Rectal metastases from breast invasive lobular carcinoma

ABSTRACT
Breast cancer is the most common cancer in the UK, accounting for 15% of all cases in both genders. One in eight women in the UK will develop breast cancer at some point in their lifetime. We present a case of 72-year-old female with a history of left breast cancer diagnosed 13 years earlier underwent wide local excision, breast radiotherapy, and adjuvant hormonal therapy. A biopsy from the area revealed metastatic breast lobular carcinoma. Palliative chemotherapy or hormonal therapy is usually considered as the first line of treatment to control disease progression.

Key words: breast lobular carcinoma, rectal metastases

Introduction
Breast cancer is the second most common cancer to metastasise to the gastrointestinal tract after malignant melanoma [2]. Breast cancer metastases to the gut lumen is rare, and can be found anywhere in the area between the oropharynx and anus. Metastases are seen most commonly in the stomach, then small intestine; the colo-rectal area is the least affected [3]. Presentation could be symptomatic or incidental. Clinical, endoscopic, or radiological presentations cannot distinguish them if they are gastrointestinal primary in origin or metastatic.

Case presentation
A 72-year-old female with a history of left breast cancer diagnosed 13 years earlier underwent wide local excision, breast radiotherapy, and adjuvant hormonal therapy. Ten years later she developed cervical, hilar and peritoneal nodal disease, and she had chemotherapy. Her re-staging computed tomography (CT) scan and magnetic resonance imaging (MRI) revealed abnormal thickening of rectal mucosa (Figs. 1, 2). A biopsy from the area revealed metastatic breast lobular carcinoma. The tumour was found positive for oestrogen receptors (ER) — 5/8, whereas progesterone receptors (PR) were negative — 0/8, and HER-2 status was negative; Ki67 was 15%. Also, the immuno-histochemistry profile of the cancer cells was positive for CAM5.2 and CK7, but negative for CD45, CD68, CD20, CDX2, and S100.

Discussion
The usual sites for breast cancer metastases are liver, bone, lung, brain, and nodes [4]. Breast cancer secondary deposits to the gut have been previously reported but are seen extremely rarely. The metastases to gastrointestinal tract are found in 0.5–0.7% of cases [5]. This may occur many years after the primary breast cancer diagnosis, usually between five and 20 years but even up to 30 years in some cases [6]. Autopsy studies suggest that it is more common than clinically
suspected; therefore, the true incidence is unknown. The clinical presentation may vary from incidental radiological or endoscopic finding, to symptomatic features as pain, bleeding, obstruction, acute abdomen, or other remote symptoms [7]. As a histological subtype, breast lobular cancer predominates in comparison to ductal carcinoma [8]. Invasive lobular cancer has been found to be more likely to metastasise to the peritoneal cavity, gastrointestinal tract and gynaecologic organs than invasive ductal carcinoma [7]. The mechanism underlying the metastatic behaviour is controversial [8]. The low mitotic rate in low-grade malignant tumours results in delayed metastatic recurrence. It has been suggested that surgical manipulation results in tumour cell dislodgment and due to its loss of cell-cell adhesion molecules [5].

Tumour size and regional nodal involvement at diagnosis time contemplate to the distant metastases. Lobular breast cancer due to its behaviour is considered as a chronic illness, and suspicion of a recurrence should be raised when relevant.

The difficulty in distinguishing metastatic breast lobular cancer to the colorectum from the primary colorectal malignancy is due to various factors. One reason is the long period between the primary breast cancer onset and the occurrence of metastatic relapse. In such cases, recognition of the medical history is a crucial element. Another challenge is the radiological and endoscopic features of the lesion. It is reported that circumferential stricture and wall thickening of the rectal mucosa are the most typical presentations. If the neoplasm involves the *muscularis propria*, without mucosal lesions, the endoscopic biopsy could be negative. In patients with gut problems, the physician aims to exclude local gastrointestinal (GI) problems such as primary GI tumours, Crohn’s disease, and several other benign neoplasms. Gastrointestinal tract metastatic disease from breast cancer must be considered in any woman with a previous history of breast malignancy presenting with a recent history of bowel symptoms. The other important aspect of this problem is the management. Palliative surgery is one of the options, especially to relieve the obstruction or to control bleeding or perforation. If there is only a single metastatic focus then surgical resection with chemotherapy is advised by some authors.

Other ways include the use of breast cancer management methods such as hormonal manipulation, chemotherapy, and radiotherapy. In synchronous metastatic foci, an initial approach with chemotherapy and endocrine manipulation of hormonal sensitive disease is suggested [10].

Conclusions

Awareness of the possibility of silent metastatic foci on imaging will aid in relevant and proper management. Palliative chemotherapy or hormonal therapy is usually considered as the first line of treatment to control disease progression. Surgery plays a small role, but could be indicated in obstruction, perforation, bleeding, or a solitary focus.
References