COLORECTAL LYMPHOMA IN PAEDIATRIC PATIENT

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ABSTRACT

Primary gastrointestinal lymphoma is an unusual disease and most commonly occurs in stomach but can involve any part of gastrointestinal tract from esophagus to rectum. Primary colorectal lymphoma is a very rare entity and accounts for 6-12% of gastrointestinal lymphoma. Historically, aggressive B-cell lymphomas have been the most common gastrointestinal lymphoma reported in the literature. Most patients with primary colorectal lymphoma present with abdominal pain but obstruction is unusual. Although the lesions may be evident on radiographic studies but the findings are generally nonspecific and definitive diagnosis relies on histopathological analysis. We present a case of 10 year old girl presented with lower abdominal pain, diarrhea and increased frequency of urine for the last one month. Her ultrasonography showed a mass in left iliac fossa. Barium enema examination and abdomino-pelvic CT scan revealed a presacral mass which on histopathology turned out to be a B cell lymphoma. The mass was surgically removed and chemotherapy was planned.

Key words: Lymphoma, Colorectal, Ultrasound, Barium enema, CT scan.

INTRODUCTION

Approximately 40% of lymphomas have extranodal manifestations, and most common site of extranodal involvement is the gastrointestinal tract. Among the gastrointestinal lymphomas, colorectal lymphoma remains a rare clinical entity.[1] Colorectal lymphomas account for only 15 to 20% of gastrointestinal lymphomas, as compared to involvement of stomach, 50 to 60% or small intestine, 20 to 30%.[2] Colorectal lymphoma differs from the gastric counter part not only in pathology but also in its presentation, treatment and prognosis. Overall, primary colorectal lymphoma accounts for 1.4% of all cases of non-Hodgkin's lymphoma and less than 1% of all colorectal malignancies.[3] The most common histologic subtype affecting the gastrointestinal tract and colon is diffuse B-cell lymphoma.[2]

CASE REPORT

A 10 years old girl, resident of District Rahim Yar Khan presented with diarrhea for last one month along with lower abdominal pain. Frequency of diarrhea was 7-8 stools per day which were mucoid and bloody in nature, associated with lower abdominal pain, mainly in left lower quadrant. There was no history of fever. There was also history of increased frequency of urination but not associated with hematuria, burning micturation, dysurea, nausea or vomiting. The past medical and surgical history was insignificant.

Our patient was young girl with average height, weight and built. She was well oriented in time, place and person with following vitals: pulse 88/min, regular; temperature 98.6 F; blood pressure 110/70 mmHg. She was slightly pale but not jaundiced or edematous. On examination of abdomen, there was a non tender mass in left iliac fossa and hypogastrium. There was no hepatosplenomegaly. Rectal examination revealed a non tender mass in the anterior wall of rectum. Rest of examination was normal.

Her laboratory investigations were as under: urine examination: 12-15 pus cells/HPF and 2-3 RBCs/HPF; Blood C/E: hemoglobin 10.9 g/dl, TLC:7200/mm^3, neutropils 54%, lymphocytes 45%; Platelets 190000/mm^3; LFTs: Serum bilirubin 1.1 mg/dl, SGPT 48 U/I, SGOT 47U/I; serum proteins 6.4 g/dl, Serum albumin 4.3 g/dl; Screening for hepatitis B & C negative; Blood urea 28 mg/dl; Serum creatinine 0.9 mg/dl; CA 125 level 26.08 u/ml and B-HCG 1.74 U/ml.

Abdominal ultrasonography revealed a mix echogenecity area measuring 11.4 cm occupying the pelvis; uterus was inseparable from the mass and

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myometrium could not be differentiated from endometrium. There was bilateral hydronephrosis due to compression effect of mass.

Single contrast barium enema revealed increased presacral soft tissue area with infiltration in the rectum from posterior side starting just above the pubic symphysis causing mucosal irregularity and luminal narrowing. (Fig. I)

CT scan of abdomen and pelvis showed a large mix density solid mass in the pelvis displacing the urinary bladder and small bowel loops anteriorly and rectum posteriorly. Small uterus was also pushed anteriorly by the mass. Bilateral hydronephrosis was seen due to involvement of distal ureters by the mass. Ovaries were not visualized. Findings were suggestive of a presacral mass with local pressure effects.

CT brain showed bilateral calcification of basal ganglia, pineal gland and falx cerebri. Ventricular system and extra ventricular CSF spaces were not dilated. No mass effect or mid line shift noted.

Fig 1: Barium Enema Examination revealing mucosal irregularity luminal narrowing of Rectum with presacral soft tissue mass

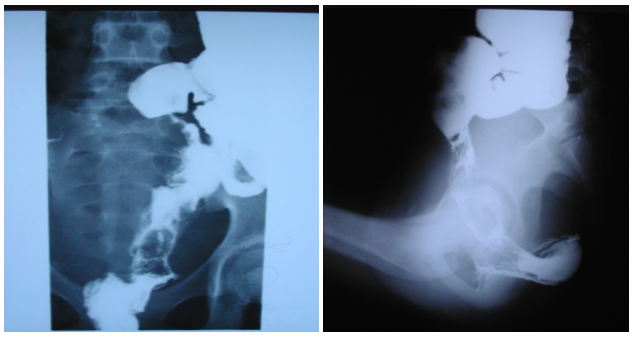
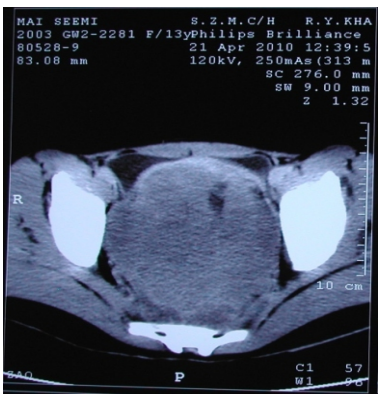
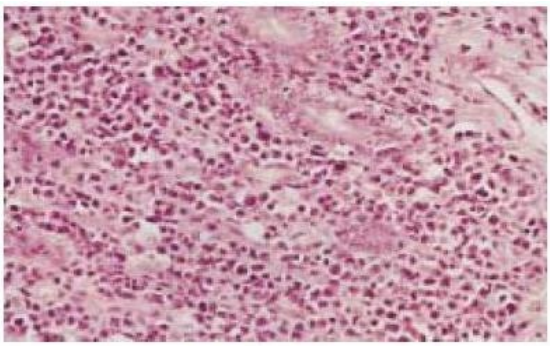


Fig II: Images of CT pelvis shows soft tissue density mass in the pelvis



Histopathological findings revealed it to be a B cell lymphoma, showing medium sized lymphoid cells, with some large cells with irregularly folded nuclear membranes.

Fig. III: Histopathological findings



DISCUSSION

Gastrointestinal lymphoma is an uncommon disease but it frequently occurs as extra nodal lymphoma and is almost exclusively of non-Hodgkin type.[4,5] Primary gastrointestinal lymphoma most commonly occurs in the stomach but can involve any part of gastrointestinal tract from the esophagus to the rectum.[6] Primary lymphoma of large bowel accounts for 0.4 % of all tumors of colon and colorectal lymphoma constitutes 6-12% of gastrointestinal lymphoma. Primary lymphoma more often affects the cecum and rectum than other parts of large bowel. Most of colorectal lymphomas are non-Hodgkin variety, usually of B-cell origin.[7,8] Various risk factors for the development of gastrointestinal lymphoma are helicobacter pylori infection, post transplant immunosuppression, celiac disease, inflammatory bowel disease and HIV infection.

Primary lymphomas of gastrointestinal tract in contrast to secondary lymphomas usually involve one site. There are five criteria that must be met for the diagnosis of primary gastrointestinal lymphoma to be made.[3] 1-No palpable superficial lymph nodes are seen. 2-Chest radiographic findings are normal (i.e. no adenopathy). 3-The white blood cell count (both total and differential) is normal. 4-At laparotomy, the alimentary lesion is predominantly involved, with lymph node involvement (if any) confined to the drainage area of the involved segment of gut. 5-There is no involvement of the liver and spleen. Our patient fulfilled all the criteria.

The classification of primary gastrointestinal lymphomas is best made with the classification

system adopted at the Consensus Conference in Luguano in 1993):[3] stage I, tumor confined to gastrointestinal tract, single primary site, and multiple noncontiguous lesions; stage II, tumor extends into abdominal cavity from the primary gastrointestinal site(II-I) local nodal involvement; II-2, distant nodal involvement); stage III, penetration through serosa to involve adjacent organs or tissues; and stage IV, disseminated extranodal involvement or a gastrointestinal tract lesion with supra-diaphragmatic nodal involvement. Most patients present with stage II disease.

The most common presenting symptoms in patients with primary colorectal lymphoma are weight loss and abdominal pain.[3,5] Fen at el reported that 62% of patients presented with pain and 43% presented with weight loss in their series of 37 patients with colorectal lymphoma,[2] and Zighelboim and Larson reported a 40% rate of abdominal pain and weight loss in their series of 15 patients with colorectal lymphoma.[4] Lower gastrointestinal bleeding in approximately 20% of patients. Up to half of patients present with a palpable abdominal mass, suggesting that these tumors can be presented for a long period of time without causing symptoms. Obstruction is rare due to more pliable nature of colorectal lymphomas and the absence of desmoplastic response. Our Case report emphasizes that in such presentations of the patients colorectal lymphoma may be considered as differential diagnosis.

REFERENCES

1. Doolabh N, Anthony T, Simmang C, et al. Primary colonic lymphoma. J Surg Oncol 2000;74:257-62.
2. Fan C W, Changchien C R, Wang J Y, et al. Primary colorectal lymphoma. Dis Colon Rectum 2000;43:1277-82.
3. Harris N L, Jaffe E S, Diebold J. Lymphoma classificationfrom controversy to consensus: the R.E.A.L. and WHO Classification of lymphoid neoplasms. Ann Oncol 2000;11(Suppl 1):310-15.
4. Zighelboim J, Larson M V. Primary colonic lymphoma. Clinical presentation, histopathologic features, and outcome with combination chemotherapy. J Clin Gastroenterol 1994;18:291-97.
5. Okada M, Maeda K, Suzumiya J. Primary colorectal T-cell lymphoma. J Gastroenterol. 2003;38:376-84.
6. Wang MH, Wong JM, Lien HC, Lin CW, Wang CY. Colonoscopic manifestations of primary colorectal lymphoma. Endoscopy 2001;33:605-609.
7. Hwang WS, Yao JC, Cheng SS, Tseng HH. Primary colorectal lymphoma in Taiwan. Cancer 1992;70:575-80.
8. Pandey M, Kothari KC, Wadhwa MK, Patel HP, Patel SM, Patel DD. Primary malignant large bowel lymphoma. Am Surg 2002;68:121-26.
9. Kim YH, Lee JH, Yang SK. Primary colon lymphoma in Korea: a KASID (Korean Association for the Study of Intestinal Diseases) study. Dig Dis Sci 2005;50:2243-47.
10. Gonzalez QH, Heslin MJ, Dávila-Cervantes A. Primary colonic lymphoma. Am Surg 2008;74:214-16.