

A Case Report of Infiltrating Ductal Carcinoma of Breast Metastasizing to the Rectum

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Abstract: Breast cancer can metastasize anywhere in the body but the primary metastatic sites are the bones, liver, lymph nodes, liver and pleura. The current case report is an unusual entity which represents a case of breast cancer metastasis to rectum. A 66 year old woman presented with constipation and bleeding per rectum. Investigations were done accordingly in which histopathology revealed rectal malignancy. The patients past history revealed that she was operated for infiltrating duct cell carcinoma. Immunohistochemical evaluation on the rectal biopsy confirmed a breast primary. Surgery, chemotherapy and radiotherapy were the therapeutic modalities done. Rectal metastasis from breast cancer is seldom seen and this possibility must be kept in mind in a patient with history of breast cancer.

Keywords: Infiltrating duct cell carcinoma, Estrogen receptors, Progesterone receptors, Metastasis, Pleomorphism, Rectum.

I. Introduction

Breast cancer is the most common tumour in women with one in eight women getting affected in their life time [1]. Metastasis from the breast to the gastrointestinal tract is rare and that of rectum is even rarer. Autopsy studies revealed the occurrence to be between 8-35% [2,3]. Metastasis from ductal carcinoma of breast is rare, however, Invasive lobular carcinoma of the breast is known to metastasize to the gastrointestinal and genitourinary tracts in addition to the peritoneum and retro peritoneum [4,5,6]. The reason for lobular carcinoma metastasis is unknown but some authors consider it to be due to tropism of lobular cells [7,8]. The diagnosis of invasive ductal breast cancer metastatic to the rectum, can be easily misdiagnosed as primary rectal cancer. We report a case of duct cell carcinoma of breast which metastasized to the rectum.

II. Case Report

A 66 year old female presented with symptoms of constipation and bleeding per rectum. Digital examination revealed a mass of 4x1 cm at the lower rectum at a distance of 2cm from anal verge. Colonoscopy revealed a sub mucosal mass with mucosal ulceration. A thorough search for the presence of tumour elsewhere was negative. A biopsy was sent from the rectal mass for histopathologic evaluation which revealed presence of pleomorphic cells adjacent to normal rectal glands. On enquiring the past history it was revealed that the patient was operated for infiltrating duct cell carcinoma of right breast 4 ½ years back. Accordingly immunohistochemistry was performed which was positive for estrogen and progesterone receptors. The tumor histology and positive estrogen and progesterone receptor status were identical to the patient's primary breast cancer which favoured the diagnosis of carcinoma breast metastasized to the rectum. The patient was treated surgically followed by postoperative radiation therapy and systemic chemotherapy.

III. Discussion

Breast cancer is the most common site specific cancer in women and it accounts for 26 % of newly diagnosed cancers in women. Breast cancer is responsible for 15% of cancer related deaths in women. About 2500 cases of breast cancer were analysed in a large series over 18 years and only 17 patients (less than 1%) were found to have metastasis to gastrointestinal tract reflecting how rare is a secondary at this site [4]. In the GI tract metastases in the stomach [10] and small intestine [1] have been frequently reported than in colon [8] and rectum [10, 11]. Autopsy studies revealed small intestine as commonest site of metastasis (28%) followed by oesophagus (25%), stomach (25%), colon (19%) and rectum (4%). McLemore et al reported that cases of gastrointestinal metastasis from primary breast cancer is a rarity as only 73 cases out of 12001 cases showed metastasis [8]. Among them, cases with colorectal metastasis were only 24. The commonest route of spread to GI tract is through hematogenous followed by lymphatic and peritoneal spread. Even though duct cell

carcinoma is more common among women with breast cancer it is infiltrating lobular carcinoma that metastasises frequently to GI tract [1,2,10,11,]. It has also been reported that even in patients with mixed ductal and lobular type primary breast carcinoma, the lobular type favoured metastatic growth [1]. The clinical manifestations are variable and range from non specific complaints to acute GI symptoms. For the clinician the main frontier lies in differentiating such metastatic lesions from primary rectal malignancy as the management varies considerably. Radiological investigations like CT, MRI, double contrast barium enema help in localising the lesion but histopathology and IHC form the crux to differentiate between them. On colonoscopy colorectal metastasis appear as diffuse thickening of the bowel wall mimicking linitis plastica or like crohns disease with ulcerated or nodular areas. In the present case a conclusive diagnosis of metastatic breast carcinoma to the rectum could be established basing on the medical history, histology of the biopsy specimen and immunohistochemistry. A biopsy of size 2x2 mm was received and was subjected to tissue processing. Microscopy revealed a tumour composed of pleomorphic cells adjacent to normal rectal glands. IHC for ER and PR receptors was positive which clinched the diagnosis as metastatic carcinoma to rectum from infiltrating duct cell carcinoma of the breast. The interval between primary breast cancer and its metastatic relapse is long. Schwarz et al reported the median interval between breast cancer and gastrointestinal metastasis to be 6 years (range 0.25 to 12.5 years) [1]. Mc lemore et al reported that mean interval between breast cancer and GI metastasis was 7 years [8]. The present case interval between the primary breast cancer and GI metastasis was 4 ½ years. Since metastases to GI from breast cancer are uncommon 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.

IV. Conclusion

In conclusion, GI metastases are possible, even uncommon, and oncologists must consider it for patients affected by breast cancer, who develop GI symptoms, even if diagnosis and treatment for the primary tumour have been performed many years before. Adequate diagnostic procedures, like CT scan, endoscopy with biopsy, or EUS endoscopy with biopsy, must be performed as soon as possible, without delaying, to obtain a definite cytohistologic diagnosis allowing an adequate treatment for the patients.

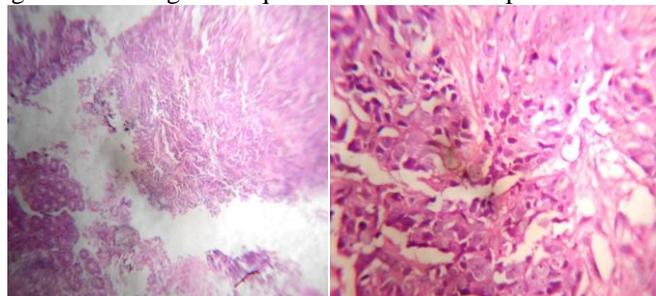


Fig 1: Low power view

Fig 2: High power view

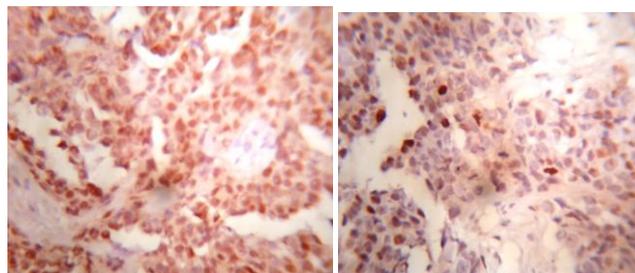


Fig 3 : ER positive tumour cells

Fig 4: PR positive tumour cells



Fig 5: Colonoscopy

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