's resection 5 months after she initially presented to the clinic. Histopathology of the resected specimen showed it to be metastasis from lobular carcinoma of the breast. Awareness of potential long delays in the presentation of metastatic breast cancer especially lobular carcinoma helps in the earlier diagnosis and clinical management.

BACKGROUND

Metastasis to gastrointestinal (GI) tract from breast cancer is rare. Awareness of potential delays in the presentation of metastatic breast cancer especially lobular carcinoma helps in the earlier diagnosis and clinical management.

CASE PRESENTATION

A 61-year-old woman presented to the clinic with a 3-month history of change in bowel habits, that is, loose stools (6–20 times/day) and faecal urgency following a holiday. There was no history of bleeding, mucous discharge per rectum or associated bowel symptoms. Her medical history included recurrent deep venous thrombosis (life long warfarin) and a right-sided mastectomy 17 years ago for lobular breast cancer with negative axillary lymph nodes and had tamoxifen for 5 years. Colonoscopy showed a circumferential smooth stricturing lesion in the rectum (10 cm from anal verge). Biopsy results from this abnormal area were inconclusive. She was diagnosed as possible gastroenteritis/colitis and was managed conservatively. CT and MR scan showed mucosal thickening involving the whole rectum, with preservation of mural structures, showing no suggestions of malignancy. She became gradually more symptomatic with the stricture in the rectum, and went on to have a Hartmann's resection (delay of 5 months).

INVESTIGATIONS

Histopathology of the resected specimen showed it to be a metastatic lobular carcinoma from the breast. On immunohistochemical staining, the tumour cells were negative for cytokeratin (CK) 20 but showed strong and diffuse positive staining for oestrogen receptor and CK7 and weak patchy staining for progesterone receptor. This immunoprofile was in keeping with metastatic lobular carcinoma of breast. She went on to have a staging CT scan which showed at least two metastatic lymph nodes in the axillary region (figures 1 and 2). Core biopsy of the axillary lymph node confirmed malignancy.

TREATMENT

She had a right-sided axillary node clearance. Nodes were oestrogen receptor positive but negative for HER 2. She had adjuvant letrozole.

DISCUSSION

Breast cancer is the most frequent malignancy in the female population and a significant cause of morbidity and mortality.[1] Breast carcinoma usually metastasises to lymph nodes, lung, bone, liver or brain, but GI involvement is rare.[2] The most frequent sites of the GI tract involved are the stomach and the small intestine, while colonic and rectal metastases are extremely rare.[1] Lobular carcinoma represents 2–20% of infiltrative carcinomas of the breast.[3] GI system, gynaecologic organ and peritoneum-retroperitoneum metastases are more prevalent in lobular carcinoma.[4] It represents the most common breast cancer metastasising to the colon and rectum. A necropsy study showed that GI tract metastasis varies from 6% to 18% which shows that metastasis to GI tract is more common than clinically suspected.[5]

Clinical presentation of metastatic disease to the GI tract is diverse. Symptoms may be non-specific as in our case where she was thought to have gastroenteritis because of her history of foreign travel. Often, biopsies obtained on endoscopy do not reveal malignant cells.[1] This in combination with the unusual long interval after the initial diagnosis of breast cancer makes the diagnosis of metastasis to rectum very difficult. In most reported cases, colorectal metastases are part of widespread metastatic disease. Systemic treatment (chemotherapy, endocrine treatment or both) is usually employed in patients with metastases to the GI tract, since patients usually present with involvement of multiple organs.[1] Improvement in more than 50% of the patients was reported in a series, where results of systemic therapy were analysed in detail.[2] Patients with rectal metastases commonly present having already developed stenosis and obstruction requiring urgent correction, which usually cannot be achieved by systemic treatment. In our case, there was a delay of 9 months between the

initial symptoms and the actual surgery due to difficulty in diagnosing such metastatic lesions. This underlines the importance of early diagnosis, which would enable prompt initiation of systemic treatment, thus avoiding surgical intervention. Metastatic lesions involving the colon may be difficult to differentiate from primary malignancies at these sites, and this differentiation is most important; optimal therapy is dependant on determining which type of lesion is present.[6] A thorough diagnostic approach is necessary with the help of radiological studies, endoscopy and biopsy to diagnose a metastatic carcinoma thus avoiding a laparotomy if diagnosed at an early stage.

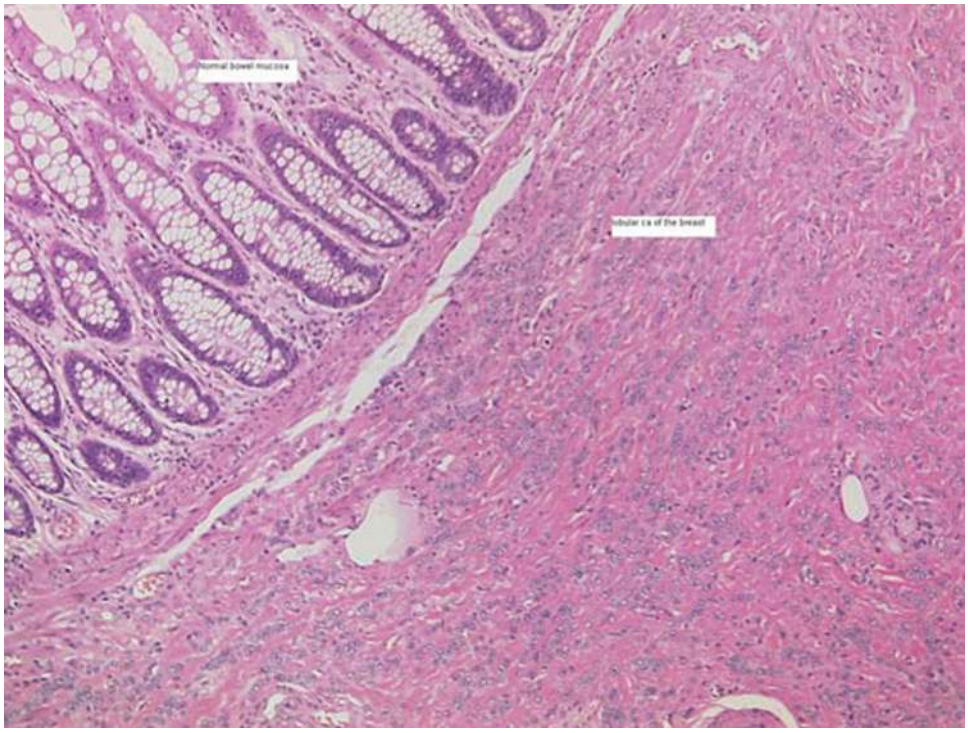

Figure 1 Histology slide showing normal rectal mucosa and breast cancer.

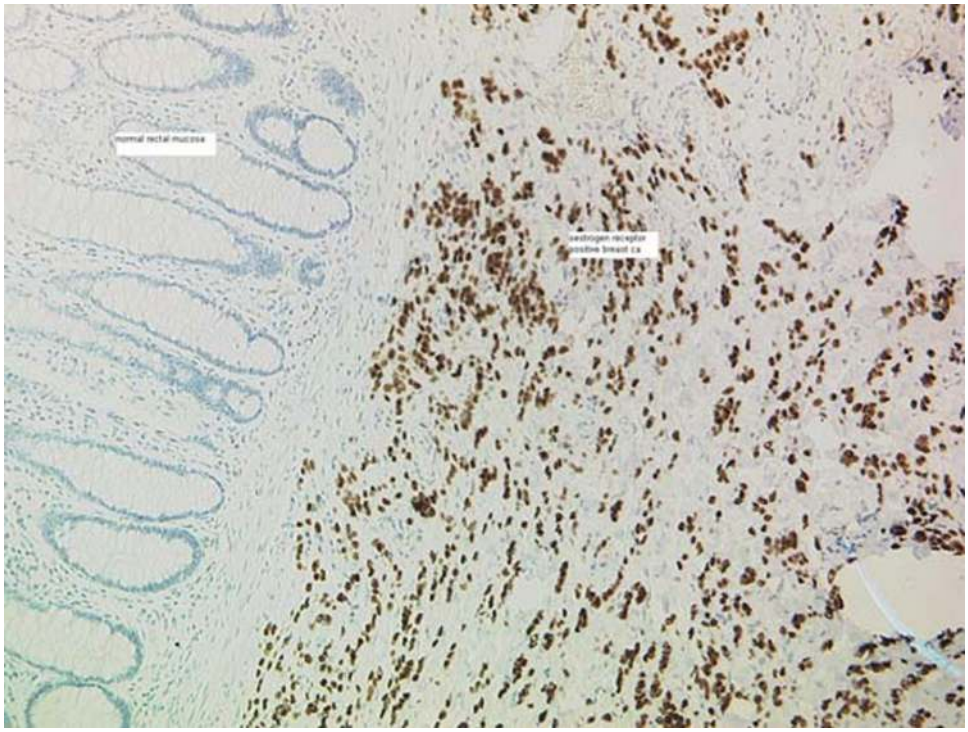

Figure 2 Histology image confirming it to be breast metastasis as oestrogen receptor positive.

BMJ Case Reports 2011; doi:10.1136/bcr.01.2011.3683

Lobular breast cancer has been shown to metastasise to the GI tract, although this has been the longest interval reported in literature with regards to metastases to rectum.[1 3] We should also be aware that the presenting symptoms can be non-specific and it is difficult to diagnose metastasis on biopsy on endoscopy. Having a high degree of suspicion can avoid delay in diagnosis and result in treatment an an early stage which can improve the outcome.

Learning points

- Carcinoma of the breast has a potential to metastasise to gastrointestinal tract, more commonly, lobular carcinoma of the breast.
- Metastasis to the gastrointestinal tract from breast cancer can occur many years after the initial primary.
- We should be aware that presenting symptoms of a metastatic breast cancer to the rectum can be non-specific and difficult to diagnose even on endoscopic biopsy.
- A thorough approach is required to diagnose a rectal metastasis from a breast carcinoma in the form of radiological studies, endoscopy and biopsy.
- It is important to be aware of such an occurrence and a high degree of suspicion is required; since early diagnosis can enable us to start systemic therapy before a complication sets in, avoiding unnecessary surgery and improving outcome.

Competing interests None.

Patient consent Obtained.

REFERENCES

1. **Bamias A,** Baltayiannis G, Kamina S, *et al*. Rectal metastases from lobular carcinoma of the breast: report of a case and literature review. *Ann Oncol* 2001;**12**:715–18.
2. **Taal BG,** den Hartog Jager FC, Steinmetz R, *et al*. The spectrum of gastrointestinal metastases of breast carcinoma: II. The colon and rectum. *Gastrointest Endosc* 1992;**38**:136–41.
3. **López Deogracias M,** Flores Jaime L, Arias-Camisón I, *et al*. Rectal metastasis from lobular breast carcinoma 15 years after primary diagnosis. *Clin Transl Oncol* 2010;**12**:150–3.
4. **Borst MJ,** Ingold JA. Metastatic patterns of invasive lobular versus invasive ductal carcinoma of the breast. *Surgery* 1993;**114**:637–41.
5. **Cervi G,** Vettoretto N, Vinco A, *et al*. Rectal localization of metastatic lobular breast cancer: report of a case. *Dis Colon Rectum* 2001;**44**:453–5.
6. **Klein MS,** Sherlock P. Gastric and colonic metastases from breast cancer. *Am J Dig Dis* 1972;**17**:881–6.