

## Intestinal Lipoma: A Rare Cause of Perforation Peritonitis

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### ABSTRACT

Lipoma arises from adipocytes. Lipomas are benign, slow growing tumors, and are generally found in subcutaneous tissue of the proximal extremities and trunk. The gastrointestinal (GI) tract is an uncommon localization for lipoma, but if found; their most common localization is the colon. We report a case of lipoma located in small intestine in a patient presenting with perforation peritonitis.

**Key words:** Benign tumor, Intestinal lipoma, Perforation peritonitis

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### INTRODUCTION

Lipomas are benign tumors of mesenchymal origin. They are the second most common benign tumors in the small intestine and account for 10% of all benign gastrointestinal tumors and 5% of all gastrointestinal tumors<sup>1</sup>. Generally they occur as a single entity, but they may be multiple. Ninety-percent of the gastrointestinal lipomas are located in the submucosa, 10% arise from the subserosa. These tumors have minimal malignant potential. They usually run asymptomatic and become symptomatic when they become enlarged or complicated causing intestinal

obstruction, perforation, intussusceptions or massive bleeding<sup>2</sup>.

### CASE REPORT

A thirty five year old male presented in emergency with severe abdominal pain and was operated as a case of perforation peritonitis. The affected segment of ileum 5 cm in length was resected with an end to end anastomosis. The removed segment was sent for histopathological examination. Gross examination of the specimen revealed a round homogenous, well circumscribed polypoidal growth covered with thin fibrous capsule measuring 4x2.5x1cm in size arising from submucosal layer from a perforation measuring 1 cm in diameter. The cut section

was grayish yellow with occasional proliferative fibrous tissue. Microscopic examination demonstrated mildly congested intestinal mucosa layer. In the underlying stroma, mature fibroadipose tissue was seen with some reactive fibrous septa. No

lipoblasts, hyperchromatic nuclei or reticular, vascular network was seen (Figure 1 and 2). These features are characteristic of intestinal lipoma. Hence diagnosis of intestinal lipoma was made.

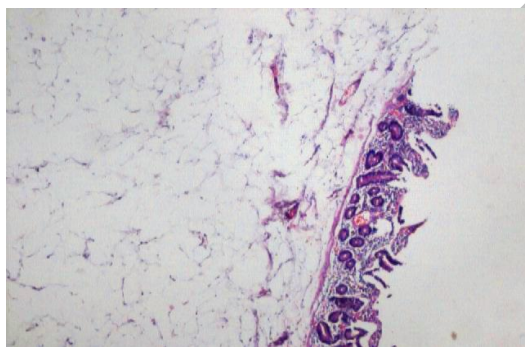


Figure 1: Microscopy revealing submucosal lipoma with mild congestion of overlying thinned out mucosa. No evidence of malignancy (H&E, 40X).

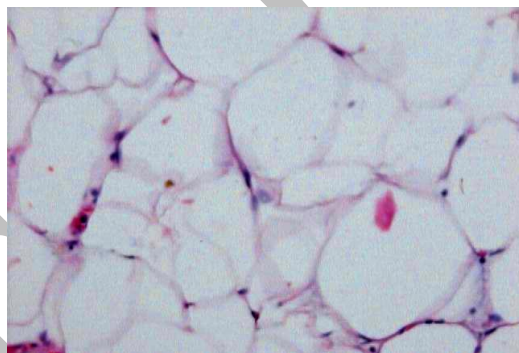


Figure 2: Microscopy revealing lipoma containing mature fibroadipose tissue (H&E, 200X).

## **DISCUSSION**

Lipomas of the large bowel are reported as incidental findings in 0.3-0.5% of cases in autopsies. The peak of incidence seems to be around the 5th and 7th decade of life<sup>3</sup>. They

usually are small lesions, with a diameter less than 2 cm, but can reach a diameter of 30 cm with most lesions being 4 cm at the time of detection<sup>1</sup>.

Gastrointestinal lipomas are most commonly located in the colon (65% to 75%, especially on the right side), small bowel (20% to 25%), and occasionally in the foregut (<5%). Ileum is the commonest site of the small bowel lipomas, followed by jejunum and duodenum. They occur mainly in elderly patients, they are benign in nature but regarding the age and symptoms of these patients, malignant lesions are often considered in distinctive diagnosis. Therefore, because of these characteristics, they are mostly removed to exclude the diagnosis of malignant lesions<sup>1</sup>.

Lipomas can be diagnosed through conventional endoscopy, capsule endoscopy, barium studies and CT. Endoscopic features are smooth, yellowish surface with pedunculated or sessile base. Other endoscopic characteristics are the “cushion sign” and “naked fat sign”<sup>1</sup>. On barium enema lipomas appear as radiolucent mass (because of presence of fat), circular, ovoid, well demarcated, and smooth. Lipomas on barium enema show ‘squeeze sign’ due to their fluctuation in size and shape. The water enema, with water as the contrast agent, accentuates the difference in density between alipoma and surrounding tissues.

Lipomas of the large bowel can be seen, however, by colonoscopy. On computerized tomography (CT) scan the lipoma has a uniform appearance and density<sup>3</sup>. Capsule endoscopy and digital balloon endoscopy are newer means for diagnosing lipomas and are particularly helpful in cases involving small bowel lipomas<sup>1</sup>. The treatment for lipomas depends on the clinical manifestations. Indications for their removal include intestinal obstruction, hemorrhage and malignant potential. There is a theoretical risk of sarcomatous change but this has rarely been documented in the literature<sup>4</sup>. Surgery can be performed through laparoscopy or via an open approach. Elective laparoscopic resection of lipomas is the treatment of choice with the concomitant benefits of laparoscopic surgery, such as shorter duration of hospital stay, less postoperative pain, early restoration of (GI) function and good cosmesis<sup>5</sup>.

Although intestinal lipomas are rare, they should be kept in mind when evaluating the adult patient with intermittent abdominal symptoms. They should be removed because they can cause symptoms such as obstruction or bleeding and usually a

histological evaluation is indicated in intestinal mass to exclude the possibility of

malignancy.

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