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Early solitary small bowel metastasis from stage I cutaneous melanoma

Authors' Contribution:
Study Design A
Data Collection B
Statistical Analysis C
Data Interpretation D
Manuscript Preparation E
Literature Search F
Funds Collection G

ABDEF **Paschalis Gavriilidis**
ABDEF **Georgios Efthimiopoulos**
ABDE **Georgios Zafiriou**

Department of Surgical Oncology, Theageneio Anticancer Hospital, Thessaloniki, Greece





Corresponding Author: Paschalis Gavriilidis, e-mail: pgav7461@yahoo.com

Patient: Male, 63
Final Diagnosis: Melanoma
Symptoms: Gastrointestinal haemorrhage
Medication: —
Clinical Procedure: Enterectomy
Specialty: Oncology

Objective: Unusual clinical course
Background: It is reported that the time interval between the initial diagnosis of malignant melanoma and the diagnosis of the gastrointestinal metastases is 43.8±11.3 months.
Case Report: We present the case of a 63-year-old Caucasian man who was operated on for superficial spreading Stage IB melanoma and 8 months later was diagnosed with solitary small bowel metastasis without other systemic metastases.
Conclusions: Small bowel melanoma metastasis should be suspected in any patient with previous history of malignant melanoma who develops symptoms of anemia, gastrointestinal hemorrhage, and non-specific abdominal pain.

Key words: gastrointestinal metastases • small bowel melanoma metastases • malignant melanoma

Full-text PDF: <http://www.amjcaserep.com/download/index/idArt/889670>

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Background

The reported post-mortem incidence of gastrointestinal (GI) metastases is 0.9% in 1000 melanoma patients [1]. Although the small bowel is most commonly affected (58%), in the GI tract organ only 2% to 5% of cases manifested clinically ante-mortem [1,2].

Case Report

A 63-year-old Caucasian man was operated on for superficial spreading Stage IB melanoma of the right shoulder (T2a, N0, M0) Clark III, Breslow 2 mm, without ulceration. Sentinel lymph node biopsy was negative.

Eight months after the operation, the patient presented with an episode of gastrointestinal bleeding. He developed progressively worsening anemia and required 2 units of packed red blood cells. During an extensive investigation he was noted on capsule endoscopy to have an ulcerated bleeding lesion in the ileum, which was inaccessible to endoscopic biopsy. Biochemical and tumor marker – lactate dehydrogenase LDH – profiles were normal. A melanotic tumor at 38 cm from the ileocecal valve was detected on laparotomy (Figure 1). There were no signs of metastatic spread during surgery.

Enterectomy was performed. The endoscopic investigation of the small bowel by the use of colonoscope during the operation was negative for metastatic spread. Postoperative CT scan, positron emission tomography (PET-CT) of the whole body, and bone scan were negative for extra-intestinal metastatic spread.

Histopathological report confirmed the diagnosis of malignant melanoma metastasis in the small bowel; 3 of the 19 lymph nodes were invaded by metastatic cells. The patient recovered well and was discharged on the 5th postoperative day. Based on the decision of the melanoma multidisciplinary meeting, he will receive adjuvant therapy with high-dose interferon alpha-2β.

Discussion

In the last 50 years, 3 large reviews of autopsies (Das Gupta et al. [1] in 1964, Blecker et al. [3] in 1999, and Schuchter et al. [4] in 2000) showed that the small bowel was the most common (50–58%) site of gastrointestinal metastasis in melanoma patients. This prevalence showed an increase in patients with disseminated metastases [1–4]. Aside from the high prevalence, the majority of patients remain asymptomatic and only 2–5% of them with small intestine metastases developed clinically apparent symptoms diagnosed ante-mortem [2].



Figure 1. Melanoma metastasis in the small bowel.

The most common presenting symptoms are anemia (60%), abdominal pain (25–59%), hemorrhage (26–40%), obstruction (27%), palpable mass (12%), and weight loss (9%) [5].

It was reported in 2001 by Bender et al. [6] and in 2004 by Wysocki et al. [7] that the time interval between initial diagnosis of melanoma and detection of metastasis is around 3.5 years (43.8±11.3 months). Furthermore, Elsayed et al., in a review of 103 cases of malignant melanoma in the small intestine, found that the time interval was 5.6 years for the surgically treated patients and 2.1 years for the cases that were diagnosed on autopsies [8]. It is widely reported that according to the time interval between the primary lesion and metastasis detection, we can subdivide the melanoma patients into 2 subsets: 1 that occurs among younger patients and gives rise to early metastases, and 1 that occurs in older patients and its metastatic possibility is attenuated⁸. Therefore, comparing the age of our patient, we can detect an obvious difference with the established information. Usually, melanoma GI metastasis is a late phenomenon of the disease, with an overall dismal prognosis [9].

As to why extra-peritoneal neoplasias metastasize to intra-peritoneal organs and why melanomas metastasize to the small bowel are questions that have intrigued scientists for over a century. Studies and investigations of the chemokines, their ligands, and the role that they play in the metastatic process helped researchers further to understand the “seed and soil” concept proposed by Paget in 1889.

Amersi et al investigated the role of chemokine receptors and their ligands in the site-specific metastasis of melanoma to the small bowel [10]. They have done in-depth analysis of the chemokine-ligand axis CCR9-CCL25. This group showed that 102 of 198 metastatic melanomas metastasize to the small bowel. In addition, 88 of the 102 that metastasized to the small bowel overexpress CCR9. Furthermore, they demonstrated tumor migration in response to CCL25 and inhibition of that migration

via anti-CCR9 antibodies or small interfering RNA (siRNA) [10]. In general, the conclusion of the study of Amersi et al is that CCR9 expression on primary neoplasias suggest a >60% likelihood that there will be metastasis to the small bowel.

Letsch et al. [11] also found that CCR9 was over-expressed on all melanoma cell lines isolated from small bowel metastases.

Ollila et al. [12] demonstrated that symptomatic patients derived a significant benefit from the surgical resection. The median survival for patients that underwent curative resection was 48.9 months compared to 5.4 months for palliative interventions [11].

In 2001, Gutman et al. [13] showed similar benefits in surgical patients compare to medically treated patients. Interestingly, they found serum albumin levels over 3.5 g/l significantly correlated with increased survival. They also found that the severity of symptoms did not correlate with survival in their series [13].

Results from an open multicentre prospective study confirmed that intestinal metastasis is frequent in advanced stages [14]. They also found that in patients with negative fecal occult blood test (FOBT) results, the small bowel metastasis detection rate

was 72.7% for Stage IV, 14.3% for Stage III, and 0% for Stage I/II [14]. Therefore, comparing the stage of our patient with published results from reviews and case reports, we can see a striking uniqueness. It is very exceptional for Stage I malignant melanoma to give rise to symptomatic intestinal metastasis 8 months after the diagnosis of the primary lesion.

To the best of our knowledge, based on PubMed and Google Scholar searches, there is no reported case of small bowel metastasis from Stage I cutaneous melanoma.

Conclusions

Metastatic melanoma in the small bowel should be suspected in any patient with a previous history of malignant melanoma who develops GI symptoms or chronic blood loss. The malignant melanoma patients with small bowel metastases have the most to benefit from a surgical approach.

Conflict of interest

There is no conflict of interest between the authors.

References:

1. Das Gupta TK, Brasfield RD: Metastatic melanoma of gastrointestinal tract. *Arch Surg*, 1964; 88: 969-73
2. Gatsoulis N, Roukounakis N, Kafetzis I et al: Small bowel intussusception due to metastatic malignant melanoma. A case report. *Tech Coloproctol*, 2004; 8: 141-43
3. Blecker D, Abraham S, Furth EE, Kochman ML: Melanoma in the gastrointestinal tract. *Am J Gastroenterol*, 1999; 94: 3427-33
4. Schuchter LM, Green R, Fraker D: Primary and metastatic disease in malignant melanoma of the gastrointestinal tract. *Curr Opin Oncol*, 2000; 12: 181-85
5. Agarwala SS, Glaspy J, O'Day SJ: Results from a randomized phase III study comparing combined treatment with histamine dihydrochloride plus interleukin-2 versus interleukin-2 in patients with metastatic melanoma. *J Clin Oncol*, 2002; 20: 125-33
6. Bender GN, Maglinte DD, Mc Lamey JH et al: Malignant melanoma: patterns of metastasis to the small bowel, reliability of imaging studies and clinical relevance. *Am J Gastroenterol*, 2001; 96: 2392-400
7. Wysocki WM, Komorowski AL, Darasz Z: Gastrointestinal metastases from malignant melanoma. Report of a case. *Surg Today*, 2004; 34: 542-46
8. Elsayed AM, Albahara M, Nzeako UC, Sobin LH: Malignant melanomas in the small intestine. A study of 103 patients. *Am J Gastroenterol*, 1996; 91: 1001-6
9. Tsao H, Atkins MB, Sober AJ: Management of cutaneous melanoma. *N Engl J Med*, 2004; 35: 998-1012
10. Amersi FF, Terando AM, Goto Y et al: Activation of CCR/CCL25 in cutaneous melanoma mediates preferential metastasis to the small intestine. *Clin Cancer Res*, 2008; 14: 638-45
11. Letsch A, Keilhotz U, Schadendorf D et al: Functional CCR(expression is associated with small intestinal metastasis. *J Invest Dermatol*, 2004; 122: 685-90
12. Ollila DW, Essner R, Wanek LA, Morton DL: Surgical resection for melanoma metastatic to the gastrointestinal tract. *Ann Surg*, 1996; 131(9): 975-79, 979-80
13. Gutman H, Hess KR, Kokotsakis JA et al: Surgery for abdominal metastases of cutaneous melanoma. *World J Surg*, 2001; 25: 750-58
14. Albert JG, Fechner M, Fiedler E et al: Algorithm for detection of small-bowel metastasis in malignant melanoma of the skin. *Endoscopy*, 2011; 43: 490-98