

CASE REPORT

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Pedunculated Lipoma of the Caecum Causing Colocolic Intussusception in an Adult

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ABSTRACT

Introduction: Colocolic intussusception in adults is uncommon and poses both a diagnostic and therapeutic dilemma. The association of an underlying malignancy necessitates a preoperative confirmation of diagnosis. The presenting features are variable. Hence contrast enhanced computed tomography of the abdomen is pivotal for diagnosis. An en bloc resection of the specimen in accordance with standard oncological principles is the mainstay of treatment. **Case report:** A case of colocolic intussusception in an adult is presented to highlight the difficulties in preoperative diagnosis and in selecting the best surgical option for treatment. **Conclusion:** Adult bowel intussusception is a diagnostic dilemma with preoperative diagnosis being the biggest challenge. CT scan of the abdomen is an excellent diagnostic modality with high diagnostic accuracy. Exploratory laparotomy with en bloc resection is mainstay of treatment in adults.

Keywords: glaucoma, IOP.

1. INTRODUCTION

Intussusception of intestine is best described as telescoping of proximal segment of bowel into lumen of adjacent or distal segment. It is a common emergency usually seen in the pediatric population. However, it is rare in the adult population constituting only 5% of all cases of intussusception and 1-5% of all intestinal obstruction cases in adults (1). Intussusception in adults is invariably secondary in 90% of cases and runs a very high risk of malignancy to the extent of 65% in all adult presentations (2). Hence, a definitive treatment is essential in almost all adult cases.

2. AIM

A case of colocolic intussusception in a 47-year-old male patient is presented in view of its rarity and the need for immediate definite treatment.

3. CASE REPORT

A 47-year-old male patient presented with a history of severe colicky abdominal pain, vomiting and passage of loose motions which were blood stained for a period of 1 month. The episodes of colicky pain were intermittent with same level of severity. Patient was passing jelly like liquid stools over the last 1 month. He was treated by his general practitioner with little success and therefore referred to our facility. On examination, the vital parameters were within normal limits. Physical examination of abdomen revealed fullness in the right upper abdomen with a firm mass palpable on deep palpation. Per rectal examination revealed blood stained jelly like stools. Hematological investigations did not reveal any abnormality. Computed tomography scan of the abdomen revealed a typical target lesion involving the colon with a hypodense area suggestive of a polyp (Figure 1 and 2). The nature of intussusception was colocolic. Patient underwent exploratory laparotomy which confirmed colocolic intussusception involving the ascending colon (Figure 3). A right hemicolectomy was performed. The specimen was slit open and revealed a large pedunculated polyp arising from the caecum as the lead point (Figure 4). Histopathological examination of pedunculated polyp was suggestive of lipoma (Figure 5). Patient was commenced on oral feeds by day 4. Skin staples were removed on day 10. The patient has been following up for the last 3 months and is symptom free.

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Figure 1. CECT showing the classical target sign.



Figure 2. CECT showing colocolic intussusception.

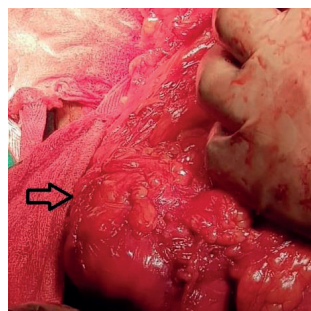


Figure 3. Intraoperative finding of colocolic intussusception.

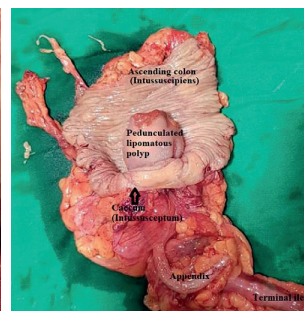


Figure 4. Resected specimen showing a pedunculated lipoma arising from the caecum serving as a lead point of the intussusception.

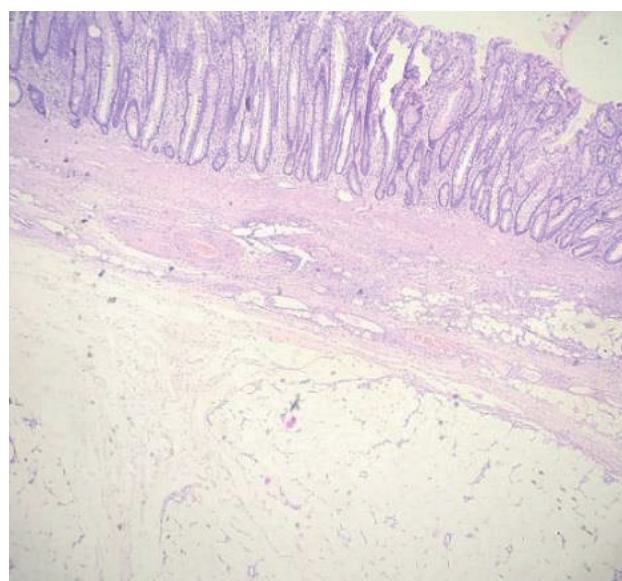


Figure 5. Histopathological features of a pedunculated lipoma. Submucosa shows well circumscribed tumor composed of benign mature adipocytes separated by thin fibrovascular septae interspersed with chronic inflammatory cell infiltrate (Magnification 10X H&E staining)

4. DISCUSSION

Intussusception usually occurs at the junction between the freely moving segment and retroperitoneally or adhesion induced fixed segments (3). In adults it is best classified based on the location: a) Entero-enteric-involving small bowel, b) Ileocolic-involving ileum and ascending colon, c) Colocolic-involving large bowel only (as seen in case presented), and d) Iliocaecal-where the iliocaecal valve is the lead point.

According to etiology, intussusception is classified as benign, malignant or idiopathic depending upon the histology of the lead point. In small intestine it may be due to Meckel's diverticulum, lipomas, polyps, inflammatory lesions, post-operative adhesions, lymphomas and metastases. In a few rare interesting instances, it may be iatrogenic due to presence of intestinal tube or in patients with gastrojejunostomy (4). In the large bowel, malignant etiology is seen in 60% cases. However,

lipoma of the colon constitutes the commonest lesion in benign variety (3, 4). In adults the exact mechanism of intussusception may still be unknown in 8-20% cases (5). However, in the rest secondary intussusceptions are initiated by the pathologic lesion within the lumen.

This alters the transmission of peristaltic wave and thereby serves as a lead point which enables invagination of one segment of bowel into distal part. The invagination of mesenteric fold within lumen of distal bowel impairs peristalsis leading to obstruction thereby compromising blood supply of entering segment. Effectively the bowel changes are obstruction and inflammation leading to thickening and ischemia of bowel wall. The clinical presentation exhibits great variability. Chronic non-specific symptoms due to persistent partial obstruction may be a common way of presentation as seen in the case presented. The classical pediatric triad of clinical features is uncommon in adults. Nausea, vomiting, intermittent crampy pain, constipation or passage of sticky blood-stained stools and abdominal distention are the usual presenting symptoms. Transient symptoms are seen in patients of intussusception without a lead point

as in Coeliac or Crohn's disease. However, intussusception with a lead point usually presents as bowel obstruction either relapsing or persistent with signs of strangulation. Preoperative diagnosis of intussusception is quite difficult due to the variability of presentation in adults. Plain X-ray will reveal positive findings only if patient presents with frank obstruction.

In majority of cases, findings are inconclusive. Ultrasonography may be diagnostic. Typical ultrasonography features include "target" or "donut sign" on transverse views and "Pseudo kidney" or "Hayfork" on longitudinal view (4, 5). Obesity and gas filled loops may compromise the diagnostic accuracy of ultrasonography as well as being an imaging modality which is performance dependent. Contrast enhanced computed tomography (CECT) of the abdomen therefore continues to be the diagnostic modality of choice with a diagnostic accuracy of 58-100% (6). Typical features on CT scan include two non-homogenous "target" or "sausage shaped" soft tissue mass with layering effect (6). Mesenteric vessels within bowel lumen are typical. The advantages of abdominal CECT are manifold. The location, nature of mass and relationship to the surrounding structures is well documented. In case of malignancy, it even helps in staging of the disease. The main advantage in cases of secondary intussusception is that it helps in determining or confirming the lead point. Typical signs of target or sausage like mass with a multilayered appearance is pathognomonic of intussusception with a lead point (6). This was typically seen in the case presented (Figure 1a). The status of impaired mesenteric circulation can also be studied. Diagnostic endoscopy can help in evaluation of cases of intussusception presenting as subacute or chronic large bowel obstruction (7). Confirmation of diagnosis, localization and demonstration of lead point are possible. A lipoma of the colon can well be diagnosed as a smooth surface typically described as "cushion sign", "pillow sign" or "naked fat sign" (7). It is advisable to avoid any sort of intervention at such a moment as chances of perforation are increased due to edema and ischemia of bowel wall. Due to the wide variation in presentation and findings of various radiological modalities, the final diagnosis is best confirmed at laparotomy in majority of the cases (8). Surgical intervention is the mainstay of treatment due to the presence of underlying pathology with high possibility of malignancy in adults (7, 8). No attempt should be made to reduce colocolic intussusception as the chances of an underlying malignancy are extremely high. Reduction can cause luminal dissemination of cancer cells or even tumor emboli. Hence, en bloc resection is the safest option. It is a safe practice to perform en bloc resection in conformity with standard oncologic principles (8, 9). In case of small bowel intussusception the lead point is invariably benign. Hence, reduction with limited resection of the bowel segment containing the lesion can be contemplated (9). A laparoscopic approach is slowly gaining popu-

larity for managing such cases. It helps in confirming the diagnosis, identifying the site and enabling an en bloc resection as well (10). However, the patient's general conditions and availability of technical expertise continue to be the major limiting factors of this approach.

5. CONCLUSION

Adult bowel intussusception is a diagnostic dilemma with preoperative diagnosis being the biggest challenge. CT scan of the abdomen is an excellent diagnostic modality with high diagnostic accuracy. Explorative laparotomy with en bloc resection is mainstay of treatment in adults.

- **Author's contribution:** The author operated the patient and was involved in writing the manuscript and editing the photos. Final proof reading was made by the author.
- **Conflict of interest:** None declared.
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