



## Small Intestinal Submucosal Lipoma: A Rare Cause of Gastrointestinal Bleeding Mimicking Malignancy

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### Abstract

*Small bowel tumors are rare entities that often present with nonspecific symptoms and accounts for only 2 to 6% of all the gastrointestinal cancers. The patient may remain asymptomatic or present with vague symptoms like abdominal pain, nausea, vomiting, fatigue or weakness. However, at times they can present with complications like obstruction, perforation, intussusception, severe pain, and bleeding. This bleeding may manifest as persistent melena with progressive weakness, which in an elderly person can raise the suspicion of malignancy. Because of its location, a pre-operative diagnosis and biopsy is often difficult to obtain and so, surgical intervention is always required. Here we report the case of an elderly man who presented with weakness and melena and was suspected to be a case of malignancy, but post operatively the cause was found to be a small intestinal submucosal lipoma.*

**Key Words:** Melena, lipoma, capsular endoscopy, malignancy.

### Introduction

Small bowel tumors are rare entities that often present with nonspecific symptoms and accounts for only 2 to 6% of all the gastrointestinal cancers<sup>(1)</sup>. About 60 to 70% of these tumors are malignant in nature with adenocarcinoma being the most common cancer, being closely followed by carcinoid, lymphoma, sarcoma and gastrointestinal tumors. The remaining 30 to 40% of the tumors are found to be benign with adenoma being the most common diagnosis<sup>(2)</sup>. Submucosal lipoma of small intestine is rarely seen and its incidence has been reported to be 4 to 6% among

benign tumors of small intestine<sup>(3)</sup>. The diagnosis of these tumour is often delayed as a result of its rarity and nonspecific presentation. The patient may remain asymptomatic or present with vague symptoms like abdominal pain, nausea, vomiting, fatigue or weakness. However, at times they can present with complications like obstruction, perforation, intussusception, severe pain, and bleeding<sup>(4)</sup>. Further, even with exhaustive diagnostic testing, small bowel tumors are often not diagnosed preoperatively and surgical excision is often recommended<sup>(5)</sup>. Here we report the case of an elderly man who presented with weakness

and melena and was diagnosed to be a case of submucosal lipoma.

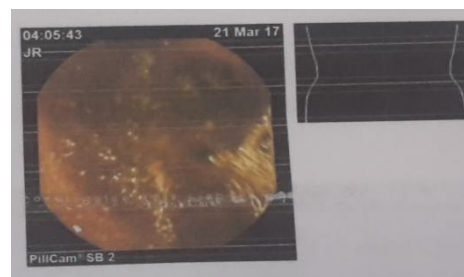
### Case Presentation

A 70-year-old man presented to our hospital with complains of passage of black stool and weakness for the last 2 months. He had no abdominal pain, nausea, vomiting, or change in his bowel habits. His clinical examination showed pallor and other parameters were normal. His blood investigations showed a haemoglobin level of 6.6 gm/dl; while other parameters were normal. The patient was hemodynamically stable and received 3 units of blood transfusion.

An upper G.I endoscopy was done which showed a healing duodenal ulcer and erosive antral gastritis. Rapid urease test was negative for H. Pylori infection. Colonoscopy revealed a small hemorrhoid in the anal canal. It also showed a small ulcer in terminal ileum, but biopsy could not be taken. The patient was kept on conservative management but melena continued. Subsequently, video capsule endoscopy (VCE) was done. The capsule reached caecum in 8 ½ hours. A large ulcer was noted in distal jejunum/ proximal ileum with fresh blood around. [Fig.1] Altered blood was seen in the lumen onwards with normal visualized mucosa. Ultrasonography of the abdomen showed mild splenomegaly, prostatomegaly with insignificant post void residual volume. The patient underwent exploratory laparotomy and the abdomen was opened through right paramedian incision. There was scarring and adhesion of a part of distal jejunum with mesentery. Proximal ileum was distended with blood in the lumen. A resection anastomosis of the part was done and abdomen was closed in layers. The resected part was cut and inspected and it showed an ulcerated growth. [Fig. 2] The resected mass was then sent for histopathological examination. The macroscopic examination showed a small bowel segment measuring 15 cm in length with a bile stained mucosa. It showed a pedunculated polypoidal mass measuring 4.5 x 2 x 2.2 cm. The cut surface was encapsulated and

yellow in colour. Microscopic examination of multiple sections from the polypoidal growth showed circumscribed submucosal proliferation of uniform mature adipocytes with ulceration of overlying mucosa consistent with enteric submucosal lipoma. All cut margins and mesentery were unremarkable. There was no evidence of granuloma or malignancy.

The patient had an uneventful recovery. On 1<sup>st</sup> follow-up after 1 month the patient was asymptomatic. A complete blood count was done, which showed a hemoglobin level of 11.8gm/dl.



**Figure 1:** Image from Video Capsule Endoscopy showing ulcer in distal jejunum/proximal ileum with fresh blood around



**Figure 2:** The resected part of small intestine showing an ulcerated sub mucosal growth.

### Discussion

Intestinal lipoma is a rare, benign, slowly growing fatty tumor representing 2.6% of non-malignant tumors of the intestinal tract. They arise from deposits of adipose connective tissue in the bowel wall and can develop in any part of the gastrointestinal tract<sup>(6)</sup>. However, the most common site is the colon which constitutes 65% to 75% of cases in comparison with small intestine which constitutes only 20% to 25%. Lipomas in the small intestine occur mainly in the

ileum<sup>(7)</sup>. These are most commonly *seen in elderly patients as seen in our case*.

*Our patient had a solitary, pedunculated, submucosal and ulcerated lipoma in the proximal ileum*. Various other studies have also reported that approximately 90% of these lipomas are located in submucosal and 10% in sub serosal areas<sup>(8)</sup>. These tumors usually present with single solitary lesions but multiple localizations have been reported in 5 - 10% of cases and can be sessile or pedunculated. A submucosal lipoma is usually covered with mucosa and grows toward the intestinal lumen. The mucosa overlying the tumor may become atrophic, congested or ulcerated. The superficial ulceration of the mucosa as seen in our patient results in bleeding, which presented as melena. Other complications reported include obstruction, perforation, pain and intussusception<sup>(4)</sup>.

Occult GI bleeding in an elderly patient often raises the suspicion of malignancy as they present with similar symptoms and so must be thoroughly investigated. In such cases of occult GI bleeding, definitive diagnosis is at times not possible with upper endoscopy and colonoscopy as seen in our case. The patient may continue to bleed and develop weakness and anemia. Other investigations which can be used include traditional techniques Enteroclysis or a small bowel radiographic series, which involves injecting a thin stream of barium through a nasojejunal tube directly into the suspected area or newer techniques like Push enteroscopy which can examine 60cm past the ligament of Treitz with a small flexible scope<sup>(9,10)</sup>. However, even these tests also often cannot detect small submucosal tumors such as lipomas.

A new technique called Video Capsule Endoscopy (VCE) is very helpful in diagnosing such cases. A study using VCE as the initial investigation in patients with occult GI bleeding showed a positive predictive value of 94.4% and a negative predictive value of 100%<sup>(11)</sup>. Another study by Mylonaki et al showed that VCE could identify significantly more sources of small bowel

bleeding than did push enteroscopy and was better tolerated by patients. Further, VCE is also able to detect lesions originally missed by upper endoscopy and colonoscopy similar to that seen in our patient<sup>(12)</sup>.

As the clinico radiological picture of submucosal lipoma is very similar to that of Gastrointestinal malignancies operative or endoscopic intervention is usually required to differentiate this lesion from a malignant or premalignant lesion. The exact diagnosis can only be done on intra or postoperative pathology examination.

The recommended treatment for symptomatic small bowel lipomas is endoscopic or surgical excision. Although lipoma is a benign tumor, intraoperative frozen sections if available is recommended to confirm the pathology and ensure negative surgical margins. Patients with malignant disease may undergo major surgery, including resection of the involved segment and regional lymph nodes, while patients with benign lipoma may undergo simple resection.

### Conclusion

Submucosal lipoma are rare neoplasms of gastrointestinal tract, mostly asymptomatic but may produce symptoms such as obstruction and bleeding. Though benign their clinico radiological features mimics malignancy. Diagnostic evaluation is very important and at times it is not possible to establish definitive pre-operative diagnosis even with the use of latest techniques like video capsular endoscopy. Surgical evaluation and resection remains the treatment of choice and produces an excellent prognosis.

*Written informed consent was obtained from the patient for publication of this Case report and any accompanying images.*

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