



Primary colorectal lymphoma: A rare cause of small bowel obstruction

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Abstract

Primary colorectal lymphoma is a rare cause of intestinal obstruction that is usually diagnosed late due to the presentation of non-specific symptoms. It is more common in males and older age groups. Diagnosis usually occurs after operative intervention through biopsy of the mass. We present a rare case of a 30-year-old female who had complaints of abdominal pain and vomiting and was diagnosed with primary colorectal lymphoma on biopsy of the surgical specimen.

Keywords: Primary colorectal lymphoma; Diffuse Large B cell Lymphoma.

Introduction

Small Bowel Obstruction (SBO) is a frequently encountered emergency surgical presentation. A large number of the cases are caused by postsurgical adhesions and hernias.

Gastrointestinal Tract (GIT) lymphomas comprise approximately 1-4% of all Gastrointestinal (GI) malignancies, 10-15% of all Non-Hodgkin's Lymphoma (NHL) and 30-40% of all extra nodal NHL's, making the GIT the most frequent site of extra nodal lymphomas [1]. Common sites of NHL are stomach, small bowel and ileocaecal region (stomach being the most common). B-cell type is found to be common in majority of the cases of primary intestinal NHL with the most common subtype being Diffuse Large B Cell Lymphoma (DLBC).

A large number of cases of primary intestinal NHL are B-Cell type with DLBC being the most common subtype.

Lack of specific symptoms causes a delayed diagnosis which is usually made postoperatively. Diagnosis can be made based on endoscopic biopsies and a histopathology report, subtyping can be done using immunological and molecular markers. In view of a rare disease phenomenon a proper treatment proto-

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col is lacking. The principle modality of treatment is combined; surgery and chemotherapy.

In this report, the authors present a rare case of small bowel obstruction which was clinically diagnosed as obstruction due to post operative adhesions but was, in fact, DLBCL.

Case presentation

A 30 year old, non-diabetic, normotensive female patient presented to the surgery emergency with complaints of abdominal pain and bilious vomiting for the last 1 week. It was associated with abdominal distension and constipation. There was no other significant history except having been operated by a Pfannenstiel incision for a C-section 6 months ago. She developed a lump at the lateral edge of the incision, was diagnosed with scar endometriosis and underwent excision of the scar.

Clinical examination revealed a pulse rate of 98 beats per minute and BP was 110/70 mm Hg. There was no pallor, icterus, clubbing, koilonychia or lymphadenopathy. On per abdominal examination central abdominal distension was present with a vague palpable mass in the right iliac fossa. X-Ray examination showed multiple air fluid levels and hence a clinical diagnosis

of small bowel obstruction likely due to post surgical adhesions was made. Since vital signs of the patient were stable, she was kept on conservative management (NPO, nasogastric aspiration and IV fluids).

In view of failure of conservative management (vomiting on oral trial and increase in the size of the lump), patient was taken up for emergency exploratory laparotomy with a working diagnosis of small bowel obstruction due to post surgical adhesions.

Intraoperatively the following findings were noted (Figure 1 and 2).

1. Level of obstruction was identified at the ileocaecal junction with gross dilatation of the proximal small bowel and collapsed ascending, transverse, descending colon.
2. A hard intraluminal lump of the size 7x6 cm was present in the caecum in posteromedial aspect compressing upon the ileocaecal junction.
3. Mesenteric lymphadenopathy was also present in the mesentery of right colon and terminal ileum.

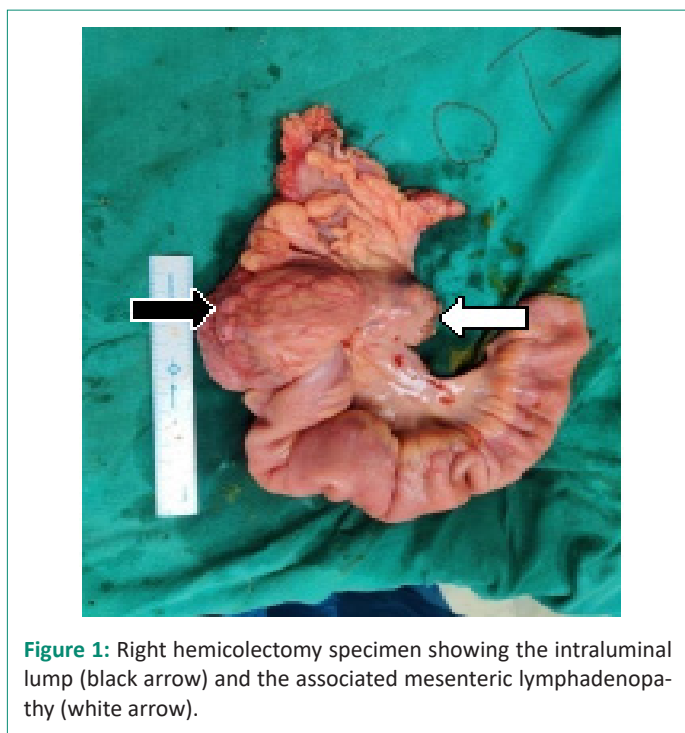


Figure 1: Right hemicolectomy specimen showing the intraluminal lump (black arrow) and the associated mesenteric lymphadenopathy (white arrow).

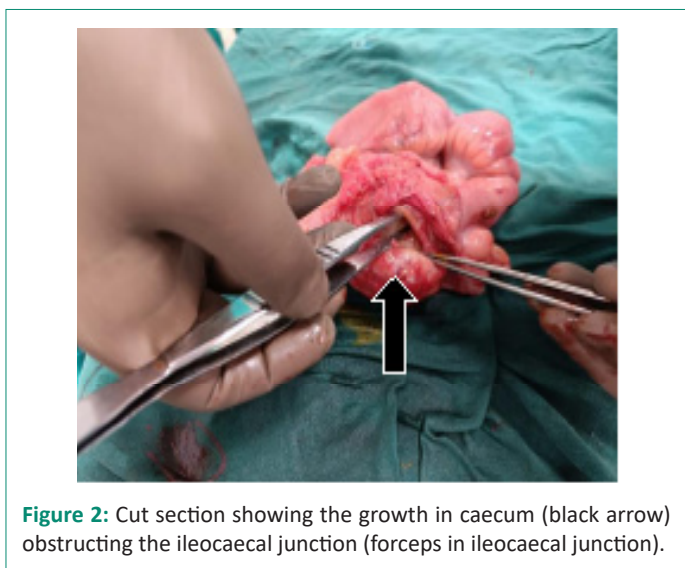


Figure 2: Cut section showing the growth in caecum (black arrow) obstructing the ileocaecal junction (forceps in ileocaecal junction).

Right hemicolectomy with end to end ileotransverse anastomosis was done. Patient was allowed orally on the third post operative day and was discharged on the fifth post operative day. Biopsy report of the hemicolectomy specimen confirmed the diagnosis of NHL, DLBC type arising from the caecum with tumour nodules in the associated mesenteric lymph nodes.

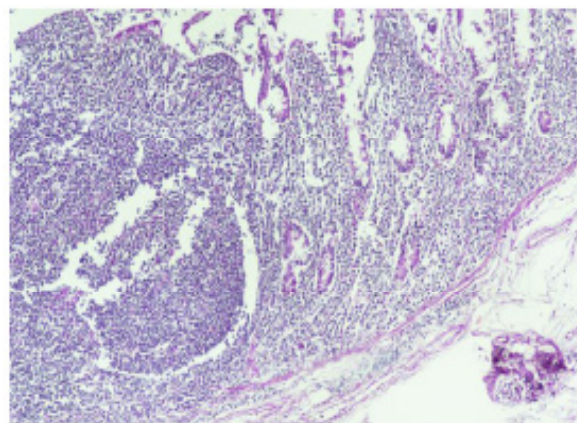


Figure 3: HPE showing sheets of atypical lymphoid tumour cells arising from mucosa.

After receiving the biopsy report, bone marrow biopsy was done which was normal. With a diagnosis of primary colorectal lymphoma the patient was started on adjuvant chemotherapy in the follow up period by a medical oncologist.

Discussion

SBO is a frequently encountered emergency surgical presentation. The vast majority of cases are caused by post-surgical adhesions and hernias. Malignancy is responsible for approximately twenty percent of cases and is the third most common cause of SBO [2]. Both benign and malignant tumours can cause obstruction and they may be found within or outside the small bowel wall.

Lymphomas make up an estimated 24% of neoplasm induced bowel obstruction [3]. GI lymphomas (an uncommon disease) are the most frequent site of extra nodal lymphomas and are mostly of NHL type. GI lymphomas comprise approximately 1-4% of all GI malignancies, 10-15% of all NHL and 30-40% of all extra nodal NHL's, making the GIT the most frequent site of extra nodal lymphomas [1]. Order of involvement is as follows; stomach (65%), small intestine (20-30%), colon (10-20%) and esophagus (1%) [4].

Most common sites in the colon is the ileocaecal region followed by caecum and sigmoid colon. In their case series, Bairey et al. had found the ileocaecal region to be the most frequent site accounting for 76% of cases [5]. As for our case, the area involved was also the ileocaecal region.

Most of the cases of primary intestinal NHL are B-Cell type with DLBC being the most common subtype. T cell lymphomas account for a lesser percentage, however B cell lymphomas have a better prognosis. Guo-Bao Wang et al. in their case series of 81 patients found that 51.9% patients had high-grade B-cell lymphoma and 25.9% patients had T-cell lymphoma [6].

Dawson et al. in 1961 has given the criteria for diagnosis of primary colorectal lymphomas as follows [7];

1. Absence of peripheral lymphadenopathy at the time of presentation.

2. Lack of enlarged mediastinal lymph nodes.
3. Normal total and differential white blood cell count.
4. Predominance of bowel lesion at the time of laparotomy with only lymph nodes obviously affected in the immediate vicinity.
5. No lymphomatous involvement of liver and spleen.

All of the above mentioned criteria were fulfilled by our patient.

The clinical presentation is variable with non-specific abdominal complaints. The most reported symptoms are pain in (62%) of the patients, abdominal mass (54%) and weight loss (43%) [8]. It is due to these nonspecific symptoms in more than half of the patients leading to a delayed diagnosis causing lymphoma to be a bulky disease reaching up to 5 cm in diameter [5]. Such large lesions are prone to producing obstruction, bleeding and perforation like in our case. Due to delay in diagnosis operative procedure is either urgent or emergent for indications such as obstruction and bleeding. In these case scenarios mostly the diagnosis is made after operative intervention after the final biopsy report is received. Colonoscopy is an important diagnostic tool in the armamentarium but is not always possible to diagnose due to lack of specific symptoms in the form of bleeding per rectum [5].

Most lymphomas can be seen on CT scan as a mass or thickening of the intestinal wall, in rare cases luminal obstruction may be observed [9] (as present in this case). Diagnosis can be made based on endoscopic biopsies and a histopathology report, subtyping can be done using immunological and molecular markers.

In view of a rare disease phenomenon a proper treatment protocol is lacking. The principle modality of treatment is combined; surgery and chemotherapy. Early stage tumors are treated with surgery followed by chemotherapy and advanced stage tumors are treated with multiple modality chemotherapy. Using Rituximab, B cell lymphomas may be treated with a combination of chemotherapy and immunotherapy for a better response [10].

Conclusion

Primary colonic lymphoma presenting as an intestinal obstruction is a very rare condition. Although it commonly occurs in an older age group (over 50) it can occur atypically in younger patients as in this case. The presentation is non-specific leading to diagnosis at a late stage.

Lymphoma should be kept in mind in diagnosis (using Dawson et al. criteria) when any other cause of obstruction is not evident. Treatment includes surgical resection of lymphoma followed by chemotherapy.

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