

# Enterocolic Fistula in GI Lymphoma: A Case Report

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## Abstract

The following case describes a young patient with failure to thrive and new-onset diarrhea who underwent upper GI series. The findings on upper GI series revealed an enterocolic fistula. Laparotomy was performed and the persistent pathology was lymphoma.

**Keywords:** Enteric lymphoma; Upper GI series; Surgery; Iran

## Introduction

Lymphoma may involve the small intestine primarily or as a manifestation of disseminated systemic disease. Primary small-intestinal lymphomas are most commonly located in the ileum, which contains the highest concentration of lymphoid tissue in the intestine. Although partial small-bowel obstruction is the most common mode of presentation, 10% of the patients with small-intestinal lymphoma present with bowel perforation.<sup>1</sup>

Enterocolic fistulas are usually caused by inflammatory conditions such as inflammatory bowel disease. This abnormal communication can also result from prior surgery, foreign bodies, pancreatitis, diverticulitis, and most ominously, malignancies.<sup>2</sup> This study describes enterocolic fistula in GI lymphoma.

## Case Report

A 36-year-old man presented with an acute diarrheal illness starting 4 days prior to admission. He described 3 to 4 daily episodes of large-volume non-bloody stool with occasional nocturnal episodes. The patient had hematemesis from 2 days before admission. He had occasional diffuse crampy abdominal

pain with vomiting, and notable weight loss over the month before. He had daily fevers, chills, night sweats, and anorexia. There were no recent use of antibiotics, no recent travel, and no history of exposure to sick contacts.

There was no previous history of abdominal surgery. His familial history was negative for inflammatory diseases. The patient was febrile to 37.5°C, with stable hemodynamic vital signs. He was cachectic and pale but appeared nontoxic on physical examination, without lymphadenopathy, with a mildly protuberant abdomen with normal active bowel sounds and no palpable tenderness. His laboratory tests showed normal electrolytes, serum calcium, thyroid-stimulating hormone, and hepatic panel. The complete blood count revealed a microcytic anemia. Work-up for the infectious diarrhea was negative. There were ulcer of cardia with clean base and a polypoid lesion in the second part of the duodenum in esophagogastroduodenoscopy. The biopsy sample showed inflammatory polyp. Chest x ray was normal. The upper GI series showed enterocolic fistula (Figure 1).

The patient ultimately underwent surgery due to upper GI bleeding and enterocolic fistula. The stomach and duodenum had no gross pathology in palpation. Intraoperative findings indicated no abdominal ascitis and lymphadenopathy. The spleen and liver were grossly normal. In addition, there was adhesion between the jejunum, 15 cm far from the treitz ligament and mid-part of the sigmoid colon. After enterolysis, a fistula without a mass was observed between these two segments. The fistula was divided and the jejunum and colon were resected with margins of 10

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**Figure 1:** Enterocolic fistula: demonstration of colon after short period of upper GI series.

cm and anastomosed, respectively. The patient was referred for chemotherapy.

The biopsy sample showed diffuse low grade B-cell lymphoma. The mucosa near the fistula in the small intestine with thick and small villi infiltrated with irregular nuclear margin, small lymphoid cells and dispersed macrophage with transmural spreading and invasion to the vascular wall. The peripheral blood cells stained positive for markers CD 20 and CD 3 which were 9%, 64%, respectively.

## Discussion

The diagnosis of lymphoma in this case explains the patient's B symptoms (B symptoms include unexplained weight loss, fevers, and drenching night sweats). The histological diagnosis was diffuse low grade B-cell lymphoma.<sup>3</sup> In a series of 371 patients with primary gastrointestinal non-Hodgkin's lymphoma, evaluation of anatomic distribution showed the majority to be gastric (75%), with 9% in the small bowel and approximately 9% localized in colonic sites.<sup>4</sup> In the literature, lymphomas have been rarely cited as a cause of enterocolic fistulas.<sup>5</sup> Cancers in general, however, are well known to cause invasion into neighboring structures. Bleeding due to gastric and duodenal etiology was ruled out. The patient's diarrhea and weight loss may be explained by several

mechanisms. The fistula between the small intestine and sigmoid colon was quite large and might have caused a short bowel syndrome. This in turn may have caused malabsorption, with early dumping of the small bowel contents. An increased fluid load in the sigmoid colon also cannot be reabsorbed easily. However, the patient's symptoms were somewhat acute and his electrolytes were not deranged, which argues against the possibility of a chronically open high-output fistula. The other possibility is steatorrhea, which is caused by the loss of bile acids over time due to bypassed absorption of bile salts in the terminal ileum because of the fistula. Alternatively, bile salts can themselves cause diarrhea by stimulating secretion in the colon. Both of these mechanisms could lead to malabsorption of fat and fat-soluble vitamins. Finally, diarrhea could also be due to colonization of the small bowel by colonic bacteria, resulting in small bowel bacterial overgrowth. This problem can be treated with non-absorbable and absorbable antibiotics.<sup>2</sup>

Localized small-intestinal lymphoma should be treated with segmental resection of the involved intestine and adjacent mesentery. If the small intestine is diffusely affected by lymphoma, chemotherapy is preferred over surgical resection. The use of adjuvant chemotherapy after resection of localized lymphoma is controversial.<sup>1</sup> Treatment of an enterocolic fistula depends on the etiology. Foremost is the correction of fluid and electrolyte abnormalities. Nutritional

repletion and treatment of associated infections or abscesses with antibiotics, and possibly drainage, should be considered. Closure of the fistula should be done surgically if feasible. In Crohn's disease-related fistulas, medical therapy with infliximab may have less efficacy in healing high-output internal fistulas as compared with enterocutaneous and perianal fistulas.<sup>6</sup> Factors that make closure of the fistula more difficult include size of the fistula, presence of cancer, highly active inflammatory bowel disease, foreign body presence, and uncontrolled infection.

Diarrhea in the patients with associated systemic symptoms is suspicious for an underlying organic cause. GI study should be considered in all such patients. Intestinal lymphomas are rare, and even more rarely cause internal fistulous connections. The most

important issue in these patients without previous surgery is determination of its etiology and the second one is its management. Radiologic studies may help to determine the etiology of fistula. In an asymptomatic patient without underlying etiology, conservative therapy is the treatment of choice. In order to make a definite diagnosis and resolve the etiology, exploratory surgery is indicated.

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