Malignant melanoma of the cecum and small intestine

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ABSTRACT

Malignant melanoma is the most lethal skin cancer. While it represents about 5% of all cutaneous malignancies for men and women, melanoma accounts for the most skin cancer deaths. Symptomatic gastrointestinal involvement from primary malignant cutaneous melanoma is uncommon and represents only 1% to 4% of melanoma cases but is found in 60% of autopsies in patients who have had a primary cutaneous melanoma. We present a case of metastatic melanoma in a 61-year-old man with initial symptomatic cecal melanoma and subsequent jejunal involvement discovered during endoscopy.

KEYWORDS Endoscopy; gastroenterology; large intestine; melanoma; small intestine

Symptomatic gastrointestinal involvement of melanoma is uncommon, found in only 1% to 4% of melanoma cases.^{1,2} Metastases can occur in the stomach, esophagus, colon, and biliary system. However, the small bowel is the most common site, most likely due to its rich vascularity.¹ These metastases often present with nonspecific symptoms such as fatigue, weight loss, obstruction, and malabsorption.^{3–5} Melanoma involvement in the gastrointestinal tract is a marker of poor prognosis overall, with some reporting a 5-year survival rate of only 14% and a median survival time of 12.5 months.⁶

CASE DESCRIPTION

A 61-year-old white man presented with a 1-week history of lightheadedness and melena. His initial hemoglobin was 8.3 g/dL, compared with 14.3 g/dL a year earlier. An iron panel showed iron deficiency anemia. He had a previously excised cutaneous melanoma a year prior to his initial presentation. The excised melanoma was ulcerated and classified as a stage IIC, T4b, N0 nodular melanoma on pathology and determined to be Clark level IV, indicating invasion into the reticular dermis.

The patient had an initial computed tomography (CT) scan of the chest, abdomen, and pelvis that demonstrated a 1.2 cm lesion in the liver, which was later found to be a benign hemangioma on biopsy, as well as a soft tissue mass in the ascending colon measuring 3.7 × 2.6 cm (*Figure 1*). Subsequent colonoscopy demonstrated a mass in the cecum (*Figure 2a*). The biopsy results of this mass were consistent with malignant melanoma

(*BRAF* mutation in codon 600, Ki-67 of 20%) and showed lymphovascular invasion. The patient underwent a right hemicolectomy with palliative intent, as it was felt that the patient's cecal mass was the source of his recurrent blood loss anemia.

The patient's clinical course was further complicated by the development of metastases to his gallbladder requiring cholecystectomy. He continued to have blood loss anemia requiring blood transfusions. A single balloon enteroscopy was later performed demonstrating a nonobstructive, polypoid, and ulcerated-appearing proximal jejunal mass that was 20 mm in size (*Figure 2b*). This was also determined to be melanoma on biopsy but was unable to be resected. The patient was ultimately treated with the PD-1 inhibitor nivolumab and has had improvement of his symptoms and resolution of his anemia after 1 year of follow-up.

DISCUSSION

Our patient's clinical course involved multiple areas of metastases requiring surgical intervention. Small bowel lesions may present diffusely, as mural nodules, as “target” lesions, or as large excavating masses on radiographs.^{4,6} A CT scan can be useful to detect mesenteric deposits in the small bowel. Endoscopically, lesions typically present as ulcerated melanotic nodules or mass lesions with necrosis and melanosis.¹ Involvement of the external serosa of the bowel and mesentery is less common and can lead to false-negative results during endoscopy. Biopsies taken from these malignant ulcerations on endoscopy are positive in 90% of cases.¹ Mainstays of treatment for metastatic melanoma

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Figure 1. CT of the chest, abdomen, and pelvis with contrast showing a 1.2 cm hypodense lesion in segment 6 of the liver as well as a soft tissue mass in the ascending colon measuring 3.7 cm in length and 2.6 cm in the axial dimension.

involving the gastrointestinal tract include surgical resection and immunotherapy.²

The propensity of the primary melanoma to metastasize is dependent on Clark level. More than 70% of lesions involving the gastrointestinal tract are Clark level III–IV.⁷ Older studies have shown that metastasectomy can lead to survival benefits in stage IV metastatic melanoma.^{2,8,9} Even with the advent of novel immunotherapy treatment for malignant melanoma, it has been shown that metastasectomy in conjunction with immunotherapy is superior to either modality alone. In one study involving 393 patients with malignant melanoma and gastrointestinal metastases, median survival was 20.0 months with surgery plus immunotherapy ($n = 160$), 13.0 months with surgery alone ($n = 111$), 8.0 months with immunotherapy alone ($n = 64$), and only 5.0 months with neither treatment ($n = 58$) ($P < 0.001$).¹⁰ Therefore, resection of metastatic lesions in conjunction with immunotherapy should be explored as a treatment option for these patients. Our case was unique because multiple areas of the gastrointestinal tract were involved throughout our patient's clinical course; his care required a wide spectrum of detection and treatment modalities, which ultimately resulted in an improved outcome.

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Figure 2. (a) Initial polypoid and ulcerated mass found in the cecum during colonoscopy. The mass involved <25% of the lumen and measured about 3 cm in its largest dimension. (b) Proximal polypoid and ulcerated nonobstructing jejunal mass seen on single balloon enteroscopy. This mass encompassed <25% of the lumen circumference.

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