Diffuse Melanoma of the Stomach and Duodenum: A Case Report

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ABSTRACT

Gastrointestinal melanoma (GIM) is occasionally observed in general practice. We report a case of melanoma dispersed diffusely in the stomach and duodenum with no skin involvement.

KEYWORDS
Melanoma; Endoscopy; Gastrointestinal bleeding

INTRODUCTION

Gastrointestinal melanoma (GIM) may present with different symptoms such as abdominal pain, anemia, dysphagia, constipation, small bowel obstruction and gastrointestinal bleeding.[1,2] Here we present the case of a 45 year old man who presented with complaints of abdominal pain and weight loss. After evaluation, GIM was diagnosed.

CASE REPORT

A 45 year old Iraqi man presented to our center with epigastric pain three months prior to evaluation. The pain was constant, did not radiate to any site and unrelated to bowel movements, however increased with food ingestion. He had nausea, anorexia and weight loss (15 kilograms) within a 12 months period. There was a history of left eye enucleation 12 years prior to admission due to ocular melanoma. Upon physical examination, he was pale with cachexia. There was no left eye. Because of adhesion and deformity of the left eyelid due to the previous left eye enucleation, further examination was not possible. Right eye fundoscopic examination was normal. There was epigastric tenderness and hepatomegaly with a 15 cm mid-clavicular span. The remainder of the physical examination was normal. Table 1 shows the patient's laboratory results upon admission.

An upper GI endoscopy was performed which revealed over 100 black pigments that ranged in size from 2-10 mm and of different appearances (flat, nodular and polypoid), which were diffusely dispersed throughout the entire surface of the stomach and duodenum (Figures 1-3). Multiple biopsies were taken from the stomach and duodenal bulb. Histologic sections showed infiltration of malignant cells in the lamina propria between the mucosal glands.

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Table 1: **Laboratory values on admission.**

Laboratory data	Patient (Normal range)
White blood cells (/µL)	11000 (4000-10000)
Neut (%)	80 (50-72)
Lymph (%)	15 (20-50)
Mono (%)	4 (2-10)
Eo (%)	1 (1-6)
Hemoglobin (g/dl)	9.4 (12-15)
Platelets (/µL)	210,000 (150000-450000)
Direct bilirubin (mg/dl)	0.5 (<0.3)
Total bilirubin (mg/dl)	1.1 (0.1-1.2)
Aspartate aminotransferase (U/L)	51 (0-40)
Alanine aminotransferase (U/L)	48 (0-40)
Alkaline phosphatase (U/L)	1479 (80-360)
ESR (mm/hr)	63 (<20)
CRP (mg/dl)	21 (<10)
Lactate dehydrogenase (U/L)	3049 (100-190)

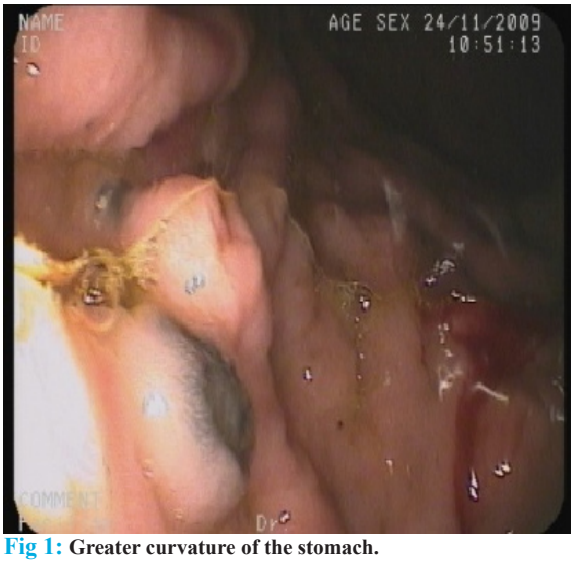

Fig 1: **Greater curvature of the stomach.**

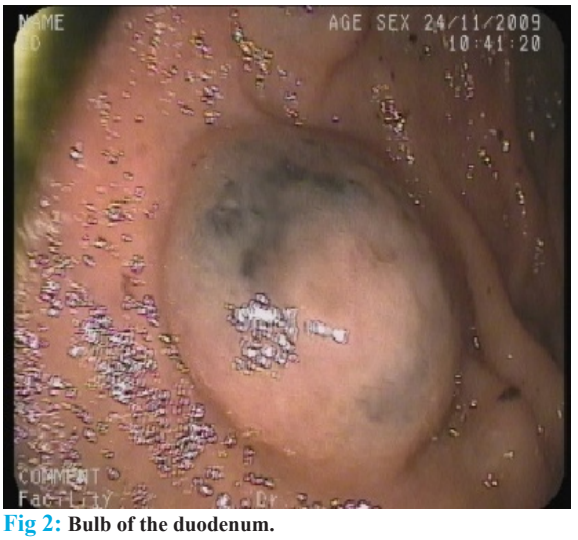

Fig 2: **Bulb of the duodenum.**

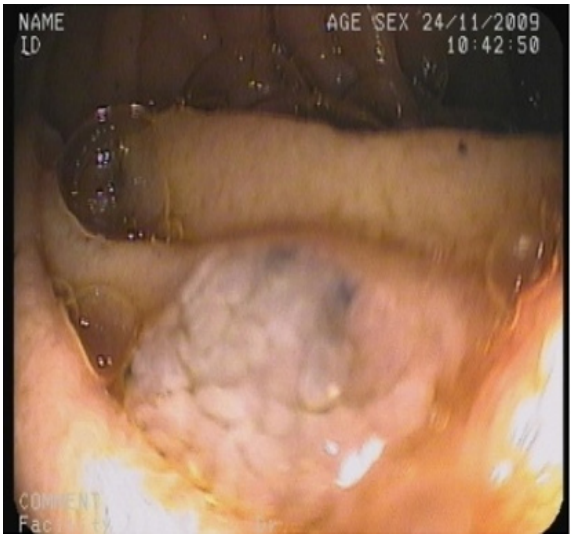

Fig 3: **Third part of the duodenum.**

The individual malignant cells had an eccentric pleomorphic nucleus and moderate to abundant granular cytoplasm. Immunohistochemistry staining for human melanoma black-45 (HMB-45), S-100 and Melan-A showed strong reactions in the cytoplasm of the malignant cells (Figure 4).

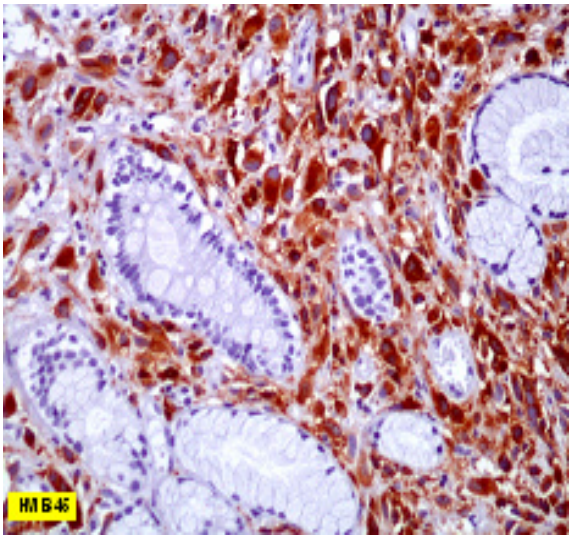

Fig 4: **Immunohistochemistry staining for HMB-45 was strongly reactive in the cytoplasm of the malignant cells.**

Spiral triphasic abdominal CT scan showed multiple liver metastasis. The patient was diagnosed with metastatic melanoma and referred

for treatment. Because of liver metastasis and diffusely dispersed GIM in this case, surgery was not a good option and the patient was referred for chemotherapy. The patient returned to his own country and therefore was lost to follow up.

DISCUSSION

GIM may present with pain, anemia, fatigue, dysphagia, constipation, tenesmus, small bowel obstruction, perforated bowel, hematemesis and melena.[1,2] The most commonly involved sites are the jejunum and ileum, followed by the colon, rectum and stomach.[3] GIM may be either primary or metastatic and it may be difficult to distinguish between them. Primary GIM tends to be more aggressive and is rarely diagnosed at an early stage. Clinically, a primary GIM is suggested if the patient has no obvious cutaneous melanoma or has an isolated GIM without other extraintestinal metastases.[1]

In our case, the presence of a history of melanoma made metastatic GIM a most likely diagnosis.

One case report described a man with an ocular melanoma, which had been excised several times, who presented with anorexia, dizziness, and fatigue. He was found to have cerebellar and gastric metastases.[1] Another case report described a man with ocular melanoma who presented with metastatic melanoma to the small intestine.[1,4] In two previous cases, both similar to our patient, GIM presented following diagnoses of ocular melanoma. Therefore, in patients with a history of melanoma, persistent nonspecific gastrointestinal complaints, such as abdominal pain, weight loss or anorexia should lead to a suspicion of GIM.

Metastases may present both at the time of primary diagnosis or decades later as the first sign of recurrence.[1] The median interval between therapy of the initial skin melanoma and detection of GIM is 4.4 years (range: 2 months to 15 years).[5] The prognosis of patients with metastatic malignant melanoma is poor with a mean survival of 6 to 8 months.[1] In one study, the median survival after resection of metastatic melanoma of the small bowel was 13 months (range: 2 days to 300 months).[5] In disseminated melanoma, multiple studies have showed that serum lactate dehydrogenase is an important independent prognostic factor.[6, 7]

Surgical resection, chemotherapy, immunotherapy, biochemotherapy, observation, or participation in clinical trials may be considered for metastatic GIM.[1] Surgical resection of abdominal metastasis, if possible, decreases symptoms and increases survival.[1, 8, 9] For patients with complications (pain, anemia, bleeding or obstruction), good performance status and no other sites of metastasis, resection is a reasonable option. Such patients with abdominal metastasis may achieve good palliation and perhaps long-term survival.[9]

Because most patients with completely resected metastatic melanoma will relapse, there is an interest in developing adjuvant therapeutic strategies to prevent recurrence.[1] Efficient chemotherapeutic agents in metastatic melanoma are dacarbazine, temozolomide, platinum analogs, nitrosoureas and tubular toxins.[10]

CONFLICT OF INTEREST

The authors declare no conflict of interest related to this work.

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