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Case Report

Acute ileo-ileal intussusception due to intestinal metastatic melanoma

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ARTICLE INFO

Article history:
Received 24 April 2014
Received in revised form
30 September 2014
Accepted 9 March 2015
Available online 19 April 2015

Keywords:
Melanoma
Metastasis
Intussusception
Computed tomography
Surgery

ABSTRACT

Introduction: Although gastrointestinal tract is a fairly frequent site of melanoma metastases, reports of small bowel intussusception caused by melanoma metastasis are very rare.
Aim: To describe a rare complication of metastatic melanoma and to expose the difficulties to screen digestive metastases of melanoma.
Case study: We report the case of a 69-year-old woman who was admitted for abdominal pain, melanoma and anemia. She had a history of surgery for a malignant vulval melanoma one year earlier and had been treated with adjuvant interferon α. Computed tomography (CT) concluded to a small bowel intussusception. Exploratory laparoscopy revealed a large tumor arising from the proximal small bowel. Jejunal resection with an end-to-end anastomosis was performed. Histological examination showed a metastasis of malignant melanoma. Regular postoperative follow-up did not show any sign of recurrence.
Results and discussion: Gastrointestinal metastases are a vicious site of distant localization of melanoma, difficult to diagnose and life-threatening due to their potential complications. Symptoms are often nonspecific. Rarely complications such as intussusception can be the first clinical presentation. CT, CT enteroclysis, fluorodeoxyglucose-positron emission tomography scan and capsule endoscopy may result as very useful for detecting gastrointestinal metastases.
Conclusions: Any gastrointestinal symptom in patients previously treated for cutaneous melanoma should lead to accurate research for metastases. We propose to use at follow-up abdominal CT scan in asymptomatic patients when the primary tumor has poor prognostic factors such as advanced stage or incomplete resection.

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http://dx.doi.org/10.1016/j.poamed.2015.03.002

1. Introduction

Melanoma is a malignant tumor that arises from melanocytic cells and primarily involves the skin but can be found on the mucous membranes. It is a frequent tumor characterized by its tendency to metastasize.[1–4] The gastrointestinal tract, including small intestine, is the most affected by these metastases.[2,5–9] The main treatment of these distant metastases is surgery. We report an unusual case of intestinal metastases of vulval melanoma revealed by acute small intestine intussusception. This case is original since it describes a rare complication of metastatic melanoma and it exposes the difficulties to screen digestive metastases of melanoma.

2. Aim

To describe a rare complication of metastatic melanoma and to expose the difficulties to screen digestive metastases of melanoma.

3. Case study

A 69-year-old woman was admitted for abdominal pain progressively worsening for the previous 3 days. She had been operated 1 year earlier for a malignant vulval melanoma with neither lymph node nor distant metastasis. The melanoma was resected; lateral and deep surgical margins were clear. The patient was treated after surgery with interferon α: 3×10^6 U per dose, 3 times a week for 18 months. The physical examination showed a distended abdomen with mainly a right lower quadrant pain and melena. Perineal and gynecological examination was normal with no tumor recurrence. Computed tomography (CT) revealed a distension of the small intestine with features suggesting a jejuno-jejunal intussusception (Fig. 1). A laparoscopy was performed and the diagnosis was confirmed as a small bowel intussusception in the jejunum (Fig. 2); a small intestine tumor measuring 6 cm was found (Fig. 3). Exploration of the abdominal cavity did not reveal any further lesion. Conversion was done and complete surgical resection of the lesion was performed, followed by immediate jejunal anastomosis. Recovery was uneventful and the patient was discharged from the hospital 5 days later. Histology confirmed the diagnosis of a small bowel metastasis of malignant melanoma.

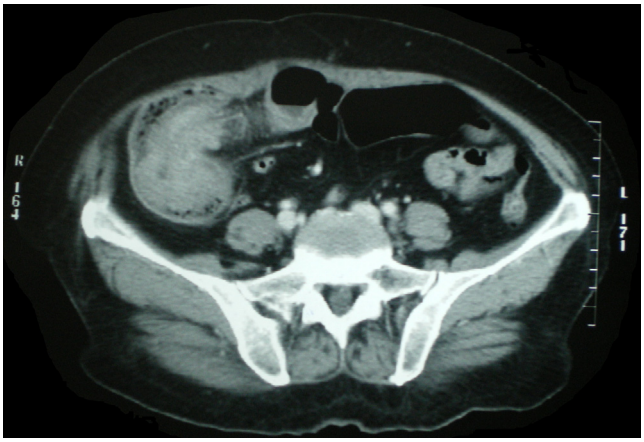

Fig. 1 – Computed tomography: jejuno-jejunal intussusception.

Fig. 2 – Intraoperative view: jejuno-jejunal intussusception.

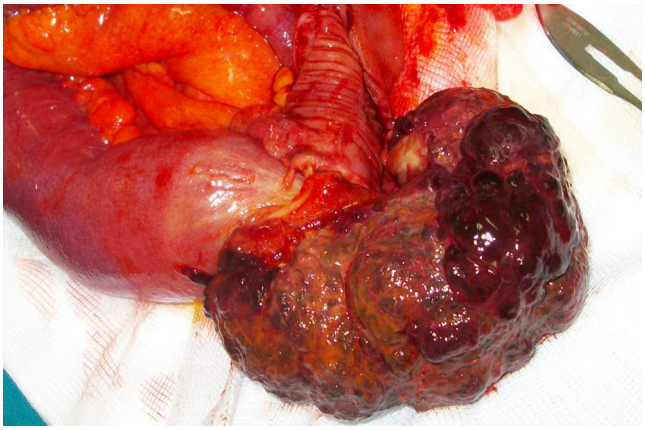

Fig. 3 – Small bowel metastasis of malignant melanoma.

4. Results and discussion

The incidence of melanoma is increasing worldwide especially in people who receive excessive sun exposure. In Central Europe, the incidence rate is 10–14 per 100 000 and in Southern Europe the incidence rate is 6–10 per 100 000.[3] The prognosis of malignant melanoma is unfavorable; the overall median survival of patients with systemic involvement is approximately 6 to 8 months.[4] Clinically detected in only 10%–20% of living patients, gastrointestinal tract metastases remain a common site of hematogenous spread.[9] Autopsy series report gastrointestinal tract involvement in almost 60% of patients with disseminated melanoma.[10] The most common metastatic sites are the small intestine (50%), colon (30%), rectum and

anus (25%).[2,10] This could be explained by the well-vascularized nature of the small intestine.[2]

Gastrointestinal tract metastases symptoms are unspecific and consist of abdominal pain and vomit. Rarely, gastrointestinal complications such as intussusception, obstruction or peritonitis by bowel perforation are the first symptoms. In our case, the clinical presentation of metastatic melanoma was a jejuno-jejunal intussusception. This form is rare; less than 25 cases have been reported in the literature.[2,5–8,11,12] It has been described that metastases of melanoma, often polypoid and implanted in the submucosa, can promote intestinal intussusception.[6,11] For many patients with metastatic intestinal melanoma, the disease is undetectable in early stages and diagnosis is made only when complications occur.

Radiological studies have been used in the diagnosis of melanoma of the small intestine; however imaging of the small bowel is difficult because of its length and complex loops. Transabdominal ultrasonography is typically the first diagnostic procedure for patients with abdominal symptoms. This technique is non-invasive, inexpensive, easily accessible, and does not need special preparation. Although ultrasound is commonly the first-choice diagnostic method, it is probably inadequate to confirm the diagnosis of metastatic intestinal melanoma if not associated to other imaging techniques.

Barium examination can detect luminal abnormalities, including low-grade bowel obstruction, but does not show relevant extraintestinal findings. Therefore, enteroclysis is not sufficient to confirm the diagnosis of small bowel metastases and further techniques might be required.

The abdominal contrast-enhanced CT allows better visualization of bowel loops. It can visualize also the structure of the tumor and lymph nodes. The recent use of CT-enteroclysis has improved the detection rate of primary or metastatic intestinal melanoma compared with conventional CT. This imaging technique combines the advantages of barium enteroclysis and abdominal CT and allows examination of the wall of the small intestine and its mesentery.[1,2,5,6,13] There are not enough of studies concerning the efficacy of magnetic resonance imaging in the diagnosis of digestive metastasis of melanoma, but it can demonstrate extraintestinal intra-abdominal metastases.[14] Fluorodeoxyglucose-positron emission tomography (FDG-PET) scan has excellent results in the detection of systemic metastases of melanoma. Its overall sensitivity is 89.42% (95% CI: 65.07–97.46) and specificity is 88.78% (95% CI: 77.04–94.91). The pooled positive likelihood ratio is 7.97 (95% CI: 3.58–17.71) and the negative likelihood ratio is 0.12 (95% CI: 0.03–0.47).[15]

Newer technologies, including capsule endoscopy (CE) and double-balloon enteroscopy (DBE), now play a major role in the evaluation of obscure gastrointestinal bleeding, and detecting small bowel tumors.[16,17] DBE is better than CE, as biopsies can be taken under direct visualization, but CE has the advantages of being non-invasive and less expensive.[18] Prakoso et al.[13] compared CE and PET-CT scanning for detection of small bowel metastases. They concluded that CE was better than FDG PET-CT scanning for localizing small bowel melanomas and that CE is an ideal complementary investigative modality both for patients with known metastatic melanomas who are undergoing preoperative work-ups and for patients with unexplained anemia or gastrointestinal symptoms. However, Lens et al.[9] recommend not to use systematically radiological examinations for patients with primary malignant melanoma for the screening of small bowel metastases when there are no abdominal symptoms, because of technical radiologic difficulties and low detection rate of small bowel metastases (10%–20%).[9,13,19]

5. Conclusions

1. Gastrointestinal lesions are a vicious, life-threatening site of hematogenous spread of metastatic melanoma.
2. This case report suggests that in patients previously treated for melanoma, any digestive symptom should evoke a gastrointestinal metastasis. Therefore physicians should not hesitate to perform accurate diagnostic work-up by CT and/or CT enteroclysis, PET-scan and CE.
3. There are no randomized controlled trials formally evaluating follow-up after treatment of primary cutaneous melanoma, however we propose to use at follow-up abdominal CT scan in asymptomatic patients when the primary tumor has poor prognostic factors such as advanced stage or incomplete resection.

Conflict of interest

None declared.

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