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Primary mesenteric Hodgkin's Lymphoma clinically masquerading as metastatic colon carcinoma

[1]Nadia Shirazi, Professor, Department of Pathology, Himalayan Institute of Medical Sciences, Swami Rama Himalayan University, Jolly Grant, Dehradun. Uttarakhand. India.

[2]Jitendra Prasad Ray, Associate Professor, Department of Surgery, Himalayan Institute of Medical Sciences, Swami Rama Himalayan University, Jolly Grant, Dehradun. Uttarakhand. India

Corresponding Author: Nadia Shirazi, Professor, Department of Pathology, Himalayan Institute of Medical Sciences, Swami Rama Himalayan University, Jolly Grant, Dehradun. Uttarakhand. India.

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Abstract

Hodgkins lymphoma is an uncommon malignancy involving cervical,supraclavicular or axillary lymph nodes. Mesenteric nodal involvement is rare and infiltration into descending colon is even rarer. Herein we report a 53 year old male who presented with symptoms of acute abdomen. Laparotomy revealed multiple firm mesenteric lymph nodes which were clinically suspected to be metastatic deposits of unknown primary. A post-operative diagnosis of Hodgkins lymphoma was made which was confirmed on Immunohistochemistry. This case merits interest because of rarity of site of involvement, seromuscular colon infiltration and unusual presentation as acute abdomen.

Keywords: Mesenteric, Reed-Sternberg, Mixed cellularity, Immunohistochemistry, sigmoid colon

Introduction

There are two types of malignant lymphomas, Hodgkin and Non-Hodgkin which constitute approximately 5-6% of all malignancies (1). The typical presentation of Hodgkin Lymphoma (HL) is an enlarged lymph node commonly cervical, supraclavicular or axillary in younger adults and adolescents . Systemic B symptoms are seen in less than 25% of patients (2). It rarely affects the mesenteric lymph nodes and involvement of bowel is rare. Primary extranodal disease that too below the diaphragm is rarely seen in Hodgkin's (3) .

Hodgkin's disease primarily presenting as a extranodal mesenteric mass with signs of acute abdomen is an unusual clinical presentation. Herein we are presenting a middle aged male who underwent emergency laparotomy for signs of acute abdomen and with clinical suspicion of carcinoma.

Case

A 53 year old North Indian male presented to the Emergency Department with chief complains of recurrent vomitings since 5 days, inability to pass stool since 3 days and bloating sensation since 2 days. On examination, there was abdominal rigidity and guarding. There was no history of fever or weight loss. He had no peripheral lymphadenopathy or organomegaly. He was taken up for emergency laparotomy. Intraoperatively the transverse and descending colon showed dilated bowel loops with multiple firm to rubbery hard lymph nodes in

the mesentery (Figure 1). A pre-operative clinical diagnosis of colon carcinoma with multiple mesenteric nodal metastasis was considered. There were no adhesions and specimen was taken from one enlarged mesenteric lymph node and sent for histopathology. Grossly the mass was measuring 70x45x32mm and firm in consistency. Cut surface was homogenous grey-white . Microscopic examination revealed complete effacement of normal lymphoid architecture with complete replacement by a polymorphous inflammatory infiltrate rich in lymphocytes, plasma cells, eosinophils and few scattered atypical Reed-Sternberg like cells. (Figure 2a) These cells had multilobated to few mononucleated and classic bi-nucleate forms with prominent eosinophilic nucleoli. The surgeon had also sent a separate seromuscular biopsy from sigmoid colon which also showed infiltration by atypical large cells with dense degenerated neutrophilic debris (Figure 2b). Immunohistochemistry showed CD45+, CD30+, CD15+ and T-cell rich lymphocyte population in background as demonstrated by CD5 and CD 20 positivity (Figure 2c,2d). A diagnosis of Hodgkin's Lymphoma-mixed cellularity type was made with infiltration into colonic seromuscular tissue. A post-operative CECT scan (Contrast Enhanced Computed Tomography) revealed multiple enlarged right iliac fossa, mesenteric, retroperitoneal and pelvic lymph nodes. (Figure 3) Bone marrow aspiration and biopsy did not reveal infiltration by lymphoma. Post-operative period was uneventful and he was subsequently managed with 3 cycles of standard ABVD (doxorubicin, bleomycin, vinblastine, dacarbazine) chemotherapy regime.

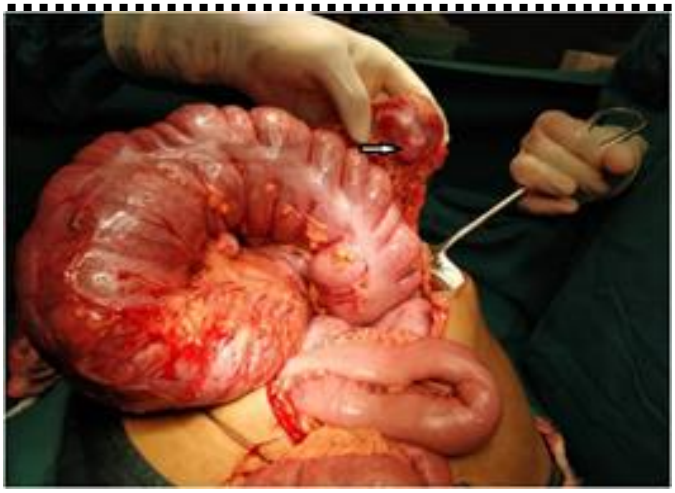

Figure 1: Intraoperative dilated bowel loops with firm, homogenous mesenteric mass

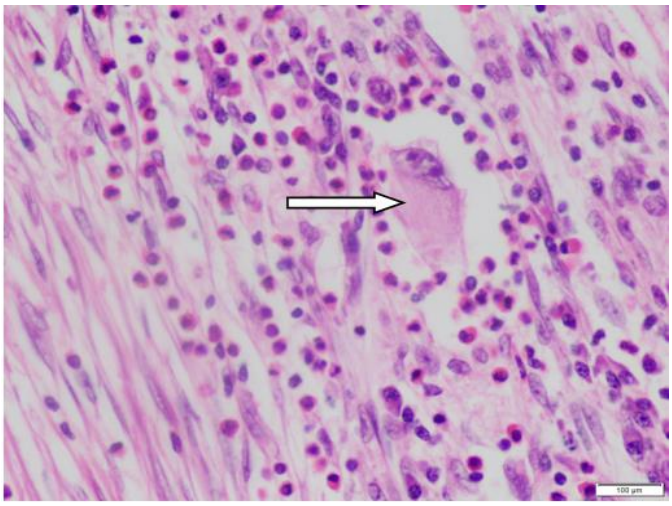

Figure 2(a):(H&E: 40 x 10X): Reed Sternberg cells surrounded by polymorphous inflammatory infiltrate

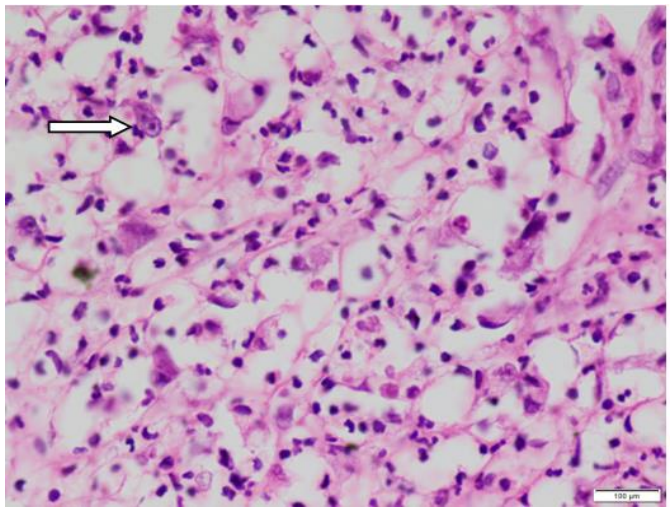

Figure 2(b):(H&E: 40 x 10X): Atypical cells in

descending colon (R-S cells) admixed with neutrophils and degenerated cell debris

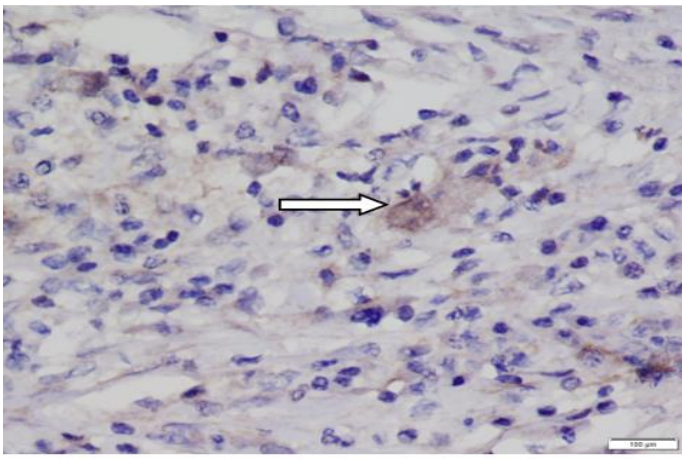

Figure 2(c):(Immunohistochemistry 40x4X) CD 30 positivity in R-S cells

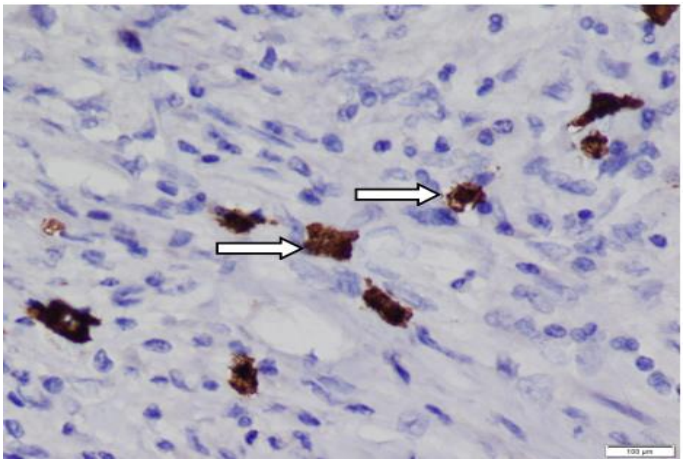

Figure 3(d):(Immunohistochemistry 40x4X) CD 15 positivity in R-S cells

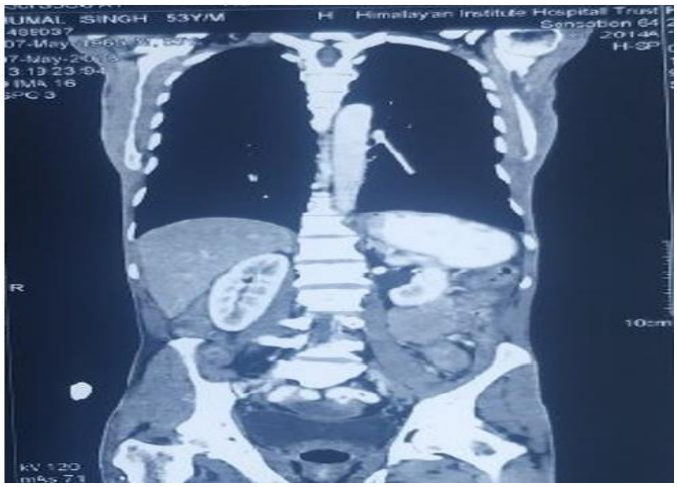

Figure 4: CECT abdomen showing pelvic, mesenteric and retroperitoneal lymphadenopathy

Discussion

Mesenteric lymph node enlargement can be the due to multiple infectious and neoplastic conditions like acquired immunodeficiency syndrome (AIDS), Tuberculosis, lymphoma, sarcoma, Whipple's disease and also post-transplant lymphoproliferative disorder (PTLD) (4). Non-Hodgkin's Lymphoma is the most common cause of mesenteric lymphadenopathy however it is unusual for Hodgkin's Lymphoma to present primarily as mesenteric lymph node involvement (<5%) (2). The typical clinical presentation is anorexia, weight loss, altered bowel habits, abdominal cramps and rectal bleed (5,6). [Our case however presented with symptoms of acute abdomen without weight loss, fever or any other B-symptoms. HL is classified into two broad groups: 1) Classical Hodgkin's Lymphoma (95% cases) and 2) Nodular Lymphocyte-Predominant Hodgkin's Lymphoma (NLPHL). Classical Hodgkin's is further subgrouped into (i)Nodular Sclerosis (ii)Mixed cellularity (iii) Lymphocyte rich (iv) Lymphocyte depleted. With the advent of standard therapy, there is no difference in the treatment or prognosis of the different subtypes of classical HL. Nodular Sclerosis accounts for almost two-thirds of the cases of classic Hodgkins Lymphoma in North America and Europe whereas Lymphocyte depleted classical HL is more prevalent in developing countries and in immunocompromised patients particularly in association with Epstein-Barr Virus (EBV) infection (7).

Our patient was Classic Hodgkin's Lymphoma-mixed cellularity of mesenteric lymph nodes with seromuscular infiltration of sigmoid colon. Earlier studies by Vadmal et al(3), Miller et al (4), Gupta et al (5) have found described intestinal Hodgkin's with or without nodal

disease , thus suggesting that mixed cellularity type of HL more often presents as a central abdominal disease as compared to peripheral nodal disease. These findings are in concordance with our case. The gastrointestinal tract is the most common organ affected in primary extranodal Hodgkin's lymphoma. Lung and liver are common extranodal sites involved by HL as compared to bone marrow(7). Association of colon carcinoma with Hodgkins lymphoma has also been reported (8). Adverse prognostic factors according to the International Prognostic Score, for newly diagnosed advanced HL patients are: male sex, age>45 years, stage IV disease, leukocytosis, lymphocytopenia, low hemoglobin and low serum albumin (9). Mortality is however progressively decreasing, with a five-year survival of almost 81% (10).After giving first line therapy patients are followed up with intermittent outpatient clinical review for two to five years. Studies have also stated that patients who are responding well to first- line therapy don't require routine surveillance CT or PET/CT imaging.[10] Our patient responded well to standard chemotherapy regime and has been advised to attend follow up clinics.

Conclusion

Multiple mesenteric masses should alert the surgeon to a possibility of Hodgkin Lymphoma. Histopathology with Immunohistochemistry remains the gold standard for diagnosis of such lesions

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