

Received: 2013.01.11
Accepted: 2013.02.08
Published: 2013.07.12

Large benign submucosal lipoma presented with descending colonic intussusception in an adult

Authors' Contribution:
Study Design A
Data Collection B
Statistical Analysis C
Data Interpretation D
Manuscript Preparation E
Literature Search F
Funds Collection G

BCDG **Ziad Allos**
AEFG **Dina Zhubandykova**

Department of Family Medicine at Swedish Covenant Hospital, Chicago, IL, U.S.A.

Corresponding Author: Dina Zhubandykova, e-mail: drdina88@gmail.com

Patient: Female, 34
Final Diagnosis: Lipoma of the large intestine
Symptoms: Abdominal pain • bloating • blood in stool • constipation • lose of appetite • nausea
Medication: —
Clinical Procedure: —
Specialty: Surgery

Objective: Rare disease

Background: Lipoma of the large intestine is rare, account for only 5% of all gastrointestinal tumors. Lipomas are usually asymptomatic but rarely may cause bleeding, obstruction and intussusception. We present a case of a giant colonic lipoma causing descending-colonic intussusception.

Case Report: 34 yo F presented with the intermittent left lower quadrant abdominal pain for 3 weeks. The pain initially was associated with bloating and constipation and for the last several days frank blood in stool, nausea and decreased appetite. CT scan of the abdomen revealed descending colonic obstruction by a 5.3 cm colonic lipomatous mass with resultant intussusception. Patient initially underwent colonoscopy that revealed polypoid lesion at 3–40 similar to lipoma with intussusception that was reduced. Patient subsequently underwent laparoscopic segmental left colectomy for the descending colonic intussusception due to large colonic lipomatous mass. Pathology confirmed the histology of lipoma.

Conclusions: Adult bowel intussusception is a rare but challenging condition to diagnose in a timely manner. Preoperative diagnosis is usually missed or delayed because of nonspecific and often subacute symptoms. Lipoma is a rare cause of the intussusception. A high index of suspicion and appropriate investigations (abdominal ultrasound, CT scan and colonoscopy) can result in prompt diagnosis. Lipoma of the large intestine is very rare. Submucosal lipomas are usually asymptomatic but may cause bleeding, obstruction, intussusception, or abdominal pain. Accurate preoperative diagnosis is difficult and lipoma is often mistaken for adenomatous polyp or carcinoma. Treatment usually requires formal resection of the involved bowel segment due to high suspicion for malignancy and subsequent complications due to obstruction.

Key words: colonic lipoma • adult intussusception • giant lipoma

Full-text PDF: <http://www.amjcaserep.com/download/index/idArt/883975>



1072



8



11

Background

The occurrence of intussusceptions in adults is rare, accounting for less than 5% of all cases of intussusceptions and almost 1–5% of bowel obstruction. In contrast to pediatric intussusceptions, which is idiopathic in 90% of cases, adult intussusceptions has an organic lesion in 70% to 90% of cases. Lipomas in the intestinal tract are still relatively rare and account for only 5% of all gastrointestinal tumors. In most cases, lipoma of the colon are localized at submucous level. Due to their intramural location, lipomas can also serve as the leading point for intussusceptions. We report a rare case of colo-colonic intussusceptions in an adult secondary to descending colonic lipoma.

Case Report

34 yo female, immigrant from Greece presented with intermittent abdominal pain on left lower side for 3 weeks. The patient had no past history of peptic ulcer disease, alteration in bowel habits, melena or weight loss. The patient had persistence of symptoms, which included mid and lower abdominal pain and bloating associated with recent onset of constipation. The patient noted blood in her stools several days ago before the admission for the first time. She also had some nausea and loss of appetite. Patient was empirically treated with PO Metronidazole twice daily for diverticulitis by her primary care doctor. The treatment did not improve her symptoms. Previous medical hx included recent right oophorectomy. On examination vital signs were stable. Abdominal exam: soft with minimal left lower quadrant tenderness to deep palpation. No obvious masses palpated. No hernias were noted. There were no peritoneal signs noted. Rectal exam: normal rectal tone, brown stool, heme positive stool but no gross red blood on glove. All lab work including CBC, CMP and UA were within normal limits.

Abdominal CT scan revealed: descending colonic obstruction by a 5.3 cm colonic lipomatous mass with resultant intussusception. The patient has obstruction of the upper to mid descending colon by what appears to be an intussusception, 5.3×4.1×4.6 cm lipomatous mass. This appears to have a stalk. There is some stranding of the pericolonic fat and bowel wall thickening within the intussusception. (Figures 1–3)

GI and surgery were consulted and patient initially underwent colonoscopy that showed polypoid lesion at 37-40. Possibly gist tumor *versus* lipoma with intussusception that was reduced (Figure 4).

Patient subsequently underwent Laparoscopic segmental left colectomy for the descending colonic intussusception which was likely secondary to colonic lipomatous mass (Figure 5).

The postoperative period was uneventful and the patient was discharged on the sixth postoperative day. Gross examination of the respected specimen revealed a round tumor covered with mucosa measuring 5.5 cm. A microscopic examination revealed fat cells proliferating in the submucosal layer and confirmed the diagnosis of colonic lipoma (Figures 6–8). The histopathology report confirmed a 5.5cm submucosal lipoma in the colon as a cause for a colo-colonic intussusceptions. There was no evidence of dysplasia or malignancy.

Discussion

Intussusception in adults is considered a rare condition, accounting for 5% of all cases of intussusceptions and almost 1%-5% of bowel obstruction. Eight to twenty percent of cases are idiopathic, without a lead point lesion. Secondary intussusception is caused by organic lesions, such as inflammatory

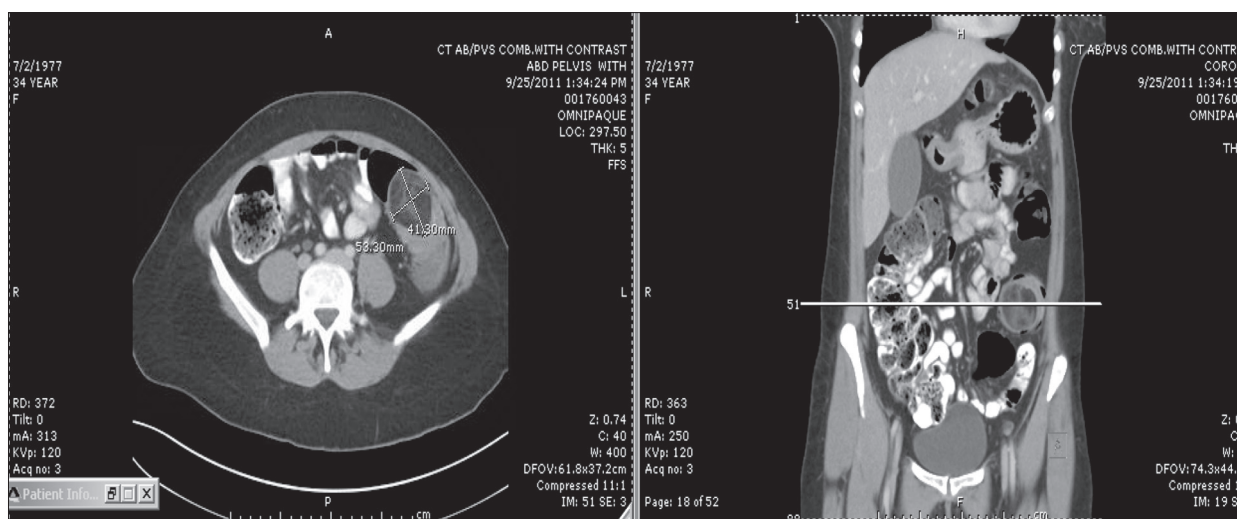


Figure 1. Abdominal CT scan: lipomatous mass in the descending colon.

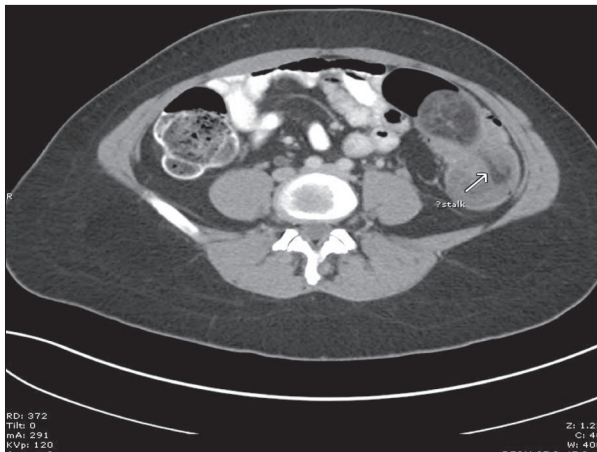


Figure 2. Abdominal CT scan: obstruction of the upper to mid descending colon by what appears to be an intussusception, 5.3×4.1×4.6 cm lipomatous mass. This appears to have a stalk.

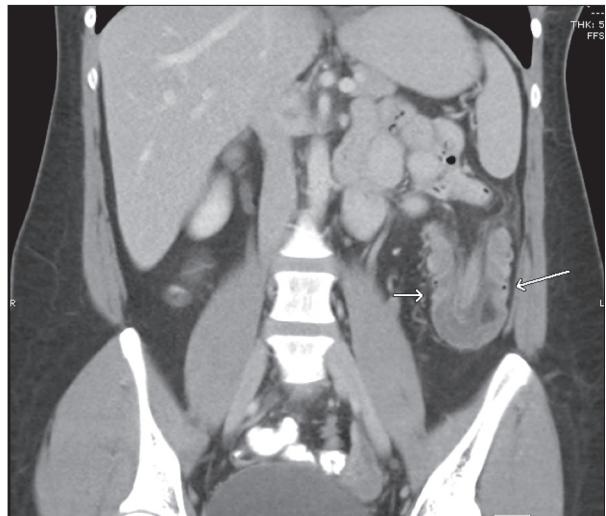


Figure 3. Coronal Abdominal CT of Intussuscepting Lipoma.

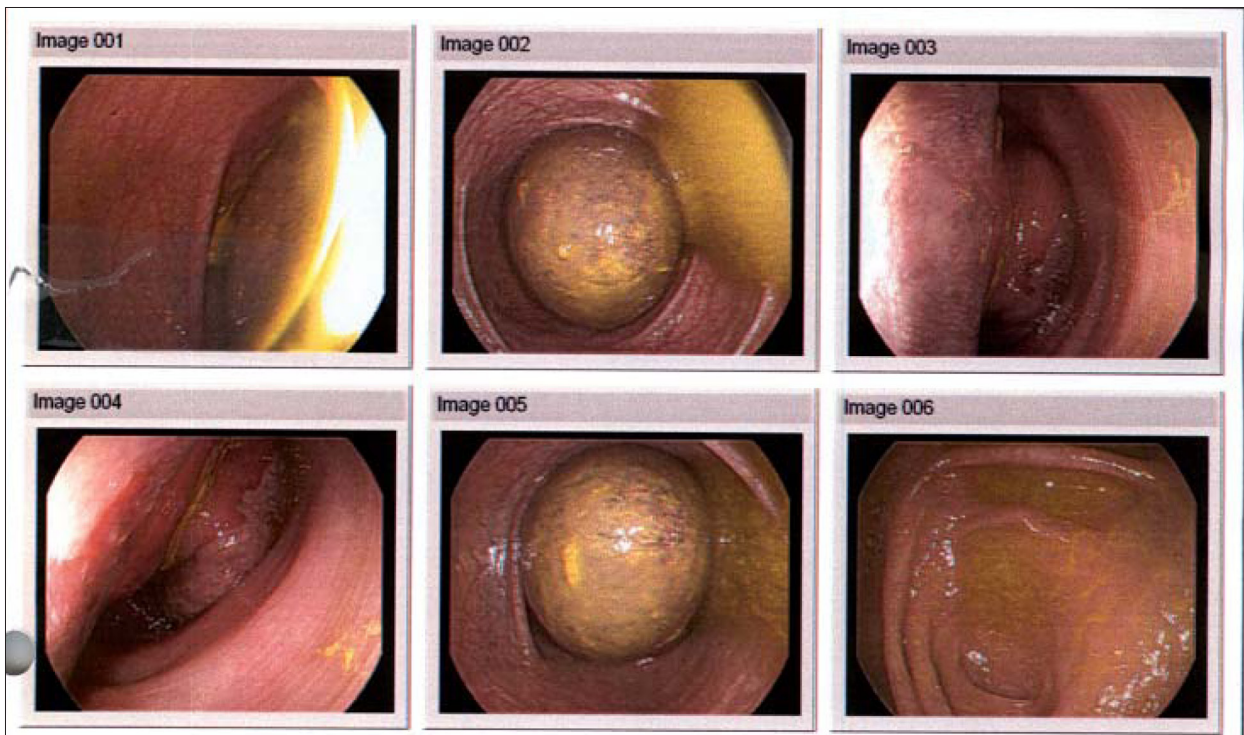


Figure 4. Colonoscopy image of the colonic lipoma in the lumen of the descending colon.

bowel disease, postoperative adhesions, Meckel's diverticulum, benign and malignant lesions, metastatic neoplasms or even iatrogenically, due to the presence of intestinal tubes, jejunostomy feeding tubes or after gastric surgery [1]. Adult intussusception presents with a variety of non-specific symptoms that can have an acute, intermittent, or chronic course. Since only about 9% to 10% of adult intussusceptions present with the typical triad of abdominal pain, palpable abdominal mass and bloody stool, the preoperative diagnosis is usually very difficult [2]. More than fifty cases of adult intussusceptions induced

by a lipoma, including our present case, have been reported in the English literature during the past decade [3]. Lipomas of the gastrointestinal tract are rare conditions first described by Baurer in 1757 [4]. Lipomas are benign tumors of mesenchymal origin. They are the second most common benign tumors in the small intestine and account for 10% of all benign gastrointestinal tumors and 5% of all gastrointestinal tumors. They are predominantly submucosal and protrude into the lumen. Occasionally, they arise in the serosa. Gastrointestinal lipomas are most commonly located in the colon (65% to 75%,

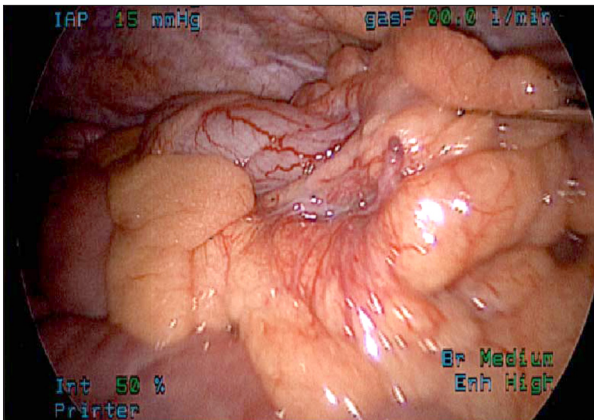


Figure 5. Intraoperative findings of the lipoma: a pedunculated lipomatous lesion that was the main cause of the intussusception.

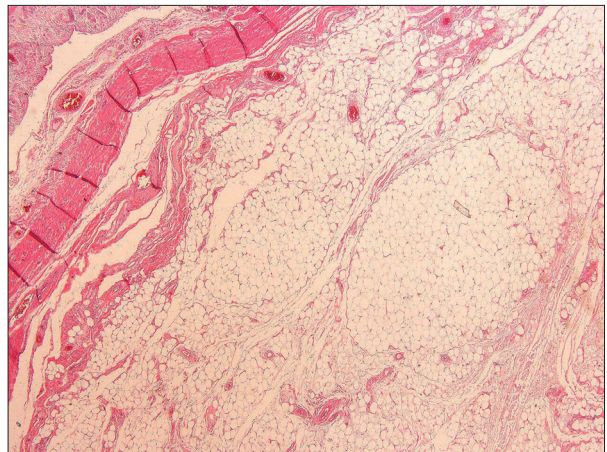


Figure 7. Histologic slide of non-encapsulated submucosal lipoma.

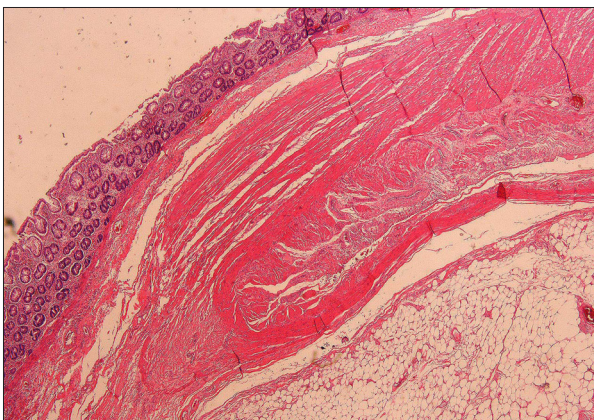


Figure 6. Histologic slide of submucosal lipoma compressing the muscularis propria.

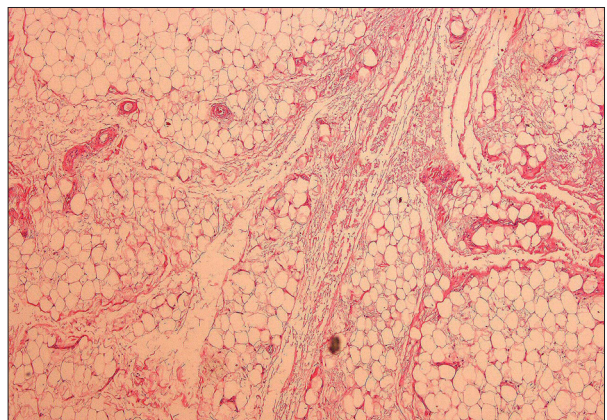


Figure 8. Histologic slide of benign lipoma – lobulated mature adipose tissue.

especially on the right side), small bowel (20% to 25%) and occasionally in the foregut (<5%) [5]. Lipomas are largely asymptomatic. The majority of presenting features are either intestinal obstruction or hemorrhage [5,6]. The peak age of incidence is in the 6th–7th decades of life and it appears that females are more prone to lipomas. Malignant degeneration has never been reported [7]. Symptomatic lipoma manifestations are hemorrhage or intestinal obstruction. Due to their intramural location, lipomas can also serve as the leading point for intussusceptions [8]. Accurate preoperative diagnosis is difficult and lipoma is often mistaken for adenomatous polyp or carcinoma [4]. Lipomas can be diagnosed through conventional endoscopy, capsule endoscopy, barium studies and, most importantly, CT scan. Typical endoscopic features are a smooth, yellowish surface with pedunculated or sessile base. Other endoscopic characteristics are the “cushion sign” and “naked fat sign” [9]. Capsule endoscopy and digital balloon endoscopy are newer means for diagnosing lipomas and are particularly helpful in cases involving small bowel lipomas [9]. CT usually reveals a smooth, well-demarcated sausage-shaped mass. It may also

reveal associated intussusception if present [10]. Adult intussusception is a rare entity and requires a high index of suspicion. CT scanning proved to be the most useful diagnostic radiologic method. Colonoscopy is most accurate in ileocolic and colonic AI. The treatment of adult intussusception is surgical. The study review supports that small-bowel intussusception should be reduced before resection if the underlying etiology is suspected to be benign or if the resection required without reduction is deemed to be massive [11].

Conclusions

Adult bowel intussusception is a rare but challenging condition to diagnose in a timely manner. Preoperative diagnosis is usually missed or delayed because of nonspecific and often subacute symptoms. A high index of suspicion and appropriate investigations (abdominal ultrasound, CT scan and colonoscopy) can result in prompt diagnosis. Lipoma of the large intestine is very rare. Submucosal lipomas are usually asymptomatic but

may cause bleeding, obstruction, intussusception, or abdominal pain. Accurate preoperative diagnosis is difficult and lipoma is often mistaken for adenomatous polyp or carcinoma.

Treatment usually requires formal resection of the involved bowel segment due to high suspicion for malignancy and subsequent complications due to obstruction.

References:

1. Marinis A, Yiallourou A, Samanides L et al: Intussusception of the bowel in adults: a review. *World J Gastroenterol*, 2009; 15(4): 407–11
2. Wang N, Cui XY, Liu Y et al: Adult intussusception: a retrospective review of 41 cases. *World J Gastroenterol*, 2009, 15: 3303–8
3. Namikawa T, Hokimoto N, Okabayashi T et al: Adult ileoileal intussusception induced by an ileal lipoma diagnosed preoperatively: report of a case and review of the literature. *Surg Today*, 2012; 42(7): 686–92
4. Grasso E, Guastella T: Giant submucosal lipoma cause colo-colonic intussusception. A case report and review of literature. *Ann Ital Chir*, 2012; 83(6): 559–62
5. Balamoun H, Doughan S: Ileal lipoma – a rare cause of ileocolic intussusception in adults: Case report and literature review; *World J Gastrointest Surg*, 2011; 3(1): 13–15
6. Balik AA, Ozturk G, Aydinli B et al: Intussusception in adults. *Acta Chir Belg*, 2006; 106: 409–12
7. Andreas M, Lagoudianakis EE, Dimitrios D et al: Lipoma induced jejunojejunal intussusceptions. *World J Gastroenterol*, 2007; 13(26): 3641–44
8. Mouaqit O: Adult intussusceptions caused by a lipoma in the jejunum: report of a case and review of the literature. *World J Emerg Surg*, 2012, 7: 28
9. Chou JW, Feng CL, Lai HC et al: Obscure gastrointestinal bleeding caused by small bowel lipoma. *Intern Med*, 2008; 47: 1601–3
10. Michael A, Dourakis S, Papanikolaou I: Ileocaecal intussusception in an adult caused by a lipoma of the terminal ileum. *Ann Gastroenterol*, 2001; 14: 56–59
11. Gupta RK, Agrawal CS, Yadav R et al: Gastrointestinal (GI) Unit, Department of Surgery, B.P. Koirala Institute of Health Sciences, Dharan, Nepal: Intussusception in adults: institutional review. *Int J Surg*, 2011; 9(1): 91–95