www.jmscr.igmpublication.org
Impact Factor 5.244
Index Copernicus Value: 83.27
ISSN (e)-2347-176x ISSN (p) 2455-0450
crossref DOI: https://dx.doi.org/10.18535/jmscr/v4i11.09

IGM Publication
Journal Of Medical Science And Clinical Research
An Official Publication Of IGM Publication

Case Report

Splenic Flexure Diffuse Large B Cell Lymphoma With Bowel Obstruction: A Radio Pathological Correlation

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Abstract

Background: *The colorectal lymphoma encountered rarely among the colonic malignancies. Early diagnosis is often challenging because of non specific symptoms, with subsequent delays in diagnosis and management. We describe a rare case of large B cell lymphoma of splenic flexure with associated obstruction.*

Case Presentation: *A 73-year-old male with a 6 days history of vague abdominal pain, constipation and melena was referred to our hospital. Computed tomography scan of abdomen revealed the presence of a thickened bowel loop with stricture along the splenic flexure and large descending bowel displacement medially with adhesion. Because of the acute obstruction with poor clinical condition the patient underwent left hemicolectomy, proximal colostomy and distal mucous fistula formation. The surgically resected splenic flexure was all pathologically and immunohistochemically diagnosed as diffuse large B-cell lymphomas (DLBCL). The patientis was on advance life support and ventilatory support and died 15 days after the surgery by multiple organ dysfunction syndromes.*

Conclusions: *Primary colonic lymphomas represent a rare minority among the colonic neoplasm's and if not correctly diagnosed can have poor outcome. This case highlights the difficulty in diagnosing of primary colonic lymphoma at splenic flexure.*

Keywords: *Mucous fistula, primary colonic lymphoma, Adenocarcinoma.*

Case Report

The primary colonic lymphoma (PCLs) are rare malignancies comprising of 1/5th of all gastrointestinal lymphomas and less than 1 percent of all large bowel malignancies. It is the third most common large bowel malignancy after adenoca-

rcinoma and carcinoid [1]. Patients often present with vague and non-specific symptoms that subsequently lead to delay in diagnosis which often occurs after laparotomy and surgical resection. It is often associated with inflammatory bowel disease and immunosupression. Males are predominantly affected with highest incidence at the age of 50–70 years. Most PCLs have a B-cell lineage and are classified as diffuse large B-cell lymphomas (DLBCL) [2]. The optimal treatment for PCL is controversial. Here, we present an unusual case of diffuse large B-cell lymphomas of the splenic flexure with acute intestinal obstruction.

Case Presentation

A 73-year-old male presented with a 6 days history of vague abdominal pain and constipation. The patient also complained of fatigue, weight loss and melena. The patient's history included repaired left indirect inguinal hernia repair 10 years back with uneventful recovery. The abdomen was firm, tender to palpation over the left upper quadrant. Clinical examination on admission suspected for acute bowel obstruction likely due to ischemic bowel disease. A ryles tube and flatus tube were inserted immediately. Complete blood examination for counts, biochemical parameters revealed the normal range except low hemoglobin level (hg 8g/dl). X ray abdomen shows distended large bowel and small bowel proximal to the splenic flexure (Figure 1).

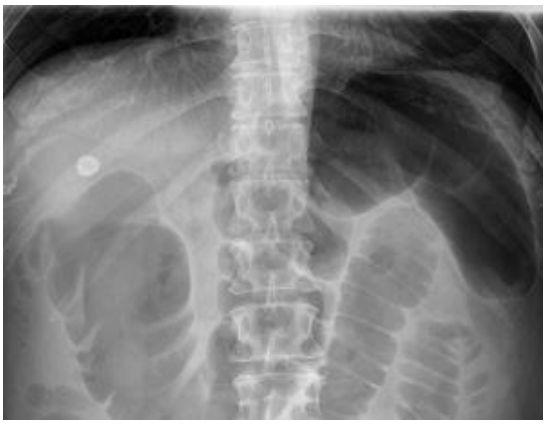

Figure 1 Radiograph abdomen at the time of presentation, erect AP view showing distended small and large bowel loops with a cut off at splenic flexure.

Abdominal computed tomography (CT) with intravenous contrast in arterial portal and delayed phase were acquired to rule out any vascular disease along with malignancy. The CT study showed a focal 6 cm long thickened bowel loop (12-16mm) with heterogenous enhancement with luminal narrowing and proximal dilatation of the bowel loops (Figure 2).

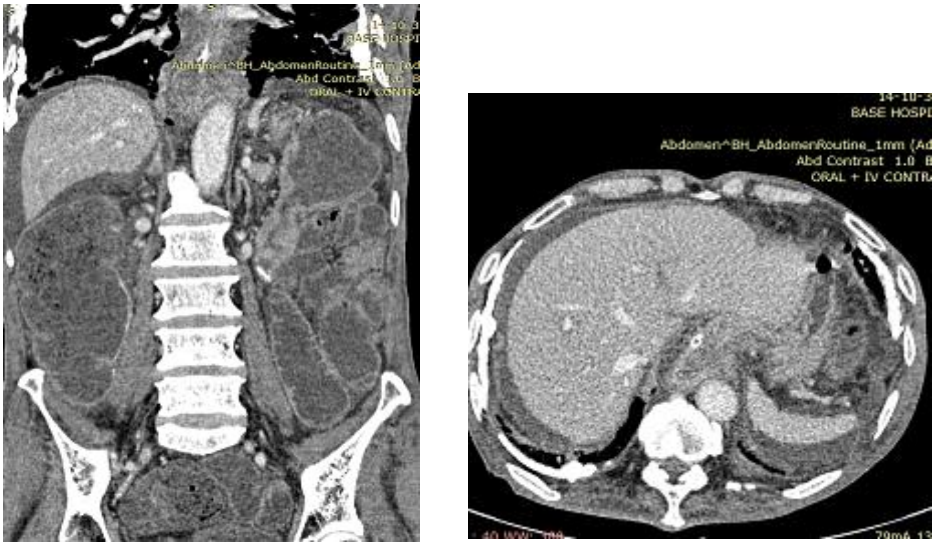

Figure 2: CECT abdomen coronal and axial view showing large and small bowel dilatation with a thickened heterogenous bowel loop at the splenic flexure with luminal narrowing and thickening of the wall along with dilatation of the proximal bowel. The axial view shows the medial dispalcemet of the splenic flexure with thickekened wall. There is moderate ascites and bilateral pleural effusion. A nasogastric tube is also seen in-situ.

There was associated moderate ascites and bilateral pleural effusion. The blood vessels showed optimal contrast opacification. No obvious lymphadenopathy or hepatosplenomegaly noticed. Patient was admitted immediately and immediately shifted for surgical exploration. On surgical exploration a growth at the splenic flexure was noted. The patients went surgical resection of the affected splenic flexure and the left colon with loop colostomy made for the proximal loop while mucous fistula made for the distal loop. 3 point blood transfusions were performed to replace lost blood. Patients was put on IV line and antibiotics (ampicillin, gentamycin and metronidazole IV route). Both the rapid health deterioration of patient, features of bowel obstruction and the high hemorrhagic risk prompted us to perform emergency surgery.

Gross examination of the resected specimen showed a 22 cm long bowel loop with a constriction at 16 cm from the proximal end along with preceding dilated portion of 10 x 6cm. cut surface showed a circumferential constricting growth 10 cm from the proximal and 5 cm from the distal end. Growth measures 6 cm in length and circumference measures 3.5cm an area of ulceration and necrosis is seen proximal to the growth with everted both edges. The microscopic examination (figure 3) revealed diffuse infiltration of the large lymphoid cells interspersed with small lymphoid cells through the lamina propria into the muscularis mucosae. There is involvement of the adjacent lymph nodes showing effaced architecture and no nodularity.

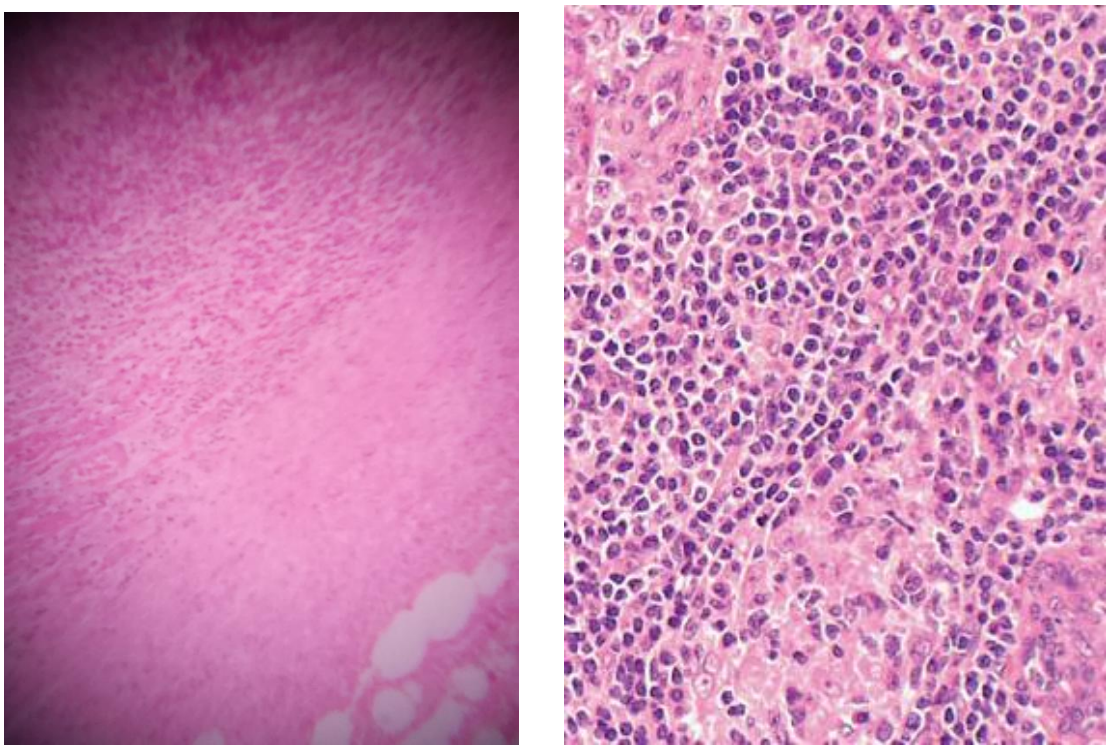

Figure 3 (low and high power light microscopic view) showing the predominantly lymhocytic infiltration in the bowel with loss of normal mucosal architectural pattern.

The margin of the resected sample was free from any pathological abnormality.

Immunohistochemical staining was also performed and revealed the tumor to be CD10+, CD3+, CD79+ and negative for BCL6 and MUM1. The patient had deranged vital biochemical profile which deteriorated 2 week for this he was admitted in ICU with advanced life support following the surgery however he succumbed later by multiple organ dysfunction syndrome.

Discussion

The colon is an uncommon site of involvement of Non-Hodgkin's lymphoma (NHL). The most frequently involved colonic site at diagnosis is the ileocaecal region (nearly 50% of the cases), followed by the caecum, then sigmoid and the rectum. The clinical presentation of colonic lymphoma is varies differently and quite uncommon. The commonly associated symptoms of colonic lymphoma are pain in abdomen and weight loss with a palpable mass identified on clinical examination. Primary colonic lymphomas commonly seen in between the fourth and seventh decade of life. The etiology of DLBCL is unknown, but some risk factors and predisposing conditions have been identified such as immunodeficienty and inflammatory bowel diseases [3]. Despite the severe luminal narrowing, lymphoma is less likely to cause obstruction because it does not elicit a desmoplastic response and submucosal lymphoid infiltration weakens the muscularis propria of the wall. The correct diagnosis is often challenging and usually based on histolopathological findings after operative colonic resection. The radiological diagnosis of colonic lymphoma could be based on the CT appearance of a bowel based mass or thickened bowel loop with extensive abdominal and/or pelvic lymphadenopathy. However primary colonic lymphoma is less common than secondary associated with HIV and patients of immunos-uppression disorders. History of celiac disease, autoimmune disorders are also one of the cause of bowel lymphoma. Even in the absence of lymphadenopathy, characteristic images such as location at the colon, demarcation from the peri-colonic fat with no invasion of surrounding viscera and the presence of perforation in the absence of desmoplastic reaction should raise the suspicion of a lymphoma. Fisher et al. suggest that without the presence of enlarged lymphadenopathy nodes it is difficult to distinguish this type of tumor from primary adenocarcinoma [4]. Radiologic examination of large bowel and colonoscopy with biopsy could not sufficient for definitive diagnosis of colonic lymphoma, but US and/or CT are invaluable for the staging of the disease. Malignant lymphoma of the colon has been reported in association with a variety of other entities, especially those of altered immune status and associations with chronic ulcerative colitis, Crohn's disease, and celiac disease. They showed the importance of considering multiple lymphomatous polyposis in differential diagnosis of patients affected by atypical inflammatory bowel disease, because, although the clinical, radiological, endoscopic, and histological presentation of gastrointestinal MCL is very informative, it should be kept in mind that morphological features alone may not be sufficient to diagnose of colonic non-Hodgkin lymphoma [5]. Wang et al. showed that the morphology of primary colonic lymphoma (PCL) is variable, resulting in a wide range of endoscopic features, including mass lesions, narrowing of the lumen, ulceration, mucosal irregularities, and aphthous lesions [6]. Wyatt revealed that endoscopic findings of colonic lymphoma are classified by ulceration, infiltration, and the presence of a mass [7]. Furthermore for B-cell lymphomas, fungating mass is the most common endoscopic type (54.0%) [8]. The radiologic changes may be similar to those found in Crohn's disease, amoebiasis or pseudomem-branous colitis [9]; they can be divided into five groups: mucosal nodularity, endo-exoenteric mass, intraluminal mass, mural infiltration and mesenteric invasion [10].

The diagnosis of primary colonic lymphomas (PCL) was initially established in 1961 and included the following diagnostic five criteria [11]. Our patient's disease met all these criteria preoperatively. The most common histological subtype of colorectal lymphoma is diffuse large B-cell lymphoma (DLBCL), as this case reported [12]. Other histologies include follicular lymphoma, Burkitt lymphoma and Mantle cell lymphoma [13].

For definitive diagnosis is crucial to define morphology and immunophenotyping.

Diffuse large B-cell lymphoma cells generally express pancreas B cell markers such as CD20, CD19, CD22, CD45 andCD79a; seventy percent of tumor cells express BCL-6 protein;

CD10 is expressed in 30 to 60% of cases [14]. Ohshima et al. reported that CD10 expression was closely associated with improved survival in patients with diffuse large B-cell lymphomas. So they concluded that that CD10 expression may be useful, in combination with clinical parameters, for determining the prognosis of DLBC [15]. Some authors have reported rare cases of emphysematous colitis [16] as the first clinical manifestation, and also masquerading Crohn's disease [17]. A multidisciplinary tumor board should manage all aspects of care of patients with colonic lymphoma. Future advancements in molecular genetics, tumor analysis, and immunohistochemistry could led to most effective management strategies for patients with colonic lymphoma. Accurate staging of bone marrow status is crucial to optimize the therapeutic strategy. Bone marrow biopsy (BMB) remains the gold standard to determine bone marrow involvement (BMI) but has poor sensitivity because the sample size may be small or the BMI focal [18].

Treatment of colorectal lymphoma usually involves combined modality of approach that includes surgical excision and systemic chemotherapy is the preferred treatment. [19]. Those with limited stage disease may enjoy prolonged survival when treated with aggressive chemotherapy. Radiotherapy is beneficial for incomplete resection or non-resectable disease. chemotherapy, radiation, surgery or a combination of these [20]. A study by Risio et al has demonstrated similar case of caecum, there are quite similarities in the cases however this case did not show anterior hepatic metastatic deposit on imaging and no gross lymphadenopathy unlike the described study. A surprising observation has came in notice of a common history of repaired inguinal hernia of the ipsilateral side with large B cell lymphoma development later in the large bowel on the same side both cases however these may be just incidental as this require larger study for proving.

Conclusion

This case is a rare case report of primary colonic lymphoma arising from the splenic flexure. In this case, the tomography and surgical exploration showed findings mimicking colonic adenocarcinoma. Colonic lymphoma is extremely rare and the variable imaging tests are non-specific; the diagnosis is rarely made before surgery and usually confirmed by histopathological methods after surgery. This kind of tumor should be considered in the differential diagnoses of colonic masses. CT scan has an important role in narrowing the diagnosis, ruling out any dissemenitaion and better judging the co morbidities. This saves the time of management and mortality.

Source(s) of support: Nil
Presentation at a meeting: Nil
Conflicting Interest: Nil

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