

## Case Report

# Relapse of Melanoma Presenting as Jejunal Intussusception

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**ABSTRACT**

Melanoma is a relatively rare tumour with tendency to metastasize to the gastrointestinal tract. Metastasis to the intestine constitutes a majority of the gastrointestinal tract melanoma metastases and confers a poor prognosis. While post-mortem studies detect that more than half of the melanoma patients have gastrointestinal tract metastasis, only minority are diagnosed, and even rarer present with intussusception. Intussusception, mainly a paediatric entity, is also seen among adult patients with underlying inflammatory bowel disease or tumour. In this report, we describe a patient with a melanoma in remission who presented with intestinal obstruction after months of vague abdominal complaints. Laparotomy revealed jejunal intussusception and histopathological staining confirmed the melanoma diagnosis. No other distant metastases other than the jejunum were revealed after extensive investigation.

**KEYWORDS:** *Intestinal obstruction, intussusception, melanoma, metastasis, neoplasm*

## INTRODUCTION

Melanoma is a rare albeit highly aggressive malignancy if metastatic, with a tendency to gastrointestinal (GI) tract.<sup>[1-3]</sup> Although more than half of the metastatic melanoma patients have GI tract involvement, majority will remain clinically silent and only 2-4% patients will be diagnosed with GI tract metastasis during their disease course.<sup>[4,5]</sup> The clinical presentation of GI tract melanoma metastasis is similar to other GI tract tumours, namely abdominal pain, nausea, upper or lower GI tract bleeding, anaemia, weight loss, bowel habit change, intestinal obstruction, perforation or rarely, intussusception. Although intussusception is mainly a childhood entity with idiopathic aetiology (non-pathologic lead point), intussusception seen during adulthood is often associated with an underlying aetiology (pathologic lead point).<sup>[6]</sup> We present a patient admitted to the inpatient clinic with intestinal obstruction whose melanoma had been in remission for 3 years. Laparotomy and following resection revealed jejunal intussusception due to melanoma metastasis.

## CASE REPORT

A 62-year-old man had presented to the outpatient clinic with complaints of abdominal pain, nausea, early satiety, abdominal distention and altered bowel habits for the past 3 months. He has history of diabetes mellitus and melanoma of the scalp that was treated with surgical excision and interferon therapy, and it has been in remission for the last 3 years. He was admitted to the ward for further treatment and aetiological investigation. Nasogastric tube was placed and 500ml of bilious gastric content was drained instantaneously. Liver and kidney function tests were unrevealing, complete blood count showed mild leukocytosis. Upper endoscopy was also unrevealing other than mild antral gastritis. Abdomen X-Ray revealed air-fluid levels. By conservative measures (nil per os, nasogastric decompression, IV fluids), his pain and nausea relieved on the first two days. On the

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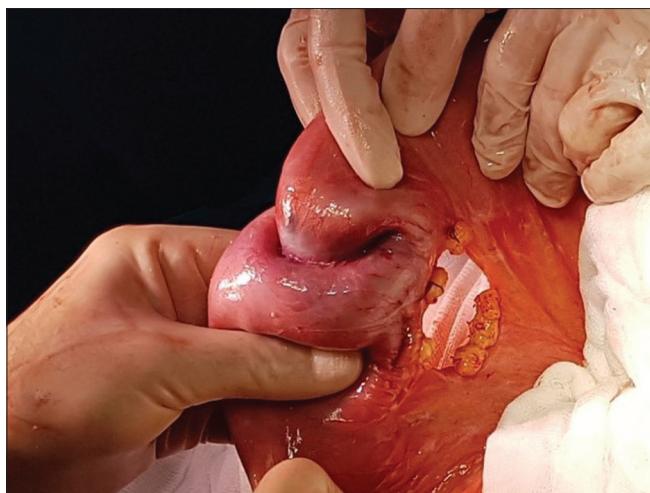
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**Figure 1:** Intussuscepted jejunal segments during diagnostic laparotomy

third day of admission, his abdominal pain and nausea became intense. Physical examination revealed tenderness over epigastrium and complete absence of bowel sounds. He, thus, had laparotomy which revealed markedly dilated intestines and antegrade intussuscepted jejunal segments 15 cm distal to the ligament of Treitz [Figure 1]. Polypoid tumoral thickening was observed at the anti-mesenteric border. No abnormality other than the intussusception was revealed during the laparotomy. Surgical resection of the intussuscepted jejunal segments and end-to-end anastomosis were performed. After surgery, he recovered and was discharged without any complication. Macroscopic examination of the surgical specimen showed the polypoid thickening of the mucosa at the point of obstruction without apparent serosa invasion [Figure 2]. Microscopic examination confirmed the melanoma diagnosis [Figure 3]. After full recovery from surgery, he was referred to Medical Oncology clinic. Magnetic resonance imaging of the cranium and positron emission tomography showed no signs of recurrence at 3 months follow-up.

## DISCUSSION

Melanoma is a relatively rare tumour comprising 1-3% of all adult tumours and exhibits an unusual tendency to metastasize to the GI tract, particularly intestines.<sup>[1,2]</sup> Intestinal melanoma metastasis constitutes more than half of the gastrointestinal melanoma metastases.<sup>[5]</sup> Although majority of the GI tract melanoma are metastatic, melanoma can seldom arise de novo as well.<sup>[7]</sup> It is difficult to differentiate primary intestinal melanoma from metastatic melanoma since primary lesion tends to regress and disappear.<sup>[8]</sup> Due to rarity of primary intestinal melanoma, some suggest that the melanoma in bowel without a primary lesion can be the metastasis of pre-existed and spontaneously regressed cutaneous melanoma.<sup>[9]</sup> Melanoma can also mimic

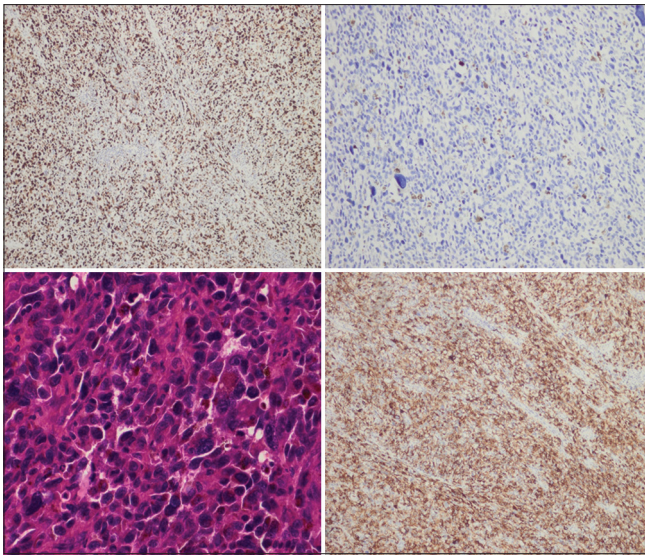


**Figure 2:** Macroscopic examination of the surgical specimen. Melanoma is markedly darker than the surrounding tissue

other intraabdominal neoplasia and create a diagnostic challenge.<sup>[10]</sup> Even though 2-4% of patients with melanoma will be diagnosed with GI metastasis during the course of their disease, many will remain silent.<sup>[4]</sup> Post-mortem series reveal more than 50% of melanoma patients had occult metastasis in their GI tract.<sup>[4,7]</sup> Another interesting point with cutaneous melanoma is that, metastasis can occur any time, regardless of the length of the disease free period and the activity of the disease.<sup>[10]</sup> Prognosis of melanoma of GI tract is poor due to diagnostic and therapeutic difficulties.

Intestinal obstructions in cancer patients are challenging since most are due to late-stage disease such as peritoneal adhesions, peritoneal carcinomatosis and space-occupying lesions.<sup>[11]</sup> Although many cancer types can metastasize to the intestine and cause obstruction, majority are associated with lobular breast cancer, lung cancer and melanoma.<sup>[1]</sup> Among those, the ratio of melanoma cases seems to be disproportionately high. This specific tendency is thought to be mediated by CCL25–CCR9 (Chemokine ligand 25–Chemokine receptor 9) interaction.<sup>[3]</sup> The clinical presentation is similar to any obstructive pathology with no significant feature. However, intussusception causing intestinal obstruction due to metastasis is a rare entity.<sup>[1]</sup>

Intussusception is markedly more common among paediatric age group with adult intussusceptions



**Figure 3:** Top Left: Ki-67 stain proliferation index over 95%. Top Right: P53 mutant type immunoreactivity with all tumour cells loss of staining. Bottom Left: Some tumour cells are full of melanin pigment in their cytoplasm (H&E stain). Bottom Right: Diffuse strong cytoplasmic immunoreactivity with Melan A stain

representing only 5% of all cases.<sup>[12]</sup> It is a common cause of intestinal obstruction in infants and toddlers and the nature, aetiology, frequency and clinical course of intussusception is different than those seen in adulthood intussusceptions seen during infancy is typically idiopathic and involves the ileocecal valve.<sup>[6]</sup> However, intussusceptions in atypical locations are more common in adults and expected to be secondary to an underlying process such as peritoneal adhesions from previous surgery, inflammatory bowel diseases and tumours.<sup>[12]</sup> Clinical presentation of intussusception also differs between children and adults since intussusception seen in adults is a slow process that manifest as long-standing complaints. The chronic nature of the insidiously growing pathology will make the symptomatology more obscure with resultant distention, change in bowel habits, intermittent abdominal pain and nausea. In a literature review of 1214 adult cases with intussusception, tumour was found to be a lead point in 63% of the cases, 50% of which were recorded as malignant.<sup>[13]</sup> In another series, 44 cases were reviewed retrospectively in one-centre and 77.3% was associated with tumour.<sup>[14]</sup>

Our patient's melanoma was in remission and presented with intestinal obstruction due to melanoma metastasis-related intussusception. This case serves to remind clinicians to become vigilant about the fact that melanoma metastasis can occur any time regardless of the length of the remission period and adults can also present with intussusception that require investigative work-up for underlying aetiology.

### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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### Conflicts of interest

There are no conflicts of interest.

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