Small Intestinal Obstruction due to Subserosa Fibrolipoma in a 2-year-old Child: A Case Report and Literature Review

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Abstract

Lipomas of the gastrointestinal tract (GIT) are generally rare. They are rare in children, and when they occur they are usually submucosa. Most of the submucosa lipomas of GIT are present in the colon (65%–75%) and small intestine (25%). In children, intestinal lipoma is a documented cause of pathological lead point intussusception, especially when located in the submucosa. The present case report is of subserosa lipoma in the distal ileum. A 2-year-old boy presented with features of intestinal obstruction which was preceded by a painless abdominal mass. In the absence of computerised tomography scan, he was operated, and histopathology examination confirmed the mass as pedunculated fibrolipoma arising from the subserosa and causing extrinsic compression of the ileum.

Keywords: Child, complete intestinal obstruction, intestinal lipoma, subserosa

Introduction

Intestinal obstruction is the failure of aboral movement of intestinal content. The causes can be intraluminal, intramural or extra-luminal. Intestinal lipoma has been described as one of the causes of intramural intestinal obstruction. Lipomas are benign tumours that are comprised of mature adipocytes.[1] The majority of intestinal lipomas occur in the colon, but they can be present throughout the entire gastrointestinal tract. About 20%–25% of gastrointestinal lipomas are present in the small intestine, with the ileum being the most common location followed by the jejunum.[2-4] It may be submucosa, intramuscular or subserosa. Most of the time, they are usually asymptomatic and usually cause symptoms when they are more than 2 cm.[5] Majority of them are found in adults.[6] In the present report, we present a case of a huge subserosa pedunculated fibrolipoma of the small intestine causing progressively increasing abdominal swelling, followed by complete intestinal obstruction and left pelviureteric junction obstruction in a 2-year-old child.

Case Report

Our patient is a 2-year-old child child who presented with a 4-day history of insidious onset of central colicky abdominal pain. There was a preceding asymptomatic abdominal swelling and progressively increasing abdominal distension, bilious vomiting and constipation. There was associated history of recurrent left loin pain and dysuria. He had a urogenital procedure done in a neighbouring health facility, 2 weeks before presentation.

Examination revealed a patient that was lethargic, pale, febrile to touch and dehydrated. The abdomen was uniformly distended with intestinal patterning. There was a palpable, non-tender, intra-abdominal mass, extending from the umbilicus to the right iliac and the pelvic region. It was soft and mobile in both transverse and longitudinal directions.

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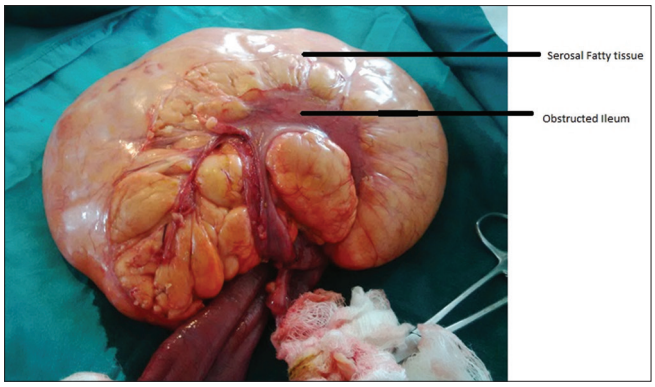


Figure 1: Serosa lipoma compressing ileum from the exterior with no definite plane of dissection

There was no area of tenderness. Intra-abdominal organs were not palpably enlarged.

There was positive left renal angle tenderness with no demonstrable ascites.The bowel sound was hyperactive. The hernia orifices were intact. Digital rectal examination reveals an empty rectum with no rectal mass.

Urine analysis showed numerous white blood cells and bacteria, and the culture yielded *Escherichia coli* which was sensitive to ampicillin-sulbactam.

The erect abdominal X-ray showed multiple air-fluid levels on erect view and dilated loop of the small intestine on supine view. Abdominal ultrasound showed a massively enlarged left kidney and was replaced mainly by multiple cystic spaces with intervening normally appearing cortex and medulla with a thickness of 18 mm. The right kidney could not be visualised. The ureters could not be defined. No ascites were seen. Abdominal computer tomography (CT), magnetic resonance imaging, diagnostic laparoscopy and intravenous urogram could not be done due to paucity of funds.

In the absence of CT, we carried out a surgical exploration of the abdomen. Intraoperative findings were that of a grossly dilated loop of proximal ileum and a hemispherical mass measuring 20 cm × 10 cm in longitudinal and transverse dimensions. The mass was about 30 cm proximal to the ileocecal junction [Figure 1]. The right kidney was absent, most likely due to a congenital anomaly of the kidney and urinary tract. The left kidney showed dilated pelvis while the left ureter appeared normal in diameter. The dilated left renal pelvis may be a result of prolonged urinary stasis due to mass effect on the left renal pelvis while asleep. Other intraperitoneal organs appeared normal. The mass was resected with segmental resection of the adjacent ileum and ileoileal anastomosis was done. The patient was also placed on ampicillin-sulbactam for 2 weeks and was discharged 16 days post-operation.

Histology report showed a segment of the ileum measuring 8 cm in length with the widest external diameter of 3.5 cm. There is a huge pedunculated mass originating from the serosa surface of the bowel and constricting its lumen from the exterior. It contains sheets of adipocytes, abundant cytoplasm and eccentric nuclei with histologic diagnosis of intra-abdominal fibrolipoma [Figure 2].

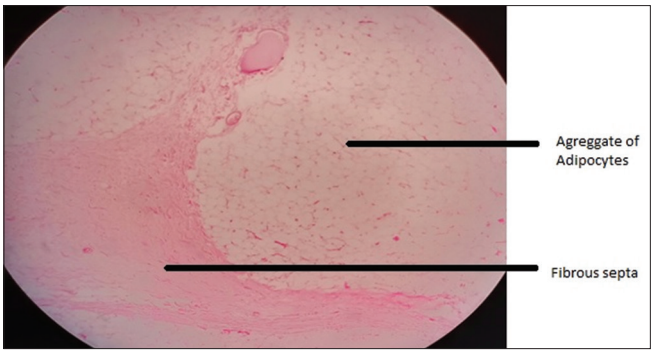


Figure 2: Microphotograph showing adipose tissue arranged in lobules

Five-year post-operative evaluation with serial abdominal ultrasound showed complete resolution of the left pelvic-ureteric junction obstruction.

Discussion

Few cases of alimentary tract lipoma have been reported till date. Alimentary tract lipomas are usually asymptomatic and often noticed during endoscopy or at autopsy.[7] Majority is usually submucosal in location and may be a lead point for intussusceptions.[4]

Lesions >2 cm in diameter may cause non-specific symptoms such as abdominal pain, diarrhoea and haematochezia.[3] Acute manifestations, such as partial or complete obstructions, are infrequent occurrences.[8] Most of the time, bowel obstructions secondary to intestinal lipomas result from intussusceptions;[2,3,9] however, a huge pedunculated lipoma may be a cause of extrinsic intestinal obstruction as was documented in our patient.

Pre-operative diagnosis of intestinal lipomas can be accomplished by imaging. Abdominal ultrasound may show a well-encapsulated homogenous echogenic mass;[10] however, CT scan can diagnose lipoma conclusively due to dense fat.[7,11] Magnetic resonance imaging is also considered a very helpful diagnostic imaging with an advantage of differentiating lipomas from liposarcomas. This differentiation prevents clinicians from employing invasive diagnostic techniques such as biopsy before surgery.[12,13]

Our patient presented with a huge ileal pedunculated lipoma that was causing extrinsic compression of the distal ileum and the left pelvi-ureteric junction obstruction. We were able to resect the lipoma together with the bowel segment and then did an end-to-end ileoileal anastomosis. Complete resection of the mass is the treatment of choice to relieve the obstructive symptoms; more so, there is a risk of malignant degeneration and fatty necrosis if left untreated.

Conclusion

Intra-abdominal fibrolipoma is a very rare cause of intestinal obstruction in children. It may cause diagnostic dilemma. It is worthy of consideration as a differential in a child

with abdominal mass with associated features of intestinal obstruction.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

References

1. Sato M, Ishida H, Konno K, Komatsuda T, Naganuma H, Segawa D, *et al*. Mesenteric lipoma: Report of a case with emphasis on US findings. Eur Radiol 2002;12:793-5.
2. Jiang RD, Zhi XT, Zhang B, Chen ZQ, Li T. Submucosal lipoma: A rare cause of recurrent intestinal obstruction and intestinal intussusception. J Gastrointest Surg 2015;19:1733-5.
3. Minaya Bravo AM, Vera Mansilla C, Noguerales 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;3:382-4.
4. 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.
5. Thompson WM. Imaging and findings of lipomas of the gastrointestinal tract. AJR Am J Roentgenol 2005;184:1163-71.
6. Climie AR, Wylin RF. Small-intestinal lipomatosis. Arch Pathol Lab Med 1981;105:40-2.
7. Pagaro PM, Deshpande A. Lipoma of small intestine. Med J Dr DY Patil Univ 2015;8:525-7.
8. Konik RD, Rhodes RA. Complete small bowel obstruction without intussusception due to a submucosal lipoma. J Surg Case Rep 2018;2018:rjy155.
9. Mouaqit O, Hasnai H, Chbani L, Benjelloun B, El Bouhaddouti H, Ibn El Majdoub K, *et al*. 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.
10. Sheen AJ, Drake I, George PP. A small bowel volvulus caused by a mesenteric lipoma: Report of a case. Surg Today 2003;33:617-9.
11. Watt DG, Sanjay P, Walsh SV, Young JA, Alijani A. Mesenteric lipoma causing small bowel perforation: A case report and review of literature. Scott Med J 2012;57:247.
12. Enyinnah MO, Umezurike CC. Mesenteric lipoma causing recurrent intestinal obstruction. Niger J Clin Pract 2013;16:551-3.
13. Coran A, Ortolan P, Attar S, Alberioli E, Perissinotto E, Tosi AL, *et al*. Magnetic resonance imaging assessment of lipomatous soft-tissue tumors. *In Vivo* 2017;31:387-95.