



Ileocecal Intussusception Secondary to Bowel Metastases from Cutaneous Melanoma: Case Report

Malign Melanom Metastazına Bağlı İleoçekal İntussusepsiyon: Olgu Sunumu

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ABSTRACT

A 63-year-old man presented to the emergency department with abdominal pain, episodes of bloody stool, nausea, and vomiting. Abdominal computed tomography showed lower intestinal intussusception and enlarged lymph nodes. Colonoscopic reduction was not possible. Exploratory laparotomy revealed a 15-cm mass comprised of the ileocecal region that had intussuscepted secondary to the small bowel. Palliative right hemicolectomy and resection of 60 cm segments of the small bowel were performed. Pathologic examination of the excised specimen revealed polypoid masses. There were 9 polyps, 1 in the ascending colon and the others in the ileum. Histopathological examination demonstrated obvious features of melanoma associated with epitheloid and spindle tumor cells and cytoplasmic melanin deposition. The tumor cells showed positivity for S-100, HMB-45 and Melan-A. Molecular examination revealed a c.1799> A (p.v600 A) mutation in exon 15 of the BRAF gene. The patient was re-examined and a nevus was found on the left anterior chest wall.

Keywords: Intussusception, metastasis, melanoma

ÖZ

Altmış üç yaşındaki erkek hasta karın ağrısı, kanlı dışkılama, bulantı ve kusma şikayetleri ile hastaneye müracaat etti. Yapılan muayene ve tetkiklerinde; bilgisayarlı tomografide intestinal intussusepsiyon ve karın içi lenf düğümleri saptandı. Kolonoskopik inceleme sonrası redüksiyon sağlanamadı. Laparotomide, çekuma invajine ince barsak segmentleri redükte olmaması üzerine sağ hemikolektomi ve palpasyonda ince barsakta lümen içi saptanan tümöral kitleleri içine alan 60 cm ince barsak segmenti rezeke edildi. Patolojik inceleme sonrasında kolonda 1 ve ince barsaklarda 8 toplamda 9 adet polipoid lezyon saptandı. Histolojik incelemede sitoplazmik melanin birikimi ile epiteloid ve iğsi tümör hücreleri izlendi. İmmünohistokimyasal boyamada tümör hücrelerinde S-100, HMB-45 ve melan-A pozitif olarak bulundu. Moleküler incelenmesi BRAF geni 15 Ekzonlar c.1799> a (p.v600 A) mutasyon saptanan hastanın malign melanom olarak rapor edilmesi sonrası hasta yeniden değerlendirildi ve göğüs ön duvarında deride malign melanom saptandı.

Anahtar Kelimeler: İntussusepsiyon, metastaz, melanom

Introduction

A 63-year-old man suffered from lower right abdominal pain last seven days associated with bloody stool, nausea and vomiting appealed to the emergency department. On physical examination, the abdomen was distended and rebound tenderness was in the right lower quadrant. Additionally, a palpable mass was found on the right lower quadrant. The laboratory data were in normal ranges. Colonoscopy was performed but colonoscopic reduction was not possible. Ileal intestinal segments were invaginated to ascending

colon and was revealed a tumor. A biopsy was done (Figure 1). History revealed that he had hypertension controlled on treatment. An abdominal computed tomography (CT) showed dilated intestines, intestinal intussusception on the right lower quadrant of the abdomen and enlarged lymph nodes (Figure 2).

Case Report

Exploratory laparotomy was performed and a tumoral mass was palpated in cecum. Additionally, following findings were



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noted; ileocecal invagination, jejunojejunal incarceration which formed an internal hernia, edematous small intestines and multiple lymph nodes in the mesentery. The liver was free of any mass. Resection of the mass with huge margins, lymphadenectomy, 60 cm of the ileum and palliative right hemicolectomy were performed (Figure 3). The continuity of the gastrointestinal tract (GIT) was reconstructed with end-to-side ileocolostomy. The postoperative course was uneventful. All these procedures were made with patient approval.

Following the resection it was found that terminal ileum was totally necrotic. There were a 3x2x2 cm polypoid mass located in the ascending colon and eight polypoid tumors located in the small intestine with a dull-gray cut surface. The histopathological examination of the resected specimen demonstrated that tumor cells had invaded the

muscularis propria together with mucosal hyperemia and necrosis. Analysis of 20 lymph nodes, 3 of them was metastatic. Microscopically, melanin granules were seen in epithelioid and spindle cells. There was vascular invasion. Perineural invasion was not occur. The tumor cells showed positivity for S-100, HMB-45 and melan-A staining by immunohistochemistry, which confirmed melanoma. Molecular examination showed that BRAF gene in 15 Exons c.1799> A (p.v600E) mutation has been identified and Ki-67 was in 25% of cells.

The patient was re-examined after surgery. The primary site of the tumor was on the left anterior chest wall (Figure 4). The lesion was excised with wide margins. Histopathological examination revealed the presence of superficial spreading melanoma. Immunohistochemical examination with S-100, melan-A and HMB-45 was considered positive in tumor cells.

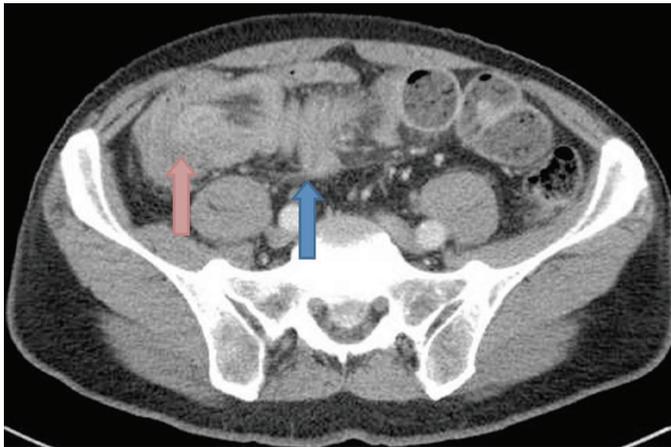


Figure 1. Abdominal computed tomography scan shows an abdominal mass (pink arrow) and the appearance of intussusception like a sausage (blue arrow)

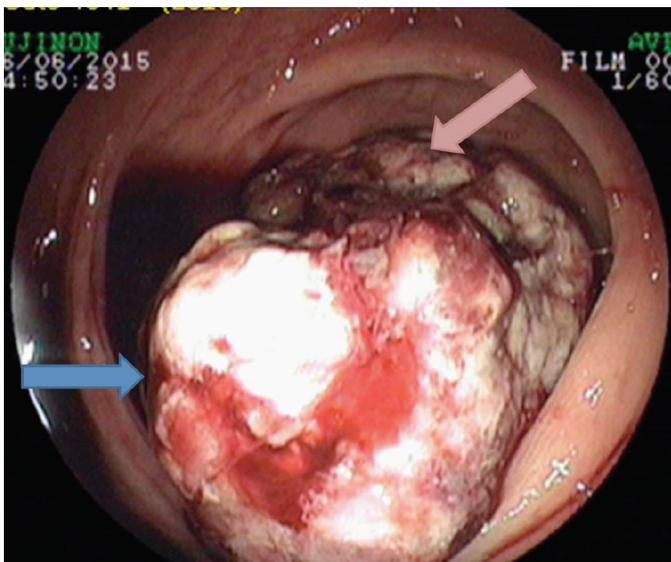


Figure 2. Colonoscopy shows ileocecal intussusception (pink arrow). The polypoid lesion (blue arrow)

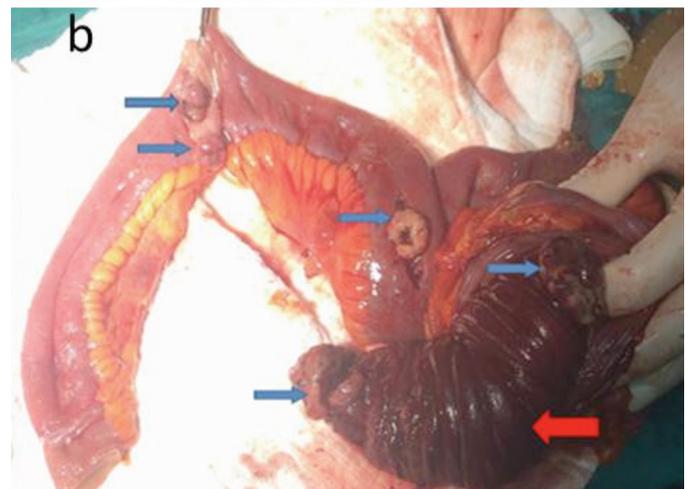
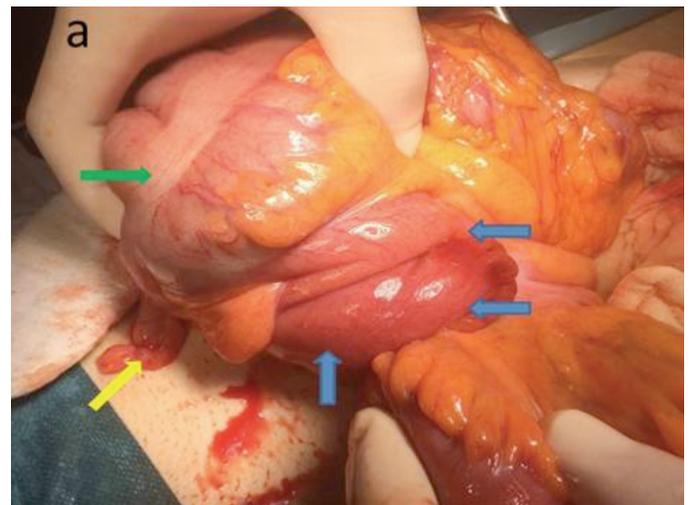


Figure 3. a) Intraoperative, ileocecal intussusception (blue arrow), cecum (green arrow), appendix (yellow arrow), b) postsurgical appearance of ileocecal intussusception (red arrow). Ileocecal resection involving proximal half of the cecum and distal 60 cm of terminal ileum. Polypoid masses (blue arrow)



Figure 4. The primary site of the tumor was a nevus located on the left anterior chest wall

The patient was discharged from the hospital on the 6th postoperative day. No complications were seen and the patient had been directed to chemotherapy and immunotherapy.

Discussion

Malignant GIT melanoma is a rare clinical disorder and has a bad prognosis. Most of them are metastases from cutaneous primaries.¹ There are two ways, which are responsible for metastases.^{2,3} The most frequent way is extending all implants intraluminally. They settle submucosally in the GIT and cause obstruction, ulceration and occult blood loss. It can be seen also as polyps, which could cause intussusception. In our patient we identified polypoid form of GIT melanoma.

Although all types of cutaneous melanoma may metastasize to the GIT, the most frequently type is superficial spreading melanoma.^{4,5} If the patient has a lesion as Clark III or above the spreading risk to the GIT is higher. The risk of metastasis in patients with Clark I or II is lesser than the other forms.^{6,7} The pathological diagnosis of metastasis of malignant melanoma to the GIT requires careful inspection of the mucosa for metastatic lesions and biopsy with special immunohistochemical stains (HMB-45 and S100).⁸

When considering the causes of adult intussusceptions, malign and benign tumors have come to the forefront. However, intestinal intussusceptions due to the melanoma are very rare. Although a limited number of studies, intestinal obstruction secondary to intussusception is the most frequent clinical presentation of primary melanoma.^{1,9,10,11,12} The presentation of our patient was ileocecal intussusception due to metastatic melanoma of the intestines.

It has been shown very clearly by the literature, that complete resection of GI metastases has serious advantage. The median survival after complete resection varied from 31.6 to 48.9 months, whereas incomplete resection was associated with a 5.4-9.6 month median survival. In some patients curative resection could be not possible due to multipl intestinal involvement. Up to 66% of cases had undergone curative resection after determination of GI metastasis.^{13,14} According to the study of Gutman et al.¹⁵, half of their patients underwent surgery on an elective basis and 22% required emergency surgery for bowel obstruction or gross gastrointestinal hemorrhage, but whether the indications for surgery were elective or emergency had no impact on postoperative survival.

It is a known fact generally, that achieving negative surgical margins is the main principle of oncologic surgery and in patients, who have localized disease curative resection with wide margins is the crucial method.¹⁶ On the other hand, if the patient has widespread disease or has multipl affected sites in the GIT, palliative surgery should be considered to relieve the symptoms of intestinal obstruction.¹⁷ There are no effective chemotherapy regimens for prolong the survival of metastatic melanoma, but some agents may control the disseminated disease, reduce the local recurrence and improve the quality of life.¹⁸

The most appropriate diagnostic method to show the intussusception is contrast enhanced CT with a diagnostic accuracy of 58-100%.¹⁹ All evidences of intestinal obstruction could be seen in our case and also CT images revealed intestinal intussusception and dilatation of proximal small intestine. However, we could not determine an intestinal tumor in the preoperative period, because of the lack of contrast-enhanced CT.

In conclusion, metastatic malignant melanoma of the intestines, which can cause to the intestinal intussusception is an uncommon clinical situation. The diagnosis and treatment strategies are often difficult especially in patients with acute intestinal obstruction symptoms. Although surgical resection is recommended in nearly all cases, the optimal treatment is discussed controversially in adult patients. The high incidence of malignancies in adult patients, which require an optimal oncological treatment, should be kept in mind.

Ethics

Informed Consent: Consent form was filled out by the participant.

Peer-review: Internally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: E.Y., M.Ç., Concept: E.Y., Y.K., Design: E.Y., İ.S., Data Collection or Processing: E.Y.,

M.Ç., Analysis or Interpretation: E.Y., A.İ.F., Literature Search: E.Y., M.Ç., Writing: E.Y., A.İ.F.

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