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Case Report

Intussusception in a mid-age female

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ABSTRACT

Intussusception in adults is a rare entity, especially caused by benign lesions like lipoma. The clinical picture of intussusception in adults is subtle making the diagnosis tenuous. Gastrointestinal lipomas are rare benign tumors and the present report describes one such clinical entity.

Keywords: Gastrointestinal lipoma, Adult Intussusception, Intestinal Obstruction, Ileoileal intussusception

INTRODUCTION

Paul Barbette first described intussusception as the proximal portion of the intestine (intussusceptum) invaginating into the distal portion of the intestine (intussuscipiens) in a telescope-like fashion.[1] Any intestinal condition that changes the normal pattern of peristalsis increases the risk of intussusception. Normal physiologic peristalsis along bowel intussusception promotes extension of the invagination to involve longer segments of the intestine, mesentery, and mesenteric blood vessels. The clinical appearance of intussusception is generally nonspecific, its common symptoms like abdominal pain, vomiting, and Red-currant-jelly stools are found in children but rarely seen in adults and leading to delay in diagnosis. Nevertheless, intussusception is an important condition to consider because most cases in adults are caused by structural lesions which are commonly malignant neoplasms.[2]

CASE REPORT

A 40-year-old female presented with complains of pain abdomen and vomiting containing food particles, bile stained not blood stained with history of obstipation. Patient was clinically diagnosed as a case of intestinal obstruction and patient underwent CECT abdomen and pelvis which suggestive of Ileoileal intussusception with mass in ileum which suggestive of lipoma (Figure 1).

Patient underwent Laparotomy and intussusception was reduced, resection of the ileum containing the mass was done and bowel anastomosis done (Figure 2). Specimen was sent for HPE. Patient was managed on parenteral nutrition for 3 days following which she was started on liquid diet and diet escalated as she tolerated. HPE report was suggestive of a lipoma (Figure 3).

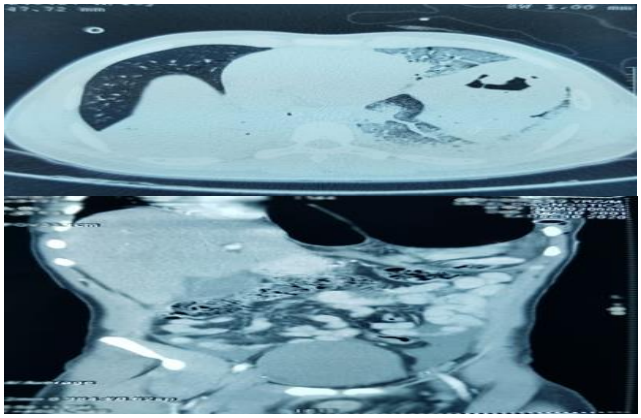

Figure 1: CT scan of reveals ileoileal intussusception involving the mid part of ileum for an approximate length of 5 cm (Intussusceptum) with ileal lipoma.

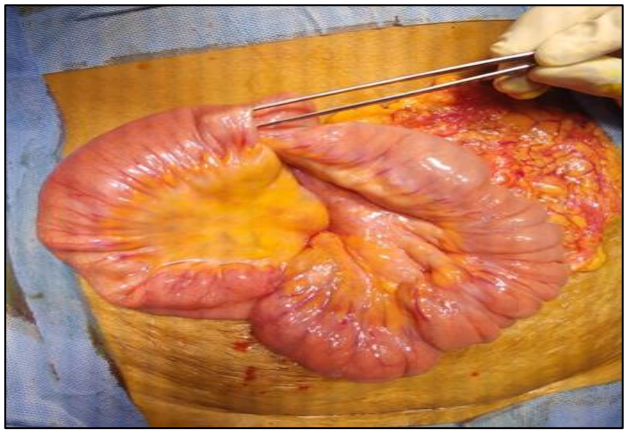

Figure 2: Intra-op finding: Ileoileal intussusception.

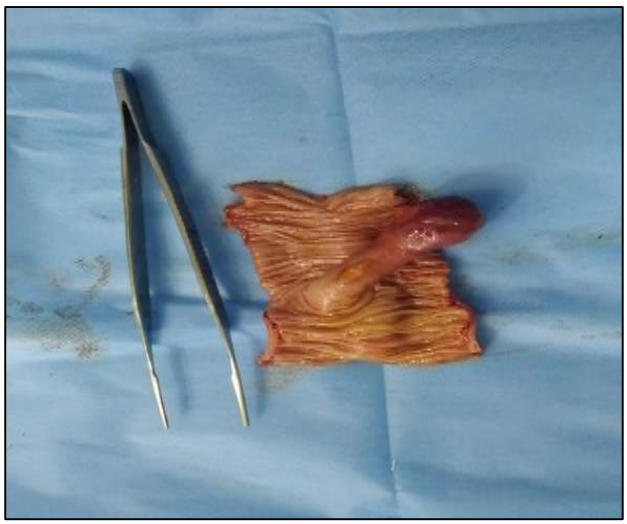

Figure 3: Resected specimen showing lead point.

DISCUSSION

Intussusception involves the telescoping of a segment of bowel into an adjacent segment, resulting in obstruction, inflammation, and possible ischemia. Intussusception is the leading explanation for ileus in children, it's however relatively rare after childhood, accounting for fewer than 5% of bowel obstruction in adults. Adult intussusception occurs most frequently within the small bowel and is assessed on the idea of location. They are often categorized as entero-enteric (small bowel only), colo-colic (large bowel only), ileocolic (terminal ileum prolapses within the ascending colon), or ileocecal (ileocecal valve is the lead point).[3]

In children, intussusception which is usually primary or idiopathic whereas in most adult intussusceptions are caused by a structural lesion. A significant proportion of those lead points are malignant neoplasms, accounting for 66% of colonic intussusceptions and approximately 30% of cases within the intestine.[1] Adenocarcinoma of the colon is that the commonest malignant lead point within the colon, whereas metastasis is that the commonest malignant lead point within the intestine. Other etiologies being benign tumors (adenomatous polyps, lipomas, fibromas, leiomyomas, hamartomas), adhesions, lymphoid hyperplasia, scleroderma, disorder, inflammatory bowel disease, appendicitis, pancreatitis, and rectal foreign bodies. 16% of small-bowel and 5% of large-bowel intussusceptions are idiopathic.[3]

The clinical presentation of intussusception in adults can be variable, posing a challenge to the diagnosis. The "classic" pediatric presentation of abdominal pain, red currant-jelly stools, and palpable tender abdominal mass, seen in 15% of pediatric intussusceptions, isn't seen in adults. In contrast to intussusception in children, adult intussusceptions often present as chronic intermittent cramping abdominal pain related to nonspecific signs of bowel obstruction including nausea, vomiting, gastrointestinal bleeding, constipation, or abdominal distention.[3]

Table 1: Causes for colonic adult intussusception.

Benign	Malignant
Adenoma	Adenocarcinoma
Inflammatory pseudopolyp	Lymphoma
Lipoma	Sarcoma

Table 2: Enteric causes for adult intussusception.

Benign	Malignant
Adhesions	Adenocarcinoma
Adenoma	Carcinoid tumor
Cantor disease	Leiomyosarcoma
Crohn disease	Lymphoma
Hemangioma, hamartomas.	Malignant GIST
Polyps	Neuroendocrine tumor
Lipoma	Malignant metastasis with melanoma being most common
Submucosal hemorrhages from unregulated anticoagulation	

Gastrointestinal lipomas usually arise in the submucosa in 90% of cases and in 90% of those cases its usually single lipoma with size varying from 1 to 30 cm. They form an intramural, discrete, either lobulated or smooth, round to ovoid shaped soft mass covered by intact mucosa but sometimes they protrude subserosally and can be asymptomatic. They can produce symptoms in association with their size and site. Lesions less than 1 cm are unlikely to produce symptoms, while those more than 4 cm are symptomatic in 75% of the cases. The symptoms of lipomas are the results of intussusception-ileus (occlusion of lumen by an outsized protruding lesion, retrograde prolapse of a polypoid lipoma of duodenum into pylorus, volvulus of the small intestine

due to subserosal lipoma) and hemorrhage due to ulceration of the overlying mucosa caused by direct pressure from the lipoma or due to intussusception itself.[4]

Abdominal CT is currently the widely regarded modality of choice for diagnosing intussusceptions in adults. The CT finding of a heterogeneous "target sign" or "sausage-shaped" soft-tissue mass consisting of an outer intussuscipiens and central intussusceptum is virtually diagnostic. Mesenteric fat and vessels are often visible within the bowel lumen with varying degrees of proximal bowel dilatation may be present. Other imaging modalities include plain abdominal films which can provide clues regarding site of obstruction but are neither sensitive nor specific in terms of diagnosis. Ultrasound could even be a helpful tool especially in children; it are often useful in adults when an abdominal mass are often palpated but could also be limited by body habitus and thus the presence of air in distended bowel loops.

Management of symptomatic adult intussusceptions includes exploratory laparotomy or laparoscopy followed by resection of lead point masses or areas of ischemia. Preoperative reduction by barium or air, or manually within the OR is usually not recommended due to the risks of perforation, seeding of micro-organisms or tumor cells, and increased surgical complications of manipulated friable and edematous bowel. However, preoperative reduction are often considered in consultation with a surgeon in cases where a diagnosis of benign lesion has previously been established and thus the bowel involved is viable, or where resection may end in short bowel syndrome.

With regard to operative management, studies recommended a selective approach to bowel resection that takes into consideration the location and pathologic characteristics of the underlying lesion – lead point. In elderly patients, >60 years or in intussusceptions with colonic lesions, bowel resection following the oncologic principles is necessary owing to the high incidence of malignancy. With cases of transient small-bowel intussusceptions within the setting of benign etiologies like celiac sprue or Crohn disease, resection might not be required as treatment of the underlying disease causes improvement in symptoms. With the various risk of short bowel syndrome in patients with Crohn disease (5%-10%), aggressive resection therapy won't be indicated if the bowel involved is healthy without evidence of obstruction or ischemia. On the off note, non-obstructing intussusception detected incidentally on CT in an otherwise asymptomatic patient doesn't require intervention.[5]

CONCLUSION

In conclusion, one should always keep in mind intussusception as one of the causes of intestinal obstruction with vague symptoms and clinical presentation. We should bear in mind the symptoms and be vigilant while handling a case of bowel obstruction. Intussusception is a common finding in pediatric age group whereas it being rare in adults especially due to benign cause as the lead point, like in this case a lipoma. It is challenging to diagnose such a patient due to the non-specific signs and symptoms and therefore a surgeon must keep in mind the incidence of intussusception and be familiar with the epidemiology and pathology of the same and understand the principles for optimal outcomes.

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