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Case Report

Primary Colonic Non-Hodgkin Lymphoma: Case Report

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Introduction

Primary colonic lymphoma is a rare tumor of the gastrointestinal system, with the most common histological subtype being Non-Hodgkin Lymphoma (NHL). It ranks third among colon cancers, following adenocarcinomas and carcinoid tumors, and constitutes approximately 0.2% - 1.2% of all colon cancers [1]. Most cases of primary colonic lymphoma occur in individuals aged 50 and above, with a male-to-female incidence ratio of approximately 2:1 [2,3]. The most common sites of involvement in the colon are the ileocecal region and the cecum [2,4].

Patients typically present with nonspecific symptoms such as abdominal pain, weight loss, and anorexia [2,5]. Diagnosis is made based on clinical findings and imaging methods. In elective cases, colonoscopic biopsy is used, while in emergency cases, diagnosis is confirmed postoperatively via pathological examination [2,6].

This study presents a case of a patient who presented with right lower abdominal pain and anorexia to the emergency department, ultimately diagnosed with primary colonic lymphoma. The case has been selected to provide insights into the clinical findings and diagnostic methods for this rare condition.

Case presentation

A 35-year-old male patient presented to the emergency department with a 2-day history of right lower abdominal pain and anorexia. Physical examination revealed tenderness and rebound tenderness in the right lower quadrant. **Laboratory results revealed** a White Blood Cell (WBC) count of 14,330/mm³, neutrophils 78%, lymphocytes 14%, monocytes 6%, eosinophils 2%. Hemoglobin level was 12.8 g/dL, red blood cell count was 4.7 million/mm³, and platelet count was 275,000/mm³. Lactate Dehydrogenase (LDH) level was elevated at 280 U/L (normal range: 140–280 U/L), which may indicate tissue damage or tumor activity.

Abdominal Computed Tomography (CT) demonstrated wall thickening and heterogeneous fat stranding around the cecum, with a maximum diameter of 8 mm at the posterior cecum. Abdominal-CT demonstrated wall thickening at the posterior cecum (maximum thickness: 8 mm) and increased density in the surrounding mesenteric fat. No significantly enlarged lymph nodes were identified in the mesentery or para-aortic regions. The appendix appeared distended and hyperemic, measuring approximately 9 mm in diameter, with surrounding inflammatory changes. These objective findings raised suspicion for an inflammatory or neoplastic process (Figure 1).

On exploration, the appendix was found to be hyperemic and edematous. Due to the presence of wall thickening at the cecal base and a palpable mass, partial cecal resection and appendectomy were performed. The cecal base was resected and closed using a linear stapler. Postoperative recovery was uneventful, and the patient was discharged in good health. Postoperative histopathological and PET-CT findings confirmed a diagnosis of primary extranodal Diffuse Large B-cell Lymphoma (DLBCL) localized to the appendix and cecum (Stage IE) (Figure 2).

Discussion

Colonic lymphoma typically presents with nonspecific symptoms such as abdominal pain, changes in bowel habits,

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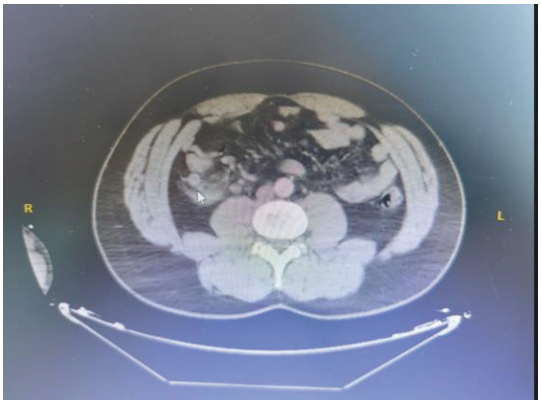

Figure 1: Axial abdominal CT showing focal wall thickening in the cecum and pericecal fat stranding.

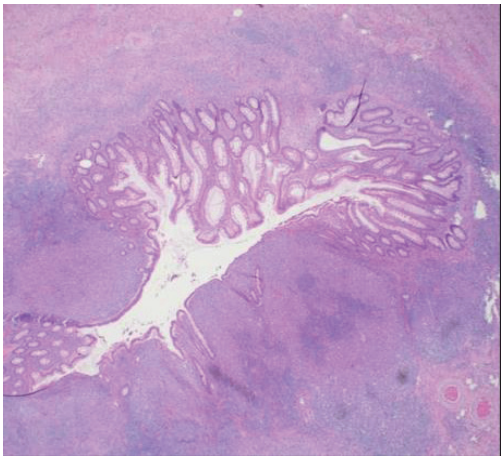

Figure 2: Histopathological slide showing diffuse infiltration by large atypical lymphoid cells. Immunohistochemical staining positive for CD20, consistent with DLBCL.

and weight loss. Other complications such as nausea, vomiting, hematochezia, bowel obstruction, intussusception, and acute peritonitis due to intestinal perforation, may also occur. These nonspecific symptoms can delay diagnosis [2,4].

Most colonic lymphomas are B-cell derived (80% - 85%), while T-cell derived lymphomas are rarer and are associated with a poorer prognosis (10% - 15%). The most commonly used diagnostic methods are colonoscopy and CT. Colonoscopy allows for macroscopic evaluation of the lesion and enables biopsy sampling. Immunohistochemical staining plays a significant role in differential diagnosis [1,5].

To determine the primary origin of the lymphoma, a Positron Emission Tomography-Computed Tomography (PET-CT) scan was performed postoperatively. The scan revealed hypermetabolic activity confined to the cecal/appendiceal region, without evidence of lymph node or distant organ involvement. Based on these findings, the case was staged as Ann Arbor Stage IE, indicating a primary extranodal lymphoma localized to the colon [7,8].

Surgical intervention and combined chemotherapy are the most commonly used treatment methods for primary colonic lymphoma. In cases with large masses or residual disease after chemotherapy, radiotherapy may be added. Rituximab (anti-CD20 monoclonal antibody) has been shown to increase treatment efficacy and reduce the need for surgery [2,4,9].

Although surgery has advantages, such as determining the tumor stage, providing prognostic information, and preventing complications like tumor perforation, its precise role in the treatment of colorectal lymphoma remains unclear. Early-stage disease is typically treated managed surgically, while advanced cases are treated with chemotherapy or a combination of therapies [3,6,8].

Conclusion

In conclusion, in patients presenting with nonspecific symptoms such as abdominal pain and weight loss, when a colonic mass is detected, especially in the presence of enlarged lymph nodes, lymphoproliferative malignancies should be considered [1,2]. These cases require a multidisciplinary approach for diagnosis and treatment [4,5].

Ethical approval and consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. All procedures followed ethical standards in accordance with the Helsinki Declaration.

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