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Small bowel obstruction caused by intussusception secondary to metastatic melanoma

Small bowel occlusion by intussusception is not common in adults. It may be due tumor lesion such as melanoma metastase.
Bowel melanoma can be a primary lesion or metastases of extra-intestinal melanoma. Primary melanoma, originate in mucosal membranes, is very rare in the bowel, but metastatic melanoma, especially localized in the small bowel, is quite common due of the propensity for cutaneous melanoma to metastasis in the gastrointestinal tract.
We present a case of a small bowel obstruction by intussusception in a 58 years old woman with previous history of cutaneous melanoma of the head completely excised; she developed a colic abdominal pain 3 weeks before.

KEY WORDS: Intussusception, Melanoma metastasis, Small bowel obstruction

Introduction

Small bowel obstruction are quite common in emergency surgery, but only less than 3% are caused by cancer lesion, not including peritoneal carcinosis [2].
In literature less than 5% of bowel obstruction are due to intussusceptions [1,2].
Intussusception is most common in pediatric age, in adults are almost 5% of all cases [1].
Small bowel cancer are 5% of all gastrointestinal tumors; mostly are carcinoid (45%), then are adenocarcinomas (33%), and less than 20% are lymphomas or GIST [3,4].
Most of melanomas are cutaneous, but non-cutaneous origin occur very rarely 5, especially from mucosa, in fact less than 4% of all melanomas originate in mucosal membranes as primaries.

Mostly of malignant melanoma detected in gastrointestinal tract are cutaneous related metastases.

Case Report

A 58 years old woman was referred by his General Practitioner to us for a urgent surgery consultation, she had no history of relevant diseases except for a cutaneous melanoma of the head completely excised 5 years earlier.
The patient had fever, abdominal pain, bilious vomiting, abdominal swelling.
She reports a colic abdominal pain started 3 weeks before developing a small bowel obstruction sintomatology.
Blood tests showed an increase in inflammatory indices, leukocytosis and C-reactive protein, normal red blood cells count; furthermore we detected mild to moderately elevated (2-3 mml/L) lactate level without metabolic acidosis and mild signs of dehydration.
We started therapy with antibiotics for surgical prophylaxis, cephalosporin plus metronidazole, and adequate fluid infusion with lactate ringer normal saline.

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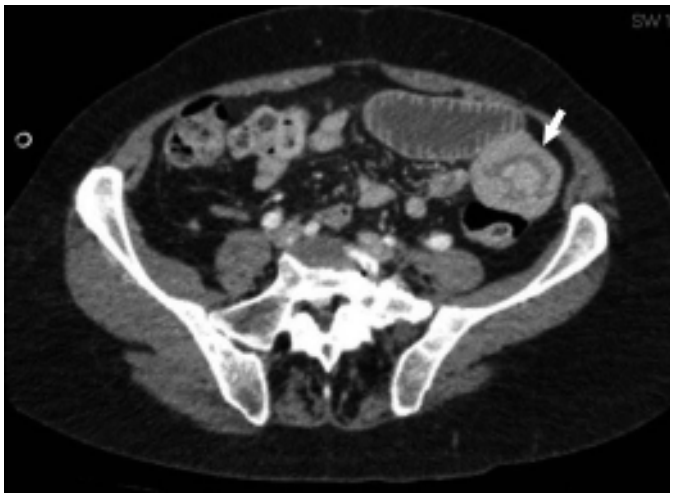

Fig. 1: Pre-operative CT scan which shows intussusception with a typical cockade appearence (arrow).

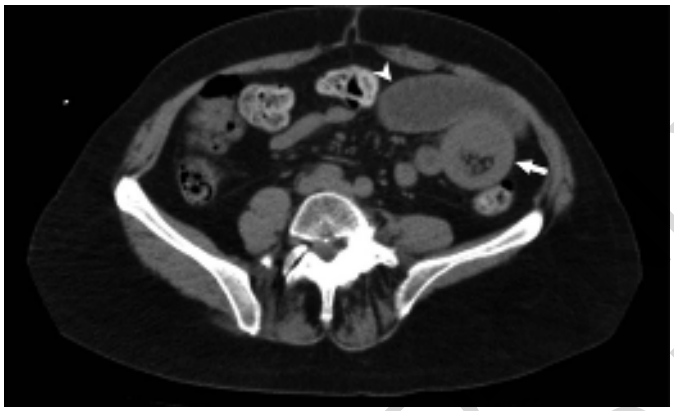

Fig. 2: Pre-operative CT scan which shows intussusception with a typical cockade appearence (arrow). Dilated jejuneal loops (arrow head).

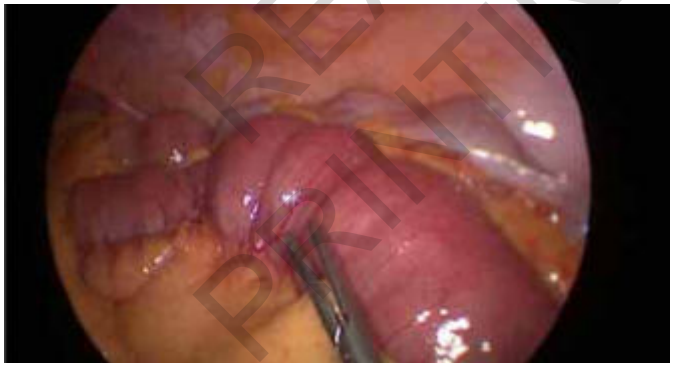

Fig. 3: Intraoperative vision of the small bowel lesion.

In consideration of the acute symptomatology he performed an abdomen CT scan who revealed thickened walls and dilated jejunal loops with a and stops at site of obstruction showing a cockade appearance, mild free fluid in pouch of Douglas (Figs. 1, 2).

She underwent emergency surgery to solve the small bowel obstruction.

A 3 trocars laparoscopy has been performed: we followed the known dilated jejunal loops until the stop, caused by an intussusception due to circumferential solid mass of about 1.5/2 centimeters (Fig. 3); in abdomen cavity explorations we didn't found others relevant pathologies except for two fibrotic nodules in the mesenteric root close to the detected mass.

After nodules excision for definitive histopathological examination and confirmed the total free of adhesion of the small bowel, we decided to use large size protector/retractor device to exteriorize the involved small bowel loop and perform segmentary resection followed with a latero-lateral anastomosis with 45 laparoscopic flex stapler with blu cartdrige.

The patient was discharged 3 days after surgery without complications.

Discussion

Intussusception is a rare cause of mechanical intestinal obstruction in adults, and It is more common in pediatric age as in adults 1. Intussusception consists in the invagination of one tract of the bowel into an adjacent distal portion 14. It can be anterograde or retrograde and is not a frequent event in adults, but near 50% of their causes are malignant [8,15].

In literature is reported that melanoma metastases causes intussusception in less than 5% [1,8] and metastases are detected within the small bowl in 2-5% of patients with a history of a cutaneous, anal or ocular melanoma [9,13,16]. However, melanoma of small bowel can also be primary but is extremely rare. In adults the mean incidence of clinical presentation is the same for both of gardes and, as our patient, is nearly 50 years [8].

Gastrointestinal metastases (GI) may occur even 10 years after primary cutaneous lesion. The disease is undetectable in early stages but in less than 5% of the patients there could be GI complication that, if recognized, allow a in vivo diagnosis [6,8,9,12].

Patients with metastatic intestinal melanoma has an aspecific symptomatology, including weakness, abdominal pain , constipation, melena, weight loss, anemia , perforation and intestinal obstruction and diagnosis is made after surgery [6,7,11,18]. Diagnostic exam, PET imaging can be useful in improving diagnosis and currently complete surgical resection is the treatment of choice [6,8,9,18] and It allows up to 12 months median survival without significant symptoms [16,17].

Further, metastatic melanoma is histologically classified as polypoid, cavitary and infiltrating. Polypoid pattern can rarely be a solitary mass or more frequently a Multiple polypoid lesion and occasionally a central ulceration and bleeding of the superficial mucosa can be observed [9,10].

In our patient, according to the literature 8, clinical presentation was unspecific with an acute onset of the symptoms. The patient underwent abdominal CT scan that revealed thickened bowel walls and dilated jejuneal loops, an obstruction with a cockade appearance was also detectable.
The patient received surgical treatment [18,19] with a conventional 3 trocars laparoscopy that allowed identification of the precise site of the obstruction. Surgery was completed by hand-assisted laparoscopy. The definitive diagnosis of metastatic intestinal melanoma was possible thanks to the Histological exam characterized by a proliferation of neoplastic cells arranged in nests and cords with infiltrating pattern and mucosal ulceration, a rare case reported in literature. Lymphonodes were within normal limits and no cancer involvement was observed. Immunohistochemistry analysis supported the diagnosis as it was positive for *S100 Melan A* and negative for *Desmina, CD117* and *CD34.*

Conclusions

Actual scientific literature data shows small bowel occlusion due to intussusception by a melanoma metastasis is still a rare condition: in fact the literature reports dozens of cases, but very few "*case studies"* and mostly "*case report"* publications.
In our case is an obstruction caused by a metastases from a skin melanoma excised five years before; not all scientific papers report the time from melanoma excision and the onset of metastatic disease.
Laparoscopic followed by minimally incision for external resection seems a safe option treatment.

Riassunto

Il melanoma maligno può avere una localizzazione primitiva intestinale oppure essere la manifestazione secondaria di un melanoma extra intestinale.
L'occlusione intestinale per intussuscezione da metastasi di melanoma è un evento molto raro e rappresenta in letteratura meno del 5% dei casi.
I pazienti possono rimanere asintomatici e le metastasi possono manifestarsi anche 10 anni dopo la lesione primitiva. Infatti, meno del 5% delle metastasi di melanoma del tratto gastrointestinale vengono diagnosticate in vivo, solo a seguito dell'insorgenza di una complicanza come l'occlusione intestinale. In particolar modo il paziente si presenta con una sintomatologia del tutto aspecifica e pertanto la diagnosi viene posta a seguito dell'intervento chirurgico.
Viene presentato il caso di una paziente donna di 58 anni con storia clinica di pregressa asportazione di un melanoma cutaneo 5 anni prima. La paziente viene ricoverata con diagnosi di addome acuto e sottoposta ad intervento chirurgico laparoscopico.
Il quadro clinico di occlusione intestinale causata da intussuscezione secondaria a metastasi di melanoma cutaneo è una condizione molto rara e la chirurgia resettiva radicale è il trattamento curativo che consente la maggior sopravvivenza del paziente.

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