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Case Report

Pathology Section

Intestinal Lipomatosis in an Adult- A Rare Case Report

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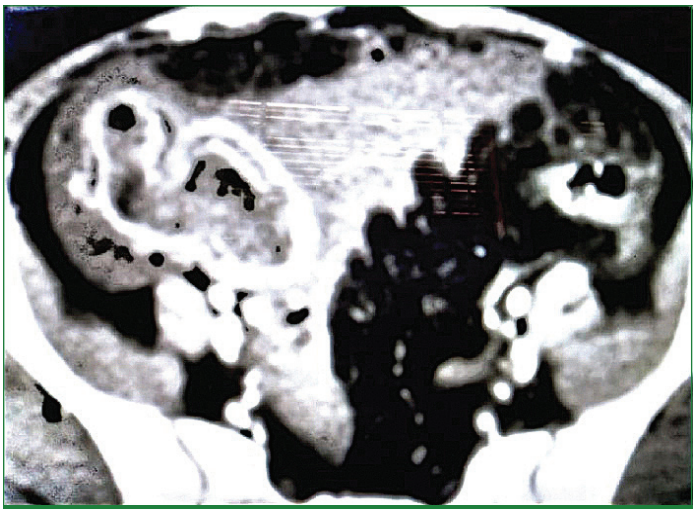
ABSTRACT

Intestinal lipomatosis is a rare disease. There is diffuse, unencapsulated, multifocal infiltration of mature adipose tissue into the intestinal submucosal or subserosal layers. The disease may remain asymptomatic or present with complications like intussusception, obstruction, bleeding or perforation. Hereby the authors report a case of a 46-year-old male patient who presented with acute abdomen to the emergency department of the hospital. An emergency preoperative workup of the patient was performed including Computed Tomography (CT) which showed a sealed caecal perforation. Following which the patient was subjected to emergency laparotomy and right hemicolectomy. The histopathology specimen was intensively studied and the cause for the sealed caecal perforation was confirmed to be due to intestinal lipomatosis.

Keywords: Adipose tissue, Diffuse, Ileocaecal region

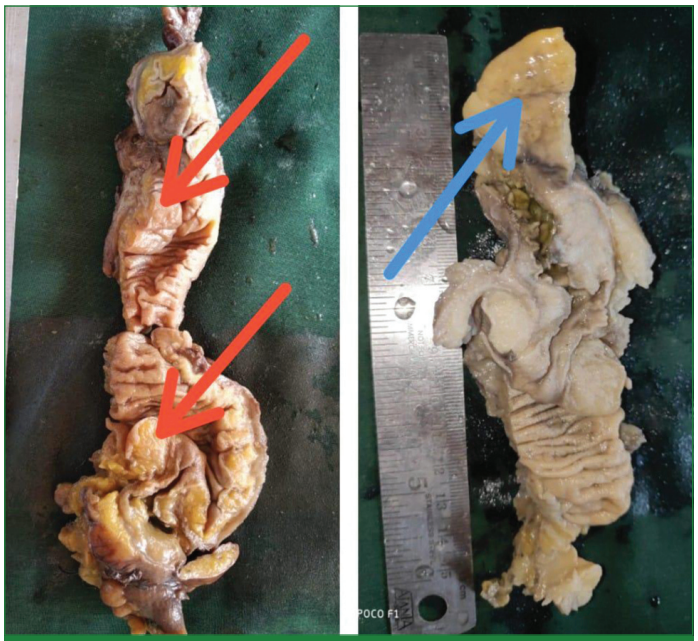
CASE REPORT

A 46-year-old well-built male, non smoker and non alcoholic, presented to the emergency Out Patient Department (OPD) with severe acute pain in the right side of abdomen of one day duration. There was no previous history of any chronic abdominal disease with no similar episode in the past. No history of diabetes mellitus, hypertension or any other chronic illness. On examination, there was marked tenderness with guarding in the right iliac fossa. Patient was evaluated and subjected to Contrast-Enhanced Computed Tomography (CECT) of the abdomen. The scan revealed a sealed caecal perforation [Table/Fig-1].



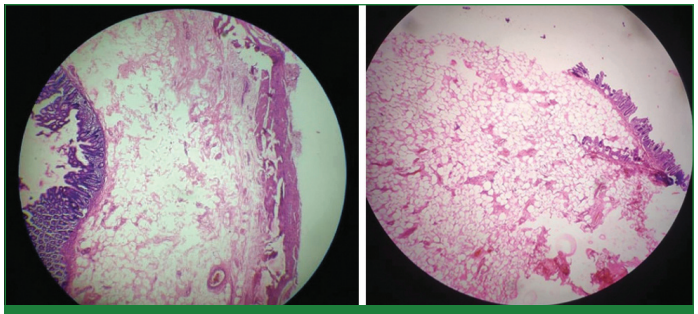
[Table/Fig-1]: Contrast-Enhanced Computed Tomography (CECT) reveals tiny pockets of extra luminal gas around the caecum suggestive of a sealed caecal perforation.

Complete haemogram revealed Haemogloblin (Hb) 12 gm%, total leukocyte 14000/cumm, differential count- Neutrophils 75%, lymphocytes 20%, eosinophils 3%, monocytes 2%. Random blood sugar level, renal function tests and lipid profile were within normal limits. Preoperative CT scan ruled out caecal perforation due to acute appendicitis, tumour mass. Since there was no prior history of any inflammatory bowel disease symptoms, patient was subjected to emergency laparotomy and limited right hemicolectomy was performed. Grossly, the ileum measured 8 cm in length, appendix measured 4 cm in length and caecum with part of ascending colon was 10 cm in length. A tiny area measuring 1 cm in the serosal aspect of caecum revealed marked congestion, with a tiny perforation measuring 0.5 cm which was sealed-off by the congested mesentery. On cutting open, the mucosal surface revealed two polypoid masses, one at ileocaecal region measuring 2.5×2.0 cm, soft in consistency, yellow in colour [Table/Fig-2]. Another polyp was present in the caecum, 4 cm away from the first and measuring 2×2 cm, also yellow in colour and soft in consistency [Table/Fig-3]. In addition, cut-section of the wall of the gut showed yellowish colouration throughout.

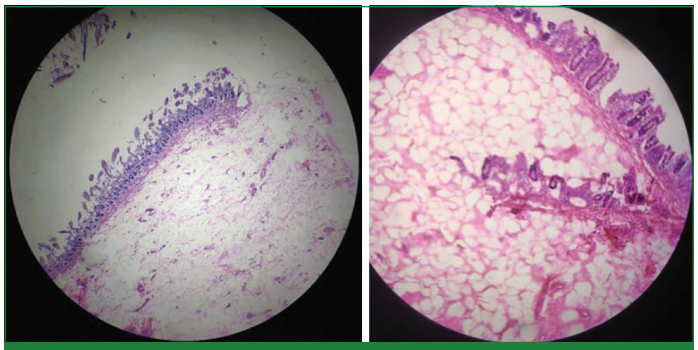


[Table/Fig-2]: Gross appearance of ileocaecal region showing two polypoid masses, yellow in colour measuring 2.5×2.0 cm and 2.0×2.0 cm.
[Table/Fig-3]: Gross appearance of caecum showing a yellow coloured polypoid mass measuring 2.0×2.0 cm. (Images from left to right)

Microscopic sections studied from the terminal ileum, caecum and ascending colon showed diffuse replacement of submucosa by lobules of mature fat cells. Overlying mucosa was unremarkable [Table/Fig-4-6]. Sections from the two lipomatous polyps revealed polypoid masses of mature adipose tissue in submucosa with intact overlying mucosa [Table/Fig-7]. There was presence of focal serosal and periserosal inflammation with vascular congestion. The histopathology was conclusive of intestinal lipomatosis. There



[Table/Fig-4]: Microscopic section of the wall of the ileum showing diffuse infiltration of submucosa by fat cells. Overlying mucosa is normal H&E 4X.
[Table/Fig-5]: Microscopic section of the wall of the ileum showing diffuse infiltration of fat cells in the submucosa. Overlying mucosa is normal H&E 40X. (Images from left to right)



[Table/Fig-6]: Microscopic section of the wall of the caecum showing diffuse infiltration of the submucosa by fat cells. Overlying mucosa is normal H&E 4X.
[Table/Fig-7]: Microscopic section showing a polypoid mass with diffuse infiltration by fat cells in the submucosa of the caecum H&E 40X. (Images from left to right)

were no features suggestive of inflammatory bowel disease or diverticulitis, since the intestinal mucosa was normal in architecture and morphology. There was no evidence of any inflammation in the mucosa. The patient recovered uneventfully and is on regular follow-up. No untoward event has been reported till the time of writing up of this case. Surgical management is the only treatment of choice in this condition.

DISCUSSION

The gastrointestinal tract is an uncommon location for lipomas. They are either seen submucosally in 90% of the cases and subserosally in 10% of the cases [1]. Lipomatous lesions of the GI tract may be solitary or multiple, diffuse or encapsulated lipomas and are second most common benign tumours of the colon [2]. Larger lesions become lobulated or pedunculated and contain mature adipose tissue [3]. Solitary lipomas of the Gastro Intestinal (GI) tract account for upto 8% of all GI tumours. However, intestinal lipomatosis is very rare with an incidence of 0.04% [4]. The vast majority of cases with intestinal lipomatosis are usually asymptomatic. However, some present with intermittent obstruction, colonic perforation and rarely intussusception [5]. The most common cause for perforation of the right-side of colon is malignancy however CT scan did not reveal any mass. Inlammatory bowel disease, diverticulitis and penetrating traumatic perforations are the other common causes of perforation. However, our patient had no past history of any chronic diarrhoea or any change in bowel habits. No history of trauma was reported. Etiology of intestinal lipomatosis is unclear. Anomalies in embryonic development, disturbance of fat metabolism, congenital predisposition, chronic inflammation, alcohol consumption and hamartomatous syndromes have been implicated [4,6,7]. Interestingly, our patient did not have any of the overt factors further demonstrating that the pathogenesis of this disease remains poorly understood.

However, it is pertinent to properly diagnose this condition on histopathology, so that the patient is properly followed-up and treated with prompt surgical intervention if symptoms recur due to presence of this condition, elsewhere in other parts of the bowel.

CONCLUSION(S)

Intestinal lipomatosis is a very rare disease. Though the disease is mostly asymptomatic, it must be kept in mind in the routine differential diagnosis when a patient presents as a surgical emergency with intestinal perforation.

REFERENCES

[1] Ponsaing LG, Kiss K, Hansen MB. Classification of submucosal tumors in the gastrointestinal tract. World J Gastroenterol. 2007;13(24):3311-15.
[2] Agarwal D, Gilotra M, Makkar K, Juneja S. Diffuse Intestinal lipomatosis presenting as intussusceptions. A case report. International Journal of Contemporary Medical Research. 2019;6(9):147-51.
[3] Fenoglio-Preiser CM, Noffsinger AE, Stemmermann GN, Lantz PE, Isaacson PG. Mesenchymal tumors in Gastrointestinal Pathology. An Atlas and text 2nd edition. UK Lippincott, Williams and Wilkins, 1997.
[4] Bilgic Y, Altinsoy HB, Yildirim N, Alatas O, Kanat BH, Sahin A. Familial Abdominal and Intestinal lipomatosis presenting with upper GI bleeding. Case Rep Gastrointest Med. 2015;2015:123723.
[5] Synder C, Cannon JA. Diffuse intestinal lipomatosis presenting as adult intussusception. World J Colourectal Surg. 2013;3:14.
[6] Jeong IH, Maeng YH. Gastric Lipomatosis. J Gastric Cancer. 2010;10:254-58.
[7] Pagacz M, Willis I, Alexis J. Massive lipomatosis of the small intestine causing Intussusception. Case Rep Gastrointest Med. 2019;2019:9701478.

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