A Rare Etiology of GI Bleeding Secondary to Duodenopancreatic Metastatic Cystosarcoma Phylloides from the Breast: a case report

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Gastrointestinal bleeding is rarely caused by metastatic gastrointestinal lesions, among which duodenopancreatic metastasis from the breast cystosarcoma phylloides is even rare. The radiological features of duodenopancreatic metastasis by cystosarcoma phylloides of breast have not been reported previously. Gastrointestinal endoscopy is the initial modality of choice for GI bleeding by the virtue of direct inspection of mucosal details; while imaging studies are requested to assess the submucosal extent of the lesion. Occasionally, imaging studies are also used to disclose organic gastrointestinal lesion invisible on endoscopy. Herein, we report such a case of gastrointestinal bleeding due to metastatic breast cystosarcoma phylloides.

Key words: Breast; cystosarcoma phylloides
Gastrointestinal bleeding; Computed tomography; Small bowel, metastasis

Upper gastrointestinal (GI) bleeding often results from primary lesions of the upper GI tract, such as peptic ulcers, varicosities or neoplasms. We herein report a rare case of upper GI bleeding due to a solitary duodenopancreatic metastatic tumor from cystosarcoma phylloides of the breast. Radiological features demonstrated on the small bowel series and computed tomography with histology correlation will be presented.

CASE REPORT

A 39-year-old woman was admitted to our hospital with a complaint of melana for about two months. Neither gastrointestinal discomfort nor epigastric pain was presented. She received a modified radical mastectomy due to malignant cystosarcoma phylloides of the right breast 3 years ago and had been well there-after in our hospital. On physical examination, a mass was palpated at the right upper quadrant of her abdomen. The abdomen was generally soft with normal bowel sounds. The laboratory workup were unremarkable except for low hemoglobin (5.5 gm%) and low hematocrit (18.2%). The tumor markers were within normal limits.

Upper GI endoscopy revealed no significant abnormality. Colonoscopy revealed melena and thereby, proximal small bowel bleeding was clinically suspected. Chest radiograph and abdominal radiographs showed unremarkable findings. Small bowel series with barium contrast demonstrated an extraluminal mass lesion indenting the second portion of the duodenum where a focal mucosal retraction suggesting a penetrating ulcer (Fig. 1). A submucosal mass was impressed. The transit time of barium passage was within the normal limits. Computed tomography (CT) showed a 3cm x 4cm inhomogenously enhanced mass with cystic and solid components in the duodenopancreatic region (Fig 2). The margin of the lesion was...
smooth without invasion to the adjacent vessels. The biliary tree and the pancreatic duct were not dilated. There was no enlarged lymph node. Therefore, the patient underwent the Whipple procedure. At the surgery, a 4-cm well-encapsulated mass was found at the distal second portion of duodenum with duodenopancreatic extension. Histopathologic examination revealed a solid and cystic mass in the submucosal layer of the distal second duodenum with extramural spread and invasion to the inferior lateral aspect of the uncinate process of the pancreas. An ulceration in the duodenal mucosa overlying the mass was identified (Fig 3). Microscopic studies revealed marked overgrowth of spindle cells with scattered large and small glands in the periphery. The final diagnosis was duodenopancreatic metastatic tumor from cystosarcoma phylloides of the breast.

**DISCUSSION**

Cystosarcoma phylloides of the breast has an unpredictable prognosis because of its potentiality of tumor recurrence and metastasis, especially for the malignant cystosarcoma subtype [1]. Distant metastasis of the malignant cystosarcomas may occur at any sites of the body with an average incidence rate of 19% [1]. Axillary lymph node involvement is rare, but hematogenous spread to lung, pleura, bone and liver is relative common [2]. Duodenopancreatic metastasis from breast cystosarcoma phylloides has rarely been reported. Solitary pancreatic metastasis from cystosarcoma phylloides of the breast was only once described in 1978 and was successfully treated by surgery [3]. To our knowledge, metastatic duodenopancreatic cystosarcoma phylloides presenting with upper GI bleeding has not been reported previously.

GI bleeding usually results from primary GI lesions. Endoscopic evaluation is the initial modality of choice because it permits direct approach to observe the esophagus, stomach and proximal duodenum and to allow biopsy if necessary [4, 5]. On some occasions, upper GI endoscopic examination cannot identify the bleeding sources, particularly those located at the mid-gut distal to the duodenal bulb. In such cases, imaging studies may be helpful for evaluation. Small bowel series is better than CT in demonstrating the intraluminal lesions and its mucosal status. However,
CT can provide more details on the internal architecture, location and extent of the lesion. In our case, small bowel series showed an ulcerated duodenal submucosal mass. CT further showed that the mass was well-defined, contained cystic and solid components and involved the contiguous pancreas. Small bowel series and CT were able to demonstrate these radiological features that were well correlated with histological specimen. Although the nature of lesion could not be established by imaging studies, the demonstration of the lesion involvement in both the duodenum and pancreas may suggest the likelihood of malignancy. Further correlation with the past history of the patient may provide a clue to the appropriate diagnosis.

Finally, we conclude that imaging study may play an important role in defining a mid-gut lesion in the cases of gastrointestinal bleeding with undetermined etiology. Although GI bleeding is not closely associated with intestinal submucosal metastatic lesions, it may occur once the overlying mucosa ulcerates.

REFERENCES

乳房葉狀囊肉瘤轉移十二指腸及胰臟引發罕見次發性消化道出血：小腸钡劑造影，電腦斷層掃描及病理組織表徵

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原發性胃腸道病灶常被認定為是消化系出血之原因，我們現在報告一罕見的病例，是因惡性乳房葉狀囊肉瘤造成十二指腸及胰臟轉移引發胃腸道出血，在早期的內視鏡檢查亦無法找出病灶。

雖然，內視鏡檢查在診斷消化系出血仍是第一選擇，但放射線影像仍是診斷消化系外病灶引致胃腸道出血的基本工具，我們在此展現此病例的小腸钡劑攝影，電腦斷層掃描及病理表徵。

關鍵詞：轉移；消化道出血；電腦斷層掃描