

Metastatic Malignant Melanoma of The Small Bowel

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Abstract: Metastatic malignant melanoma in the small bowel is a rare entity representing 35% to 50% of metastatic tumors of the small bowel and remains a late phenomenon of the disease. Surgical management of this type of recurrence is recommended to improve the survival and the quality of life. We report a case of surgical management of a small bowel metastasis from a malignant cutaneous melanoma occurring 38 months after the treatment of the primary lesion in a 63 years old woman.

Key words: cutaneous melanoma, small bowel, metastasis, recurrence.

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I. Introduction

Primary malignant tumors of the small bowel are rare and account for less than 2% of gastrointestinal (GI) malignancies(1).Metastatic tumors involving the small bowel are more common and metastatic malignant melanoma is the most common among them with reported incidences ranging from 35% to 50% (2).We report the case of a patient who developed small bowel metastases of cutaneous melanoma and underwent jejunal resection.

II. Case report

A 63-years old woman presented, in March 2010, with an ulcerative and pigmented lesion on the plantar surface of the left great toe measuring approximately 25×15 mm. Physical examination did not reveal other palpable masses in the remainder of the ipsilateral foot areas nor inguinal or popliteal lymph nodes. The biopsy of the lesion concluded to an invasive nodular malignant melanoma of the toe. A total body computerized tomography (CT) scans did not show signs of metastatic spread. The patient underwent a closed partial first ray amputation with ipsilateral groin lymph node dissection.

Histological inspection of the specimen revealed a proliferation of spindle-shaped atypical melanocytes containing large oval shaped nuclei with prominent eosinophilic nucleoli and achromic cytoplasm. Tumor-infiltrating lymphocytes were seen. These findings were consistent with a Clark's level 4 spindle-cell melanoma, Breslow thickness was 5 mm. The resection margins were free of tumor involvement. Five out of nine nodes were positive.

Two years later, the patient presented with a second lesion of the left hand measuring 30mm located in the hypothenar eminence. A complete resection with adductor brevis muscular flap and left axillary lymph node biopsy were performed. Pathology report concluded to hand metastasis of a spindle-cell melanoma. Therefore, the patient received interferon-a (IFN-a) as adjuvant therapy.

Fourteen months later, PET-CT shows left groin recurrence. Surgery was performed and microscopic evaluation showed a 40mm node recurrence.

Eighteen months following radical groin dissection she was seen in emergency complaining of diffuse abdominal pain associated with nausea and vomiting. A computed tomography (CT) scan revealed the presence of a heterogeneous tissular mass of the anterior wall of a distal jejuna ansa measuring 11×76.7×66 mm. This tumor showed a central area of necrosis containing multiple extra luminal air bubbles (fig.1). Therefore, an emergency laparotomy was performed and the surgical exploration revealed a jejunum tumor perforation with distension of the small bowel. The performed bowel segment was resected with end to end anastomosis.

Pathology report showed that jejunum wall was extensively involved by sheets of medium to large-sized tumor cells with irregular nuclear contours and large hyper-chromatic nuclei. Numerous mitotic figures were observed (Fig. 2).

Immuno-histo-chemically analysis showed that the neoplastic cells were strongly reactive for HMB-45 and Melan A (Fig.3). Thus confirming the diagnosis of metastatic melanoma involving the jejunum. Longitudinal resection margins were free from tumor. Postoperative course was unremarkable.

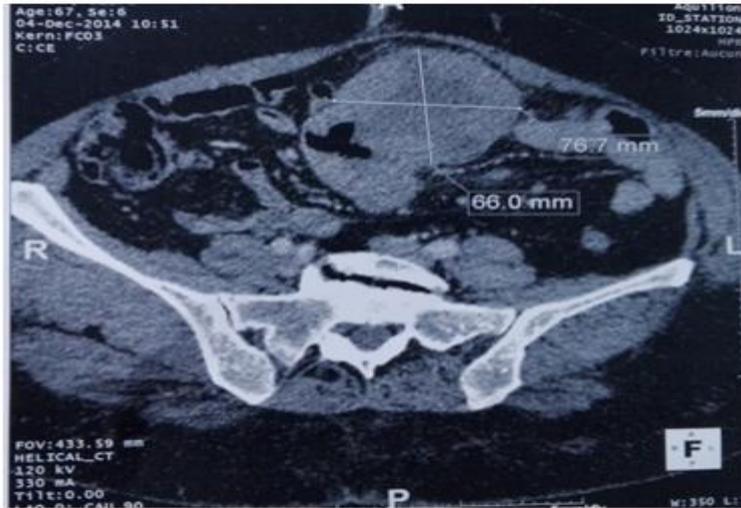


Figure 1: Computed tomography (CT) scan showing an heterogeneous tissular mass of the anterior wall of a distal jejuna ansa measuring 11×76.7×66 mm with a central area of necrosis containing multiple extra luminal air bubbles.

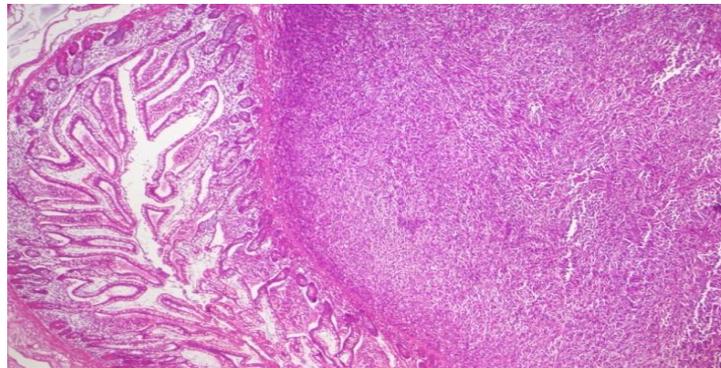


Figure 2(a)

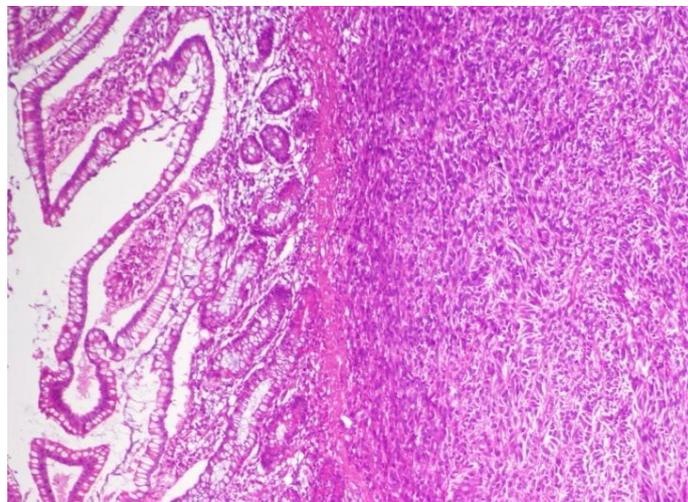


Figure 2 (b)

Figure 2: (a) Histologic examination showing jejunal wall infiltration (H&E x 100), (b) Sheets of markedly atypical cells with large hyper-chromatic nuclei (H&E x 200).

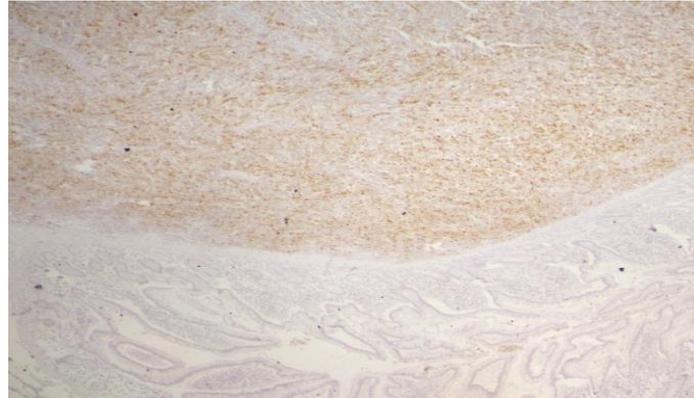


Figure 3(a)

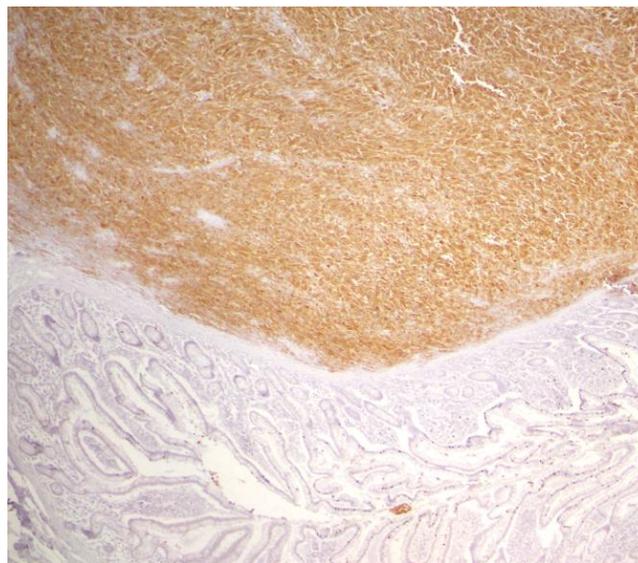


Figure 3(b)

Figure 3: Positive immunohistochemical staining for HMB-45 (a) and Melan-A (b) (x100).

III. Discussion

Bowel metastasis from cutaneous melanoma typically occurs 3 to 6 years after the treatment of the primary cutaneous melanoma(3). These lesions are isolated in the majority of the reported cases. Predictive factors for intestinal extension were reported including axial primary tumor site, ulceration, high mitotic rate, Clark level III or IV, and a high degree of histological regression(4).

The majority of patients with GI metastasis remain asymptomatic and only 2–5% of them developed clinically apparent symptoms (5). The most common presenting symptoms are chronic blood loss, bleeding, obstruction, abdominal pain, palpable mass and weight loss(6). Our patient was diagnosed with a small bowel perforation four years after the primary cutaneous melanoma of the great toe and two years after a hand metastasis, which is a rare presentation.

Diagnosis can be made by abdominal ultrasound examination, barium contrast studies, endoscopy, and CT scan. The sensitivity of CT for detecting metastases is 60–70%(7). Although more recently, PET-CT has been useful to identify sites with a sensitivity of 100% in detecting bowel metastasis (8).

Several studies have shown the benefits of metastasis surgery and immunotherapy in Stage IV melanoma. In a retrospective study about 393 gastrointestinal (GI) melanoma metastases, Gary B and all compared the combination of surgery and immune therapy versus surgery alone. The median melanoma-specific survival (MSS) was 20 months for the combination surgery-immune therapy, compared to 13 months for surgery alone, 8 months for immunotherapy alone, and 5 months with neither treatment ($p < 0.001$). By multivariable analysis, metastasis surgery was a significant predictor of MSS (HR=0.544; $p < .001$) suggesting that the treatment of GI melanoma metastases should use a combination of surgery and immune therapy(9). There is no evidence of the effectiveness of the administration of post-operative chemotherapy as further palliative treatment (10).

However, patients with a long disease-free interval between the primary diagnosis and the intestinal metastases have prolonged survival after surgical intervention(11).

The prognosis of intestinal metastatic melanoma remains poor with an overall median survival of 6–9 months and a 5 years survival rate of less than 10% (12).

IV. Conclusion

GI metastasis of melanoma is a late phenomenon of the disease, with a dismal prognosis. This rare site of metastatic spread should be suspected in any patient with a previous history of malignant melanoma who develops gastrointestinal symptoms. Surgical management should be encouraged when a complete resection of the disease is possible in order to improve the survival and the quality of life of symptomatic patients.

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