

Case Report

Ileal Lipoma Causing Ileo-Ileal Intussusception: A Case Report

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Abstract: Intussusceptions are rare entities among adult and adolescent populations. It is relatively common among children. Due to the lack of specific clinical features in adult and adolescent patients, its diagnosis is often delayed. Adult and adolescent intussusception could be due to many reasons, but malignancy is one of the key causes among them. Thus, unlike in children, adult and adolescent patients need proper evaluation to find the cause of intussusception pre-operatively. Having a pre-operative diagnosis prevents unnecessary bowel resections. It also helps not to miss a malignancy and to carry out the correct surgery. Intestinal lipoma is a rare entity that could cause intussusception among adults and adolescents. But most of the lipoma does not cause any symptoms and may only find during a post-mortem following an unrelated death. Intestinal lipomas are benign lesions that can occur anywhere in the gastrointestinal tract. A quarter of intestinal lipomas occur in the small intestine. Among those lipomas, 90% arise from the submucosa of the intestine. Here we report a 17-year-old boy presented to the surgical clinic with progressively worsening colicky abdominal pain. Further imaging revealed an ileal lipoma causing intussusception. The patient was treated with laparoscopy-assisted ileal segment resection and primary anastomosis. He made an uneventful recovery. Histology confirmed the diagnosis of a lipoma and it was arising from the subserosa of the intestine, making it a rare type of lipoma. Since lipomas are benign lesion patient did not need any follow-up after the surgery. The case presented here is the first documented case in Sri Lanka of ileo-ileal intussusception as a result of a subserosal lipoma.

Keywords: Intussusception, Lipoma, Ileum, Ileo-Ileal, Subserosal

1. Introduction

Intussusception is rare in adults with an incidence of around 2-3 per 100,000 per year [1]. The incidence of intestinal lipomas ranges from 0.035-4.4% [2]. Lipomas occur anywhere in the gastrointestinal tract and a quarter of them occur in the small intestine [3]. Intestine lipomas arise from the submucosa in 90% of cases [3].

The greatest incidence of intussusception is between the ages of 3 months and 6 years. The older children (7-18year) account for 13% of intussusceptions and 23% occur in adults [4].

We report a case of intussusception due to lipoma arising

from subserosal fat which is a very rare occurrence.

2. Case Report

A 17 years old boy presented to the surgical clinic with colicky central abdominal pain of one month duration, which was increasing in frequency. He had no vomiting or change of bowel habits or melena. On examination, he was comfortable and haemodynamically stable with a soft abdomen, and no palpable masses. Bowel sounds were normal at the time of examination. Ultrasonography was normal.

MRI abdomen showed ileo-ileal intussusception with a 29x12mm lipoma in the distal ileum acting as the leading

point (Figures 1 and 2). As there were no features of acute intestinal obstruction surgery was planned on the next available routine theatre list.

feeding and mobilization were possible due to reduced surgical morbidity. There was a cosmetic benefit due to small incisions and an extraction port scar located below the bikini line.



Figure 1. MRI showing the ileal lipoma.



Figure 2. MRI showing the ileal lipoma.



Figure 3. Intra-operative finding of ileo-ileal intussusception.



Figure 4. Intra-operative finding of ileo-ileal intussusception.

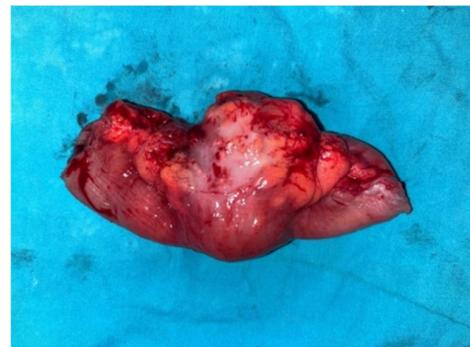


Figure 5. Excised part of the ileum.



Figure 6. Opened up specimen showing intestinal lipoma.

The patient underwent laparoscopy and the entire small bowel was examined from the DJ flexure up to ileocaecal valve to identify the intussusception which was noted in the distal ileum with dilated proximal bowel (Figures 3, 4, 5). This segment was exteriorized via a 5cm Pfannenstiel incision. The affected bowel segment was excised and end-end to hand-sewn bowel anastomosis was performed using 3/0 polyglactin interrupted seromuscular sutures.

Postoperative recovery was uneventful and the patient was discharged 3 days after surgery.

The patient was reviewed one month after discharge and was asymptomatic. He was safely discharged from follow-up.

In this case, the patient benefitted from minimally invasive surgery. Postoperative pain was minimal and early enteral

The histopathology report confirmed a 25x15x15mm size intestinal lipoma with areas of infarction, necrosis and

haemorrhage. Its stalk extended up to subserosal fatty tissue. There was no evidence of malignancy or dysplasia.

3. Discussion

Tumours of the small intestine account for 1-2% of all gastrointestinal tumours [5] and 30% of all small intestinal tumours are benign [6]. Gastrointestinal stromal tumours are the most common symptomatic benign tumours of the small bowel and lipomas are the second most common tumours [5].

Lipoma is a benign tumour composed of mature lipocytes [7]. It could be found in any part of the gastrointestinal system. The most common site is the colon (70%) followed by the small intestine (20-25%) [3]. There are three pathological types of intestinal lipomas namely, intermuscular, subserosal and submucosal [8]. The majority of small intestinal lipomas are submucosal (90-95%) [8]. When the size is larger than 4cm, 75% of submucosal lipomas become symptomatic. Symptoms include abdominal pain (68%), intussusception (44%), haemorrhage (29%) and vomiting (24%) [5].

Intussusception is an invagination of part of the intestine through the adjacent part [9]. Only 5% of all adult small intestinal obstructions are due to intussusception [10]. In 90% of adult intussusceptions, there is an organic cause and 60% are due to neoplasm. Of the small intestinal intussusceptions in adults, 24-40% are associated with malignancy [11].

When Intussusception categorized according to its location; colon, small intestine and foregut account for 65-75%, 20-25% and <5% respectively [12].

The clinical presentation of adult intussusception is non-specific, making diagnosis very difficult [12, 13]. Thus, a high index of clinical suspicion is a must and requires repeated clinical evaluation and radiological findings.

In both CT and MRI, lipomas are usually easy to diagnose on account of their density (-80 to -120HU). Intestinal lipomas are seen as well-circumscribed rounded homogenous lesions [5, 14].

Preoperative diagnosis is important since the intra-op diagnosis is difficult and the wrong diagnosis can lead to unnecessary bowel resection [3].

Laparotomy is considered the choice of treatment for acute intussusception of adult patients due to the association with neoplasm [15]. But laparoscopic resection is the best approach because it is less invasive and associated psychosocial benefits are higher [3, 5, 12]. However, uncomplicated symptomatic lipomas can be safely excised by using endoscopic polypectomy [16, 17].

This patient underwent an MRI scan resulting in pre-operative diagnosis of ileal lipoma. Thus, allowing laparoscopic evaluation and limited excision.

No malignant transformation of lipomas has been reported and therefore recurrence is unlikely [3]. Thus, follow-up is not needed.

4. Conclusion

Intussusception in adults is rare and mostly associated with an organic cause. Due to variation of symptoms, diagnosis can

be difficult and pre-operative diagnosis is important to prevent unnecessary surgery and to identify malignant lesions. For intestinal lipoma, pre-operative diagnosis helps to perform a limited resection to preserve the length of the small intestine. For this benign condition, it is better to perform a minimally invasive procedure and the patient can be safely discharged from the follow-up.

Ethical Approval and Consent for Publication

Written informed consent was obtained from the father of the patient and the patient himself for publication of this case report and accompanying images.

Conflict of Interest

The authors have no conflict of interest.

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References

- [1] de Zoysa M, Halahakoon C. Pre-operative hydrostatic reduction of intussusception in an adult. *Ceylon Medical Journal*. 2009; 54 (4): 130. doi: 10.4038/cmj.v54i4.1455.
- [2] Farkas N, Wong J, Bethel J, Monib S, Frampton A, Thomson S. A systematic review of symptomatic small bowel lipomas of the jejunum and ileum. *Ann Med Surg (Lond)*. 2020; 58: 52-67. doi: 10.1016/j.amsu.2020.08.028.
- [3] Oyen TL, Wolthuis AM, Tollens T, Aelvoet C, Vanrijkel JP. Ileo-ileal Intussusception Secondary to a Lipoma: a Literature Review. *Acta Chirurgica Belgica*. 2007; 107 (1): 60-63. doi: 10.1080/00015458.2007.11680013.
- [4] Morrison J, Jeanmonod R. Intussusception Secondary to a Meckel's Diverticulum in an Adolescent. *Case Reports in Emergency Medicine*. 2011; 2011: 1-3. doi: 10.1155/2011/623863.
- [5] Tsushimi T, Matsui N, Kurazumi H, et al. Laparoscopic Resection of an Ileal Lipoma: Report of a Case. *Surgery Today*. 2006; 36 (11): 1007-1011. doi: 10.1007/s00595-006-3294-6.
- [6] Williamson JML, Williamson RCN. Small bowel tumors: pathology and management. *J Med Assoc Thai*. 2014; 97 (1): 126-137.
- [7] Dei Tos AP. Adipocytic Tumors. In: *Bone and Soft Tissue Pathology*. Elsevier; 2010: 97-118. doi: 10.1016/B978-0-443-06688-7.00005-5.
- [8] Charalambous G, Katergiannakis V, Manouras A. Jejunojejunal Lipoma Causing Intussusception. *Case Reports in Gastroenterology*. 2012; 6 (3): 684-688. doi: 10.1159/000345379.
- [9] Marsicovetere P, Ivatury SJ, White B, Holubar SD. Intestinal Intussusception: Etiology, Diagnosis, and Treatment. *Clin Colon Rectal Surg*. 2017; 30 (1): 30-39. doi: 10.1055/s-0036-1593429.

- [10] Martín-Lorenzo JG, Torralba-Martinez A, Lirón-Ruiz R, et al. Intestinal invagination in adults: preoperative diagnosis and management. *Int J Colorectal Dis.* 2004; 19 (1): 68-72. doi: 10.1007/s00384-003-0514-z.
- [11] Minaya Bravo AM, Vera Mansilla C, Nogueras Fraguas F, Granell Vicent FJ. Ileocolic intussusception due to giant ileal lipoma: Review of literature and report of a case. *Int J Surg Case Rep.* 2012; 3 (8): 382-384. doi: 10.1016/j.ijscr.2012.03.035.
- [12] Balamoun H. Ileal lipoma - a rare cause of ileocolic intussusception in adults: Case report and literature review. *World Journal of Gastrointestinal Surgery.* 2011; 3 (1): 13. doi: 10.4240/wjgs.v3.i1.13.
- [13] Azar T, Berger DL. Adult intussusception. *Ann Surg.* 1997; 226 (2): 134-138. doi: 10.1097/0000658-199708000-00003.
- [14] Thompson WM. Imaging and Findings of Lipomas of the Gastrointestinal Tract. *American Journal of Roentgenology.* 2005; 184 (4): 1163-1171. doi: 10.2214/ajr.184.4.01841163.
- [15] Vagholkar K, Chavan R, Mahadik A, Maurya I. Lipoma of the Small Intestine: A Cause for Intussusception in Adults. *Case Reports in Surgery.* 2015; 2015: 1-3. doi: 10.1155/2015/856030.
- [16] Shi L, Zhao Y, Li W. Endoscopic resection of a giant colonic lipoma with endoloop-assisted unroofing technique. *Medicine.* 2018; 97 (23): e10995. doi: 10.1097/MD.00000000000010995.
- [17] Toya Y, Endo M, Orikasa S, Sugai T, Matsumoto T. Lipoma of the small intestine treated with endoscopic resection. *Clin J Gastroenterol.* 2014; 7 (6): 502-505. doi: 10.1007/s12328-014-0538-7.