Anemia and jejunal intussusception: An unusual presentation for a metastatic phyllodes breast tumor

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A B S T R A C T

INTRODUCTION: Phyllodes tumor of the breast is a rare cause of breast cancer, accounting for less than 0.5% of breast cancers. These tumors are classified as benign, borderline, or malignant, with malignant tumors comprising nearly 25% of cases. Metastases occur in 20% of malignant tumors, lungs, bones, liver and brain being the frequent sites of metastases.

PRESENTATION OF CASE: We present a case of a metastatic phyllodes tumor to the small bowel causing jejunal intussusception, symptomatic anemia, and small bowel obstruction.

DISCUSSION: Patients with phyllodes tumor of the breast can develop disease recurrence even years after initial treatment. Phyllodes tumor metastasizing to the small bowel is extremely rare, with only three known previously described case reports in the literature.

CONCLUSION: High risk patients, with a past medical history of phyllodes breast cancer, should be monitored closely. Even years after breast cancer treatment, these patients may present with gastrointestinal complaints such as obstruction or bleeding, and therefore metastatic disease to the small bowel should be considered on the differential with subsequent abdominal imaging obtained.

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1. Case report

Our patient is a 59-year-old African American woman, who presented to the emergency room in June of 2010 with a growing right breast mass for the previous six months. She denied breast pain, nipple discharge, fever, weight loss, coughing, or abdominal pain. A core needle biopsy was done, which showed a spindle cell neoplasm with heterologous elements not associated with any epithelial component. There was noted moderate stromal atypia, with increased stromal cellularity, and increased stromal mitoses (up to 8 mitoses/10 HPF). Immunohistochemistry revealed the spindle cells, to be positive for vimentin and SMA, focally positive for CD34 and negative for pancytokeratin, HMWK, CAM5.2, desmin, and S100.

In August of 2010, she underwent a right modified radical mastectomy, which revealed a 19 cm mass. Histopathology of the mass showed a malignant phyllodes tumor with chondrosarcomatous elements (grade 3) with a mitotic count score of 3 (40 mitoses/10 HPF), and a necrosis score of 1 (50% tumor necrosis). No lymphovascular invasion was identified. She did not receive any further adjuvant chemotherapy or radiation therapy.

On July 20th, 2011, the patient presented to the emergency room complaining of inability to keep food down, nausea and vomiting, shortness of breath, and vague epigastric pain for 2 weeks. She was found to have microcytic anemia (hemoglobin of 6.6), and was given two units of packed red blood cells with resolution of her shortness of breath. A computed tomography (CT) of the abdomen and pelvis showed a jejunal mass as the lead point for intussusception with surrounding mesenteric lymphadenopathy (Fig. 1). Upper and lower endoscopies demonstrated an irregularly shaped heterogeneous mass in the proximal jejunum which was brown/black and actively bleeding. An exploratory laparotomy was performed and the jejunal intussusception was found 12 cm from the ligament of Trietz with associated mesenteric lymphadenopathy. There was no other significant pathology on examination of the remainder of abdominal viscera. The mass was resected along with its mesentery and the bowel anastomosed.

Pathologic examination of the mass revealed an 8 cm × 3.7 cm × 3.4 cm high-grade malignant neoplasm, compatible with metastatic malignant phyllodes tumor from the previously diagnosed right breast primary. The metastatic lesion showed a higher grade and no de-differentiation compared to the previously resected breast tumor (Figs. 2 and 3).

2. Discussion

Phyllodes tumor of the breast is a rare cause of breast cancer, accounting for less than 0.5% of breast cancers. These tumors are classified as benign, borderline, or malignant, with malignant tumors comprising nearly 25% of cases. Metastases occur in 20% of malignant tumors, and they generally spread to the
lungs, bones, liver and brain.\textsuperscript{5} Phyllodes tumor metastasizing to the small bowel is extremely rare with only three previous cases described in literature.\textsuperscript{6–8} In the first case the patient presented with upper gastrointestinal bleeding and was found to have a mass in the duodenum. In the second case the patient presented with abdominal pain and vomiting, and a mass was found to be an ileocecal intussusception. In the third case the patient presented with abdominal pain, weight loss, and nausea and was found to have an intraluminal lobular mass in the mid-ileum. Similarly, our patient presented with anemia and vague abdominal complaints. The CT findings of jejunal intussusception along with diagnostic endoscopy resulted in a surgical consult which ultimately led to a diagnosis of metastatic phyllodes tumor.

Patients with phyllodes tumor of the breast can develop disease recurrence even years after initial treatment. The sarcoma and phyllode retrospective (SAPHYR) retrospective study demonstrates the impact of histological classification on survival rates. Three year disease-free survival rates for benign and borderline tumors was 57\%, while for malignant tumors it was 45\%.\textsuperscript{9} Furthermore, metastatic phyllodes tumor can present within three years of initial therapy or even after more than ten years.\textsuperscript{4} Therefore high risk patients should be monitored closely. Traditionally, attention has been directed to monitoring the pulmonary, nervous, and skeletal systems with CT imaging of the lungs, liver, and brain as well as with bone scans. Given this, in patients who have a history of phyllodes tumor of the breast and present with gastrointestinal complaints such as obstruction or bleeding, metastatic disease to the small bowel should be considered and abdominal imaging obtained.

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None.

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\textbf{Ethical approval}

Consent obtained.
Author contributions

Sidney A. Schechet: study design, data collection and analysis, writing, coordination.
Erik P. Askenasy and Bradford G. Scott: caretaker and surgeon of the patient, writing and editing
Sagar Dhamne: pathology imaging and descriptions.

References