CASE REPORT

A Rare Case Report of Ileo-Ileal Intusucception In A Young Adult

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Abstract

Intussusception is rarely found in adults, accounting for about 5% of all cases of intussusception. The lipomas found in ileum are usually asymptomatic, not needing any special intervention. Herein, we describe a case of 36-year-old female who presented with abdominal pain associated with projectile vomiting. Abdominal ultrasound sonography and computed tomography of abdomen were suggestive of intussusception. The patient underwent emergency laparotomy surgery and partial resection of the ileum, including the ileal mass, following reduction of the intussusception. The resected specimen was diagnosed on histopathology as an intestinal lipoma. The patient made a satisfactory recovery post operatively and was discharged.

Key Words

Intusucception, Ileoileal, lipoma, obstruction

Introduction

Intussusception is defined as the telescoping of one segment of the bowel into another, was first described in 1964 by Barbette of Amsterdam.[1] While intussusception is primarily a pediatric condition, it occurs rarely in adults and accounts for less than 5% of intestinal obstruction cases in adults, with an overall incidence of 2-3 cases per 1,000,000 of the general population per year.[1,2] Small intestinal intussusception due to a small intestinal lipoma is a rare clinical occurrence, typically diagnosed only after the intussusception has developed[3]. Lipomas are benign tumor arising from mesenchymal cells in adipose tissue, may lead to intussusception and are typically detected after causing such complications.[1] Clinical presentation in adults is often vague and nonspecific, making differential diagnosis challenging[2]. Ultrasonography and computed tomography of the abdomen are valuable imaging modalities for diagnosing intussusception and identifying intraluminal lesions[4]. Here we report a case of 36years female presented with small intestinal lipoma associated with ilieoileal intussusception.

Case Report

A 36-year-old female patient presented with clinical features of pain in epigastrium and right side of abdomen for 3 months which was sudden, gradually progressive in nature, radiating to back aggravate on sitting and taking food associated with vomiting 1 episode per week which was projectile, non-bilious containing food and water. History of constipation was present. Patient was a known case of hypothyroidism. She had a history of laparoscopic cholecystectomy 5 years back. All the vital parameters were within normal limits. On per abdomen examination, abdomen was soft non tender, non-distended, bowel

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Manuscript Received: 31.05.2024; **Revision Accepted**: 30.07.2024;

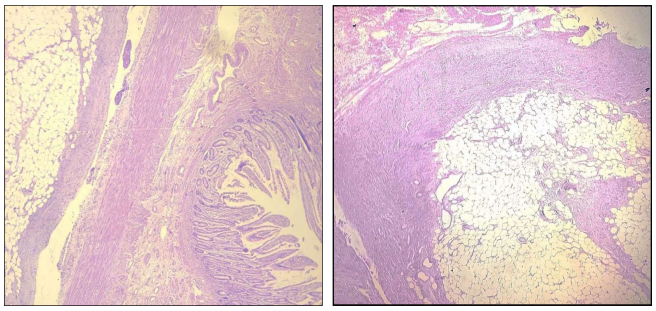
Published Online First: 10 Jan, 2025

Open Access at: https://journal.jkscience.org

Cite this article as: Rana S, Bushra, Mohroo R, Trisal M, Solanki A, Jetley S, Thakral A. A Rare Case Report of Ileo-Ileal Intusucception in a Young Adult. JK Science 2025; 27(1):63-65

(a) (b)

Fig 1 (a): Gross image showing Ileo-ileal intussusception with proximal bowel telescoping into distal bowel.
Fig 1 (b): Cut section image of intussusceptum showing capsulated circumscribed homogenous yellowish fatty lesion (Lipoma) as the the lead point.



(a) (b)

Fig 2 (a): Microscopic image showing intestinal mucosa with Lipoma (H&E, 10X)
Fig 2(b): Microscopic image showing Lipoma consisting of lobules of mature adipocytes separated by thick and thin fibrous septae. (H&E, 10X)

sounds were present. Patient was advised for USG abdomen and CECT abdomen. USG revealed an ileoileal intussusception in right lower abdomen towards the midline. On CECT, a short segmental thickening of a loop of distal ileum with a 35 mm size oval fat density lesion within this loop at its distal end was seen. A small nodule was seen within the fat containing lesion. However no evidence of dilatation of proximal bowel loops or obstruction was seen. A provisional diagnosis of distal ileoileal intussusception with a lipoma as a lead point was given. The patient underwent exploratory laparotomy with resection and anastomosis of ileal segment. The ileal segment was sent for histopathological examination. On gross inspection, a segment of small intestine measuring 7 cm in length and 3.4 cm in diameter was received. External surface was unremarkable. One cut end measured 2.2 cm and other cut end measured 2.6 cm in diameter. On cutting open, a loop of intestine was seen telescoping into distal segment measuring 4.5 cm in length and 2.5 cm in diameter. Mucosal surface of intussusceptum appeared denuded, hemorrhagic and congested. On cut section, intussusceptum showed capsulated circumscribed homogenous yellowish fatty lesion measuring 3x2x2 cm (Figure 1a and 1b). The intussusceptions showed focally denuded mucosa. On microscopic examination, intussusception showed mucosa lined by intestinal epithelium with goblet cells with focal areas of ulceration seen invaginating into another similarly lined mucosa. Lamina propria showed inflammatory infiltrate. Submucosa was unremarkable. Serosa showed a partially encapsulated lesion comprising of lobules of mature adipocytes separated by thick and thin fibrous septate and few dilated blood vessels (Figure 2a and 2b). Surrounding wall showed edema at places, infiltration by mixed inflammatory cells and congested blood vessels.

Discussion

Adult intussusception is rare compared to pediatric intussusception. The ratio of children to adults is around 20 to 1. It is identified in less than 1 in 1300 abdominal surgeries and 1 in 100 cases of intestinal obstruction.[5] Adults rarely present with the classic triad of abdominal pain, palpable mass, and bleeding per rectum, which frequently results in misdiagnosis.[6] In adults, the majority (70%–90%) of small intestinal intussusception cases are caused by pathological factors. These causes can be broadly categorized into two main types: occupying lesions and non-occupying lesions. Occupying lesions include conditions such as lipomas, gastrointestinal mesenchymal tumors, polyps, small bowel metastases, and malignant melanoma. Non-occupying lesions encompass abnormalities like Meckel's diverticulum and inflammatory lesions of the small bowel. These pathological factors contribute to the invagination or telescoping of the small intestine, leading to intussusception in adults.[3] Intestinal lipomas are more frequently located in the colon (65-75%) but can also occur in the small intestine (20-25%). In intussusception, the lead point is propelled forward by normal peristalsis, causing the affected segment of the bowel (intussusceptum) to telescope or slide into another segment of the bowel (intussusceptions). Although intussusception is rare as a cause of small bowel obstruction in adults, the lead point in small bowel cases is malignant in 25% of instances, and up to 66% for large bowel cases.[7]

Small intestinal lipomas are uncommon benign tumors of mesenchymal origin with the ileum being the most common site without malignant potential, often found incidentally due to their asymptomatic nature. However, symptomatic cases may present with hemorrhage or intestinal obstruction especially when lipomas exceed 2 cm in size.[8,9,10]

Majority of the lipomas are solitary, but they can be multiple in numbers and are distributed throughout the gastrointestinal tract. While they are more common in the large intestine, particularly in the right colon and cecum, only about 20-25% are found in the small intestine.[11] Intussusception is traditionally categorized into four types based on the part of bowel involved: (a) ileoileal, occurring within the small bowel, (b) colocolic, involving the large bowel, (c) ileocolic, where the terminal ileum prolapse into the ascending colon, and (d) ileocecal, with the ileocecal valve serving as the lead point.[2]

Radiological methods for diagnosing intussusception include plain abdominal X-ray, ultrasonography, and CT scan. Abdominal X-ray is typically the initial diagnostic tool, revealing air-fluid levels and soft tissue density changes. It may exhibit a distinctive "crescent" sign, caused by trapped gas between the invaginated bowel's mucous surfaces. Ultrasonography identifies intussusception by characteristic signs like the "target," "pseudo kidney," or "crescent in a doughnut." CT scans, commonly used for acute abdomen cases, display a "target" or "doughnut" sign.[1,11]

Conclusion

Gastrointestinal lipomas are rare clinical condition and can either be asymptomatic or symptomatic. Asymptomatic cases may remain undetected for years or found incidentally. However, large intestinal lipomas can lead to intussusception, a rare occurrence, particularly in adult small bowel obstruction cases. Abdominal CT is the preferred diagnostic tool. Surgical resection and histopathological examination are the mainstay of management for symptomatic patients to alleviate symptoms and rule out malignancy.

Financial Assitance & Sponsorship: Nil
Conflict of Intrest : Nil

References

1. Pol V, Deshmukh S, Bhosale A, Pol J, Dugad V. Intestinal lipoma causing intussusception in an adult – A case report. Med J DY Patil Vidyapeeth 2023; 16:631 3.
2. Vagholkar K, Chavan R, Mahadik A, Maurya I. Lipoma of the Small Intestine: A Cause for Intussusception in Adults. Case Rep Surg 2015; 2015:856030.
3. Hu Q, Wu J, Sun Y. Intussusception Related to Small Intestinal Lipomas: A Case Report and Review of the Literature. Front Surg 2022 ; 9:915114.
4. Sharma A, Thakur A. Ileocolic intussusception due to intestinal lipoma in an adult patient. Clin Case Rep 2021; 9:1524–8.
5. Singhal S, Singhal A, Arora PK, Tugnait R, Tiwari B, Malik P et al. Adult ileo-ileo-caecal intussusception: case report and literature review. Case Rep Surg 2012; 2012:789378.
6. MenegonTasselli F, Urraro F, Sciaudone G, Bagaglini G, Pagliuca F, Reginelli A, et al. Colonic Lipoma Causing Bowel Intussusception: An Up to Date Systematic Review. J Clin Med 2021; 10:5149.
7. Roy J, Sall K, Megaris A, DiRoma F, Mukherjee I. Submucosal Lipoma Causing Small Bowel Intussusception. Cureus 2021 ;13(8): e17367.
8. Manouras A, Lagoudianakis EE, Dardamanis D, Tsekouras DK, Markogiannakis H, Genetzakis M et al. Lipoma induced jejuno-jejunal intussusception. World J Gastroenterol 2007;13(26):3641-4.
9. Bansal YM, Kudva A. "Small bowel intussusception in an adult due to lipoma: a rare cause of obstruction. Case report and literature review," The Internet Journal of Surgery 2010;25(1):22
10. Bilgin M, Toprak H, Ahmad IC, Yardimci E, Kocakoc E. Ileocecal Intussusception due to a Lipoma in an Adult. Case Reports in Surgery 2012; 2012:1–4.
11. Cheikhrouhou T, Dhaw MB, Zouari M, Zitouni H, Kallel R,Gouiaa N, et al. Small intestinal submucosal lipoma: a rare cause of secondary intussusception in a child. Ann Pediatr Surg 2021;17(1):1-5.