

# Gastrointestinal Bleeding, Jejunum Perforation and Intussusceptions Ileo-Jejunal Segment with Multiple Polyposis Due to Metastatic Melanoma with Out Primary Cutaneous Melanoma?

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## ABSTRACT

*Approximately 60% of patients who die due to melanoma have gastrointestinal metastases at autopsy, yet ante mortem diagnosis is uncommon. The small bowel is the most frequent intestinal site of metastasis and prognosis is very poor with a median survival after operation was 6.2 months (range: 1–42 months). Bowel metastases may appear radiologically as polypoid mucosal lesions, submucosal nodules, diffuse infiltration with thickening of the intestinal wall, or serosal implants. Bowel obstruction due into intussusceptions is common clinical presentation of gastrointestinal metastasis; other presentation include gastrointestinal bleeding, perforation and large masses. We reported a case of metastatic melanoma to small bowel, whose had hematemesis melena, abdominal pain, diarrhea and weight loss without primary cutaneous melanoma. Gastroduodenoscopy appeared normal. The ultrasonography of bowel showed a "doughnut" configuration with concentric rings of bowel wall. Left lateral decubitus abdominal radiographies showed free air appearances. Laparotomy reported three location of invagination (intussusception) with multiple polyposis at ileo-jejunal segment (29 pieces of polyp) and jejunum perforation. Resection and end-to-end anastomosis of the affected segment had been performed with no serious complication after this. Microscopical examination of specimen showed metastatic melanoma malignant in 3 lymph nodes. Eight weeks later patients died with distant metastases to brain.*

**Keywords:** *Intussusception and perforation, multiple polyposis, metastase melanoma without primary cutaneous melanoma*

## INTRODUCTION

Approximately 60% of patients who die due to melanoma have gastrointestinal metastase or topsy, yet antemortem diagnosis is uncommon. The small bowel is the most frequent intestinal site of metastatis and prognosis is very poor with a median survival after operation was 6.2 months (range: 1-42 months).<sup>1</sup>

Metastatic melanoma can cause a wide variety of non specific gastrointestinal symptoms, including vomiting, abdominal pain, diarrhea and weight loss. Bowel obstruction due to intussusception is a common clinical

presentation of gastrointestinal metastasis; other presentation include gastrointestinal bleeding, perforation and large masses.<sup>2,3</sup> Bowel metastases may appear radiologically as polypoid mucosal lesions, sub mucosal nodules, diffuse infiltration with thickening of intestinal wall or serosal implants.<sup>2</sup> The most common radiologic appearance is "bull's eye" which is seen when barium occupies a central ulcers in a metastatic nodule.<sup>4</sup>

The abdominal ultrasonography appearances of bowel with intussusception are characteristic. In cross section, the bowel assumes a "doughnut" configuration

with concentric rings of bowel wall. Dilated loops of fluid-filled, obstructive bowel may be demonstrated proximal to the intussusception. The use of ultrasonography to diagnose this condition is highly reliable, reducing or eliminating the need for contrast radiology.<sup>5</sup>

There are two subject of primary melanoma: one that occurs among younger patients and is more aggressive with rapid metastasis and early death and one that occurs among older patients, is more indolent and metastasizes less rapidly.<sup>6</sup> Systemic adjuvant therapy for metastasis malignant melanoma is limited. There is no standard, effective chemotherapy after either palliative or curative resection of malignant melanoma of the GI tract.<sup>7</sup>

**CASE REPORT**

A man, 35 years old, was admitted to the hospital because of hematemesis-melena since a week ago. The patients had no prior history of nonsteroidal anti-inflammatory use or peptic ulcer disease. One month before admitted he felt recurrent of abdominal pain with loss of appetite and sometimes follows by diarrhea. He lost his weight during this time before admission. He did not have any past history of surgery.

The patient's general condition was weak. The blood pressure was 100/70 mmHg. The body temperature was 37°C. The pulse rate was 100 beats/minute and the respiration rate was 20/minute. Physical examination showed conjunctiva were pale, the sclera were not jaundice. Heart and lung examination were normal. The abdomen showed mild tenderness in the epigastrium and umbilical quadrant, without masses or organomegaly on palpation. Rebound tenderness was not found. There was peripheral edema. Rectal examination showed no abnormalities.



Figure 1. The Ultrasonography of Bowel Showed a 'doughnut' Configuration with Concentric Rings of Bowel Wall



Figure 2. Small Bowel Intussusception with Multiple Polyposis at Ileo - Jejunal Segment

A routine blood test revealed hemoglobin level 6.5 g/dL, leukocyte 13,500/ $\mu$ L, platelet counts 324,000/ $\mu$ L, differential count of leukocyte was segment 60%, lymphocytes 39% and monocytes 1%. Electrolyte examination were also within normal range with sodium 153 mEq/L, potassium 5.0 mEq/L, chloride 100 mEq/L and calcium serum 11.83 mEq/L. Other laboratory results were blood glucose 108 mg/dL, BUN 39.8 mg/dL, serum creatinin 0.78 mg/dL, uric acid 6.4 mg/dL, total cholesterol 148 mg/dL, triglyceride level 143 mg/dL, total bilirubin 0.73 mg/dL, direct bilirubin 0.28 mg/dL indirect bilirubin 0.45 mg/dL ALT 10 unit/L, AST 13 unit/L and albumin level 2.89 mg/dL. During the time of investigation, he required blood transfusion for separate occasions.

Gastroduodenoscopy was normal with no sign of active bleeding in his gastrointestinal tract. Two days later the ultrasonography of bowel showed a 'doughnut' configuration with concentric rings of bowel wall left lateral decubitus abdominal radiographies showed free air appearance. Re-examination showed abdomen with rebound tenderness.

The patient offered surgical procedure of exploratory laparotomy because of intussusceptions with sign of perforation. Laparotomy revealed three location of invagination (intussusception) with multiple polyposis at ileo-jejunal segment (29 pieces of polyp) and jejunum perforation. Resection and end-to end anastomosis of affected segment had been done. Microscopical examination of specimen showed metastasis melanoma malignant in 3 lymph nodes.

## DISCUSSION

Metastatic melanoma can cause a wide variety of non specific gastrointestinal symptoms, including vomiting, abdominal pain, diarrhea and weight loss. Bowel obstruction due to intussusception is a common clinical presentation of gastrointestinal metastasis, other presentation include occult intestinal bleeding, gastrointestinal bleeding, perforation, and large masses.<sup>2,3</sup> Gastrointestinal metastase may as polypoid mucosal lesions, submucosal masses or nodules, diffuse infiltration with thickness of intestinal wall, carcinomatosis or serosal implants. The most common form is that of multiple submucosal implants which may grow intraluminally to cause intestinal obstruction.<sup>2</sup> Such lesions often ulcerate, resulting in acute or occult intestinal bleeding.<sup>2,3</sup> In this case, the diagnosis of metastasis melanoma in small bowel was not suspected clinically and was established only on histological examination of resected specimen, even though the patient present with gastrointestinal bleeding, intussusception and sign of perforation.

Malignant melanoma is the most common tumor that metastasizes to the gastrointestinal tract, spreading by direct extension or by lymphatics.<sup>8</sup> Autopsy studies have shown gastrointestinal metastases in 50% to 60% of patients with melanoma,<sup>9</sup> but most metastases are not diagnosed before the patient dies.<sup>8</sup> The small bowel is the most frequent intestinal site of metastasis and in one autopsy series, 58% of patients with metastasis melanoma had small-bowel involvement.<sup>9</sup> Malignant melanoma can metastases to virtually any organ, but the most common initial site of distant metastasis are skin and subcutaneous tissue (42% to 59% patients), followed by the lung (18% to 36%), liver (14% to 20%), brain (12% to 20%), bone (11% to 17%) and gastrointestinal tract (1% to 7%).<sup>9</sup> Some studies indicate that malignant melanoma accounts for up to 70 percent of metastasis tumor involving the small intestine.<sup>6</sup> Within the gastrointestinal tract, metastasis melanoma most frequently involves the jejunum and ileum (26% to 58% cases), followed by the colon and rectum (5% to 28%), stomach (7% to 24%), duodenum (12% to 13%) and esophagus (3% to 9%).<sup>9</sup> At autopsy, many organ systems are found to harbor clinically silent metastasis disease. Most patients with disseminated disease die from involvement of the lung or brain.<sup>9</sup> In our case gastrointestinal metastasis melanoma to jejunum and ileum. Gastrointestinal metastase may as polypoid mucosal lesion. Laparatomy reported three location of intussusception with multiple polyposis at ileo-jejunal

segment (29 pieces of polyp) and jejunum perforation. Eight weeks later patients died with distant metastases to brain.

In our case no primary lesion was found on repeat thorough physical examination. There have been very rare case reports of GI tract those malignant melanomas without any other known primary site. In elsayed's retrospective study concluded that their data and results support the concept that small bowel involvement by melanoma, even without a known primary, is most probably metastasis.<sup>6</sup>

Because the small and large intestines normally contain no melanoblast, some authors believe that primary malignant melanomas of GI tract are unlikely. However, melanocytes have been found in alimentary tract as well as the respiratory tract even in lymph nodes. Another hypothesis supporting a primary etiology proposes that malignant melanomas can originate from neural crest cells. These multiple potential cells become amine precursor uptake and decarboxylation (APUD) cells. APUD cells can undergo neoplastic transformation and produce tumors such as carcinoid, gastrinoma, and medullary thyroid carcinoma. Melanomas may originate from APUD cells, although it is not similar to the usual APUDomas. Malignant melanomas are not hormone producers.<sup>7</sup> Because this case dies with another site of metastases in the brain, we suspected that small bowel involvement to this patient even without unknown primary, was probably metastasis.

Systemic adjuvant therapy for metastasis malignant melanoma is limited. There is no standard, effective chemotherapy after either palliative or curative resection of malignant melanoma of GI tract.<sup>7</sup> Prognosis is very poor with a median survival after operation was 6.2 months.<sup>1</sup> In our case, two months after surgery the patient died with distant metastases to the brain.

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