Journal for Research in Applied Sciences and Biotechnology

www.jrasb.com

ISSN: 2583-4053

Volume-2 Issue-1 || February 2023 || PP. 105-108

https://doi.org/10.55544/jrasb.2.1.14

Non-Hodgkin's Gastric Lymphoma: Case Report

Dr. Jhumur Ghosh[1], Dr. Samia Hossain Sami[2] and Jaya Ghosh[3]

[1]Associate Professor, Department of Hepatology, MH Samorita Hospital and Medical College, Tejgaon, Dhaka, BANGLADESH.

[2]Student of M.Sc, Department of Oncology, University of Chester, UNITED KINGDOM.

[3]Student of M. Pharma, Department of Pharmacology, Netaji Subhas Chandra Bose Institute of Pharmacy, Chakdaha, West Bengal, INDIA.

[3]Corresponding Author: ghosh95jaya@gmail.com

www.jrasb.com || Vol. 2 No. 1 (2023): February Issue

Received: 10-01-2023	**Revised:** 31-01-2023	**Accepted:** 10-02-2023

ABSTRACT

More than 95% of gastric lymphomas are Non-Hodgkin's lymphoma. It is very difficult to distinguish primary gastric lymphoma from secondary stomach dissemination. Here we reported a case of high-grade B cell type Non-Hodgkin's gastric lymphoma. The patient presented with upper abdominal swelling associated with anorexia, vomiting, and weight loss. He was hemodynamically unstable and needed ICU support. But before starting R-CHOP chemotherapy he was expired. The diagnosis of gastric lymphoma can be delayed for many years due to the presence of nonspecific symptoms. High-grade Non-Hodgkin's lymphoma is very aggressive, but treatment response is better than low-grade lymphoma. Here we suggest early diagnosis and management of high-grade Non-Hodgkin's gastric lymphoma to save the patient's life.

Keywords- Non-Hodgkin's lymphoma, Gastric lymphoma, R-CHOP chemotherapy.

I. INTRODUCTION

Primary gastric lymphomas are rare tumors and account for approximately 5% of primary gastric malignancies. Primary gastric lymphoma is confined to the stomach and the regional lymph nodes. On the other hand, secondary gastric lymphomas are part of generalized illness[1]. More than 95% of gastric lymphomas are Non-Hodgkin's lymphoma. Most of these lesions are approximately equally divided into two subtypes: 1) diffuse large B cell type lymphoma, 2) marginal zone B cell lymphoma of mucosa-associated lymphoid tissue (MALToma)[1].

II. CASE PRESENTATION

A 65-year-old male patient noticed upper abdominal swelling for 1 month which was progressively increasing in size, associated with anorexia, nausea, vomiting, and weight loss. He vomited food materials just after taking a meal, so he avoided his meal and developed constipation and scanty micturition. With those complaints, he consulted with a physician and was admitted to a tertiary-level hospital. Endoscopy of the upper GIT was done, and the report showed that large ulceroproliferative growth in the stomach involved the incisura angularis and fundus (Figure 1).

Journal for Research in Applied Sciences and Biotechnology

www.jrasb.com

ISSN: 2583-4053

Volume-2 Issue-1 || February 2023 || PP. 105-108

https://doi.org/10.55544/jrasb.2.1.14

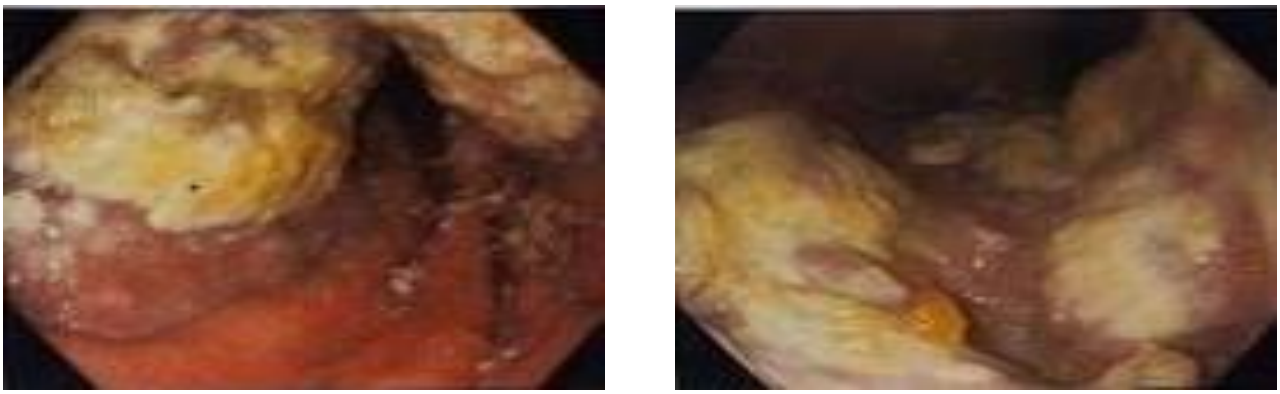

Figure 1: Endoscopy of upper gastrointestinal tract showed large ulceroproliferative growth in the stomach.

The gastroenterologist commented that the findings were highly suggestive of carcinoma of the stomach and a biopsy was taken from the growth. Histopathology report revealed high-grade Non-Hodgkin's lymphoma. The immunohistochemistry report showed CD20-positive, MIB-1 >95% of tumor cells positive, but cyclin and CD3 were negative. They reported B cell type Non-Hodgkin's gastric lymphoma and advised for Bcl6, CD10, and MUM1 immunohistochemistry stain for further categorizing of diffuse large B cell type lymphoma. The patient was hemodynamically unstable and needed intensive care unit support for better management. Unfortunately, the patient expired before getting chemotherapy.

His blood test revealed Hb% 8.3 gm/dl, MCV-57.7 fl, MCH-16.7 pg, MCHC- 29.0 g/dl, total WBC 7.77x 10^9/l, platelet count-501x10^9/l. Serum electrolytes showed sodium-136 mmol/l, potassium-5.1mmol/l, chloride-16.7 mmol/l, TCO2-16.70 mmol/l (N: 21-31), calcium- 8.4 mg/dl (N: 8.8-10.6), magnesium- 2.29 mg/dl. Liver function test revealed bilirubin 0.18 mg/dl, SGPT 14.2 IU, SGOT 31.5 IU, ALP- 54.0 IU, and D-Dimer >5 mg/L.USG of the abdomen revealed a large mass in the stomach, peri gastric enlarged lymph node, mild ascites, and mild bilateral pleural effusion. LDH-2848 U/L (N-248). CT scan of the abdomen was suggestive of the infiltrative type of gastric carcinoma/lymphoma with abdominal lymphadenopathy (Figure 2).

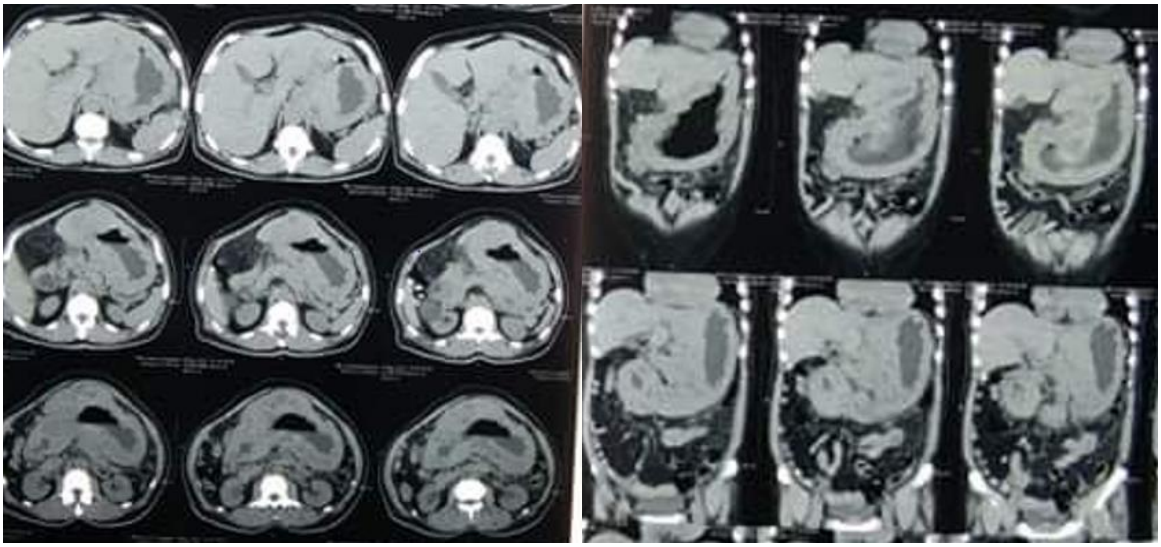

Figure 2: CT scan of whole abdomen showed infiltrative gastric lymphoma with abdominal lymphadenopathy

III. DISCUSSION

The stomach is the most common site for the development of extranodal lymphomas in the GI tract accounting for 60% of cases, followed by the small bowel, ileum, cecum, colon, and rectum[2]. It is very difficult to distinguish primary gastric lymphoma from secondary stomach dissemination. No peripheral and mediastinal lymphadenopathy at the time of diagnosis, no spleen or liver infiltration, and normal blood counts are in favor of primary gastric lymphoma[3]. Primary gastric lymphomas are a diverse group of lymphoproliferative disorders and the 2nd most common gastric malignancy globally following the

ISSN: 2583-4053

Volume-2 Issue-1 || February 2023 || PP. 105-108

https://doi.org/10.55544/jrasb.2.1.14

adenocarcinoma of the stomach. Adenocarcinoma is the most common gastric cancer and the 5th most common malignancy in the world[3]. The incidence of primary gastric lymphomas varies from 4 to 20% of extranodal non-Hodgkin's lymphoma and reaches up to 5% of primary gastric neoplasms. Primary gastric lymphomas usually occur in males than females and older than 50 years[3]. Most cases of primary gastric lymphomas are B cell subtypes of Non-Hodgkin's lymphoma (59%) and marginal zone B cell lymphoma of the mucosa-associated lymphoid tissue (38%)[4]. The potential risk factors associated with the pathogenesis of primary gastric lymphoma include infection by Helicobacter pylori, HIV, Epstein-Barr virus, Hepatitis B virus, and human T cell lymphotropic virus1[4,5]. The diagnosis of primary gastric lymphoma can be delayed for many years due to the presence of nonspecific symptoms, mimicking peptic ulcer disease, gastritis, and functional gastric or pancreatic disorder. The main symptoms include nausea, vomiting, anorexia, abdominal distension, abdominal fullness or pain, indigestion, dyspepsia, and weight loss. The less common symptoms are weakness, night sweats, fever, jaundice, hematemesis, or melena[4]. Primary gastric lymphomas can be diagnosed properly with an appropriate endoscopic evaluation with adequate-sized tissue samples. Endoscopic ultrasonography can also help to diagnose gastric lymphoma. CT scan or MRI abdomen and 18Ffluorodeoxyglucose positron emission tomography (FDG-PET) assist in diagnosing and staging primary gastric lymphoma[6,7]. Bone marrow infiltration elevated lactate dehydrogenase, and B symptoms are more common in nodal lymphomas than gastric lymphomas. The Ann Arbor staging system is widely used for primary nodal lymphomas and is considered unsatisfactory for primary gastric lymphomas originating from the lining of the stomach instead of the lymph nodes. Recently, the Lugano staging system is used for primary gastric lymphomas[2]. The tumor B-cells can express the surface immunoglobulin and pan-B antigens (CD19, CD20, and CD79a). The marginal zone-associated antigens express CD35 and CD21, and lack CD5, CD10, CD23, cyclin D1[7]. There are many treatment options for primary gastric lymphoma like antibiotic therapy, H-pylori eradication, immunotherapy, radiotherapy, and chemotherapy. MALT lymphomas are treated with antibiotics or H pylori eradication or wait and watch approach for asymptomatic cases. In cases of DLBCL, systemic chemotherapy with R-CHOP is indicated. Gastrectomy is limited to selected cases of primary gastric lymphoma[4]. The overall prognosis of primary gastric lymphoma is dependent on tumor characteristics, host-related factors, histological subtypes, age, and performance status of the patient[4]. It was impossible to diagnose that this patient either was suffering from primary or secondary gastric lymphoma. Bone marrow examination could not be done, because the patient was hemodynamically unstable and needed ICU support. Before confirmation of diagnosis, the patient was expired.

IV. CONCLUSIONS

The diagnosis of gastric lymphoma can be delayed for many years due to the presence of nonspecific symptoms. Here we suggest early diagnosis and management of high-grade Non-Hodgkin's gastric lymphoma to save the patient's life.

ABBREVIATIONS

DLBCL; Diffuse large B cell lymphoma, R-CHOP; Rituximab, cyclophosphamide, hydroxydaunorubicin hydrochloride, vincristine, prednisone.

INFORMED CONSENT

Written informed consent was taken from the patient's attendance.

ACKNOWLEDGMENT

We are very grateful to the patient's attendance for giving permission for the case report.

CONFLICT OF INTEREST

The authors have declared that there is no conflict of interest.

REFERENCES

[1] Al-Akwaa AM, Siddiqui N, Al-Mofleh IA. Primary gastric lymphoma. World J Gastroenterol. 2004 Jan;10(1):5-11. doi: 10.3748/wjg.v10.i1.5. PMID: 14695759; PMCID: PMC4717077.

[2] Psyrri A, Papageorgiou S, Economopoulos T. Primary extranodal lymphomas of stomach: clinical presentation, diagnostic pitfalls and management. Ann Oncol. 2008 Dec;19(12):1992-9. doi: 10.1093/annonc/mdn525. Epub 2008 Jul 22. PMID: 18647965; PMCID: PMC2733120.

[3] Diamantidis MD, Papaioannou M, Hatjiharissi E. Primary gastric non-Hodgkin lymphomas: Recent advances regarding disease pathogenesis and treatment. World J Gastroenterol. 2021 Sep 21;27(35):5932-5945. doi: 10.3748/wjg. v27.i35.5932. PMID: 34629810; PMCID: PMC8475005.

[4] Juárez-Salcedo LM, Sokol L, Chavez JC, Dalia S. Primary Gastric Lymphoma, Epidemiology, Clinical Diagnosis, and Treatment. Cancer Control. 2018 Jan-Mar;25(1):1073274818778256. doi:

ISSN: 2583-4053

Volume-2 Issue-1 || February 2023 || PP. 105-108

https://doi.org/10.55544/jrasb.2.1.14

10.1177/1073274818778256. PMID: 29779412; PMCID: PMC6028178.

[5] Ferrucci PF, Zucca E. Primary gastric lymphoma pathogenesis and treatment: what has changed over the past 10 years? Br J Haematol. 2007; 136:521–538.

[6] Li XF, Fu Q, Dong YW, et al. (18)F-fluorodeoxyglucose positron emission tomography/computed tomography comparison of gastric lymphoma and gastric carcinoma. World Journal of Gastroenterology. 2016 Sep;22(34):7787-7796. DOI: 10.3748/wig. v22.i34.7787. PMID: 27678362; PMCID: PMC5016379.

[7] Ghimire P, Wu GY, Zhu L. Primary gastrointestinal lymphoma. World J Gastroenterol. 2011 Feb 14;17(6):697-707. doi: 10.3748/wjg. v17.i6.697. PMID: 21390139; PMCID: PMC3042647.