

Clinical Image

A Case of Breast Cancer with Duodenal Metastasis

Fen Ming Zhang¹, Hong Tan Chen¹, Wei Chen¹, Long Gui Ning¹, Hua Tuo Zhu¹, Sai Heng Xiang¹, Li Jun Wang², Guo Qiang Xu^{1*}

¹Department of Gastroenterology, The First Affiliated Hospital, Zhejiang University School of Medicine, Zhejiang University, China

²Department of Pathology, The First Affiliated Hospital, Zhejiang University School of Medicine, Zhejiang University, China

Clinical Image

A 49-year-old lady was referred to us. She presented with history of persistent epigastric pain and vomiting for the last three weeks, which increased in the severity and accompanied by diarrhea over last week. Those symptoms were aggravated by oral intake. There is no distention nether change in the bowel habits. She had a past medical history of right side radical mastectomy 7 years ago due to breast cancer. After the operation, 8 times of chemotherapy and 22 times of radiotherapy were performed, followed by long-term oral letrozole treatment. On examination, she looked conscious and vitally stable. Abdomen was soft, lax and not tender with normal bowel sounds. The initial blood work shows low hemoglobin. Carcinoembryonic antigen was 6.8 ng/ml, carbohydrate antigen 125 was 234.8 U/ml, carbohydrate antigen 153 was 39.5 U/ml. Liver function test and other lab analyses were within normal range. Computed Tomography (CT) scan was carried out and showed wall thickening of the gastric antrum (Figure 1). The patient underwent Upper Gastrointestinal (GI) endoscopy which showed gastric retention, mucosal congestion, and edema in the gastric antrum and duodenum (Figure 2A and 2B). Biopsies taken from duodenum showed poorly differentiated adenocarcinoma. Immunohistochemistry study also done for the biopsies from the duodenum showed positivity for CK (pan), ER, GATA-binding protein 3 and positivity for human epidermal growth factor receptor 2 (HER₂), as shown in Figure 3A-D. The pathological findings were consistent with poorly differentiated adenocarcinoma of primary breast origin, most likely invasive lobular carcinoma. However, biopsies taken from gastric antrum showed chronic mild superficial inflammation. Colonoscopy found the mucosa of ascending colon, transverse colon and descending colon were hyperemia and edema with scattered erosion (Figure 4A and 4B), but biopsies taken from colonic mucosa showed chronic mucositis. Soon afterwards, endoscopic ultrasonography-guided fine-needle aspiration and deep cut biopsy was performed, it showed the gastric wall hierarchy was disappeared in the gastric antrum and the thickness of the stomach wall was about 1.66 cm (Figure 5A) and Elastography suggested that the lesion was hard (Figure 5B). The 22 G EUS was used to penetrate

into the thickest mucosa of the antrum, 20cm tissue strip was obtained and sent to liquid-based cytology and histology for examination while with negative results.

We suggested the patient underwent positron emission tomography scan as well and informed her that she may should underwent tumor resection and systemic chemotherapy, but she abandoned further examination and treatment. During follow-up, we learned that the patient had died less than three months after discharge from our hospital. Study shows that less than one percentage of metastatic breast cancers had gastrointestinal metastasis and most of these cases were invasive lobular carcinoma. Metastatic breast cancer to the duodenum is rare. The presentation of GI metastasis from breast cancer is usually not specific and the common signs to present with are abdominal pain, nausea, vomiting, alternation of bowl habit and bleeding. All these signs and symptoms mimic the primary intestinal disorder and it is difficult to distinguish it from breast cancer metastasis clinically. There should be a suspicion of metastases to the duodenum when a patient with a history of breast cancer presents with new GI symptoms (Figure 5A-5B). The clinical presentation of GI metastasis alone is not enough to diagnose the origin. So the imaging and histopathology diagnostic tools are found to be essential in diagnosis. Although endoscopy is an indispensable means of diagnostic examination, it is difficult in some cases when the metastatic cells are in the submucosa, muscularis propria, and serosa. A biopsy can be negative and the operation will reveal the histological nature of the lesion. In our case, neither gastric antrum mucosal biopsy nor intestinal mucosal biopsy confirmed breast cancer metastasis, even endoscopic ultrasonography-guided fine-needle aspiration and deep cut biopsy could not confirmed gastric metastasis of breast cancer though we highly suspected it. Surgical management was found to be helpful in survival of limited cases with limited GI metastasis, however, the GI metastasis from breast is indication of poor prognosis and unfavorable life quality on the whole.

Citation: Guo Qiang Xu. A Case of Breast Cancer with Duodenal Metastasis. *Am J Clin Case Rep.* 2020;1(1):1004.

Copyright: © 2020 Guo Qiang Xu

Publisher Name: Medtext Publications LLC

Manuscript compiled: July 10th, 2020

***Corresponding author:** Guo Qiang Xu, Department of Gastroenterology, The First Affiliated Hospital, Zhejiang University School of Medicine, Zhejiang University, Hangzhou 310003, Zhejiang Province, China, E-mail: xugq@zju.edu.cn

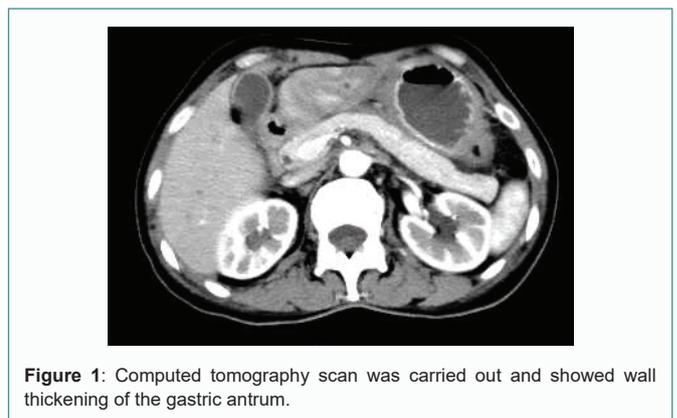


Figure 1: Computed tomography scan was carried out and showed wall thickening of the gastric antrum.

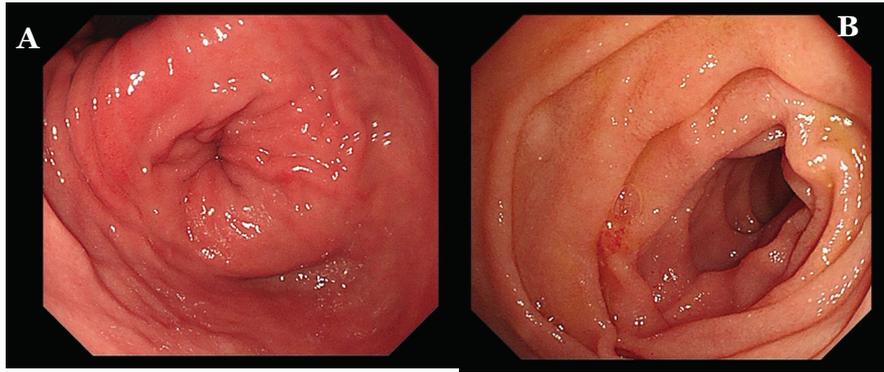


Figure 2: Upper gastrointestinal endoscopy showing gastric retention, mucosal congestion, and edema in the gastric antrum (A) and duodenum (B).



Figure 3: Immunohistochemical analysis showing the duodenal tumor cells positive for CK (pan) (A), ER (B), GATA-binding protein 3 (C) and human epidermal growth factor receptor 2 (HER2)(D). (Original magnification 200).

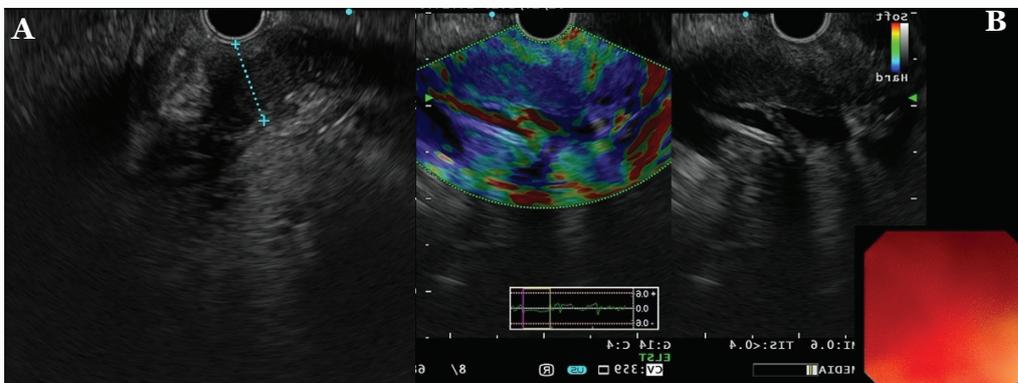


Figure 4: Colonoscopy showed the mucosa of ascending colon, transverse colon (A) and descending colon (B) were hyperemia and edema with scattered erosion.

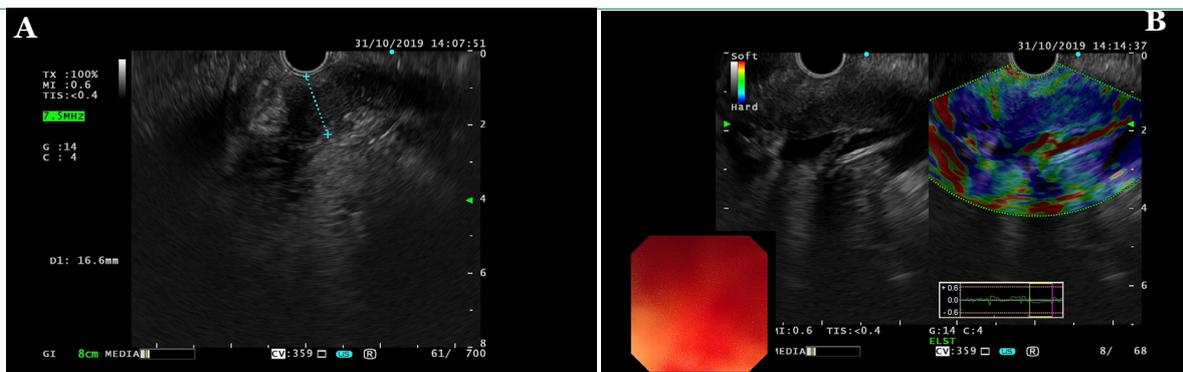


Figure 5: Endoscopic ultrasonography showed the gastric wall hierarchy was disappeared in the gastric antrum and the antrum wall was markedly thickened (A) and Elastography suggested that the lesion was hard (B).