

## Primary Gastric Lymphoma- A Case Report

SARMISTHA BISWAS,<sup>1</sup> ABM ABU SUFIAN,<sup>2</sup> PRODIP KUMAR SARKER,<sup>3</sup> MD. HARUN-UR RASHID,<sup>3</sup> MOSTOFA KAMAL CHOWDURY,<sup>3</sup> MD. MAHFUZE SARKAR,<sup>3</sup> CHANDRA SHEKHAR BALA,<sup>4</sup> BAHARUL MINNAT,<sup>5</sup> MOHAMMED KAMAL,<sup>6</sup> HAM NAZMUL AHASAN<sup>7</sup>

### Abstract:

Primary gastric lymphoma accounts for less than 5% of gastric cancers. They are usually non-Hodgkin's lymphomas (NHL), but have been considered as a separate entity from NHLs of peripheral nodes. The diagnosis of primary lymphoma of stomach requires histological confirmation without any evidence of peripheral lymphadenopathy or organomegaly. Secondary gastric lymphoma indicates the involvement of the stomach by a diffuse lymphoma developed elsewhere. Here we report a 50 year old male presented with abdominal pain and intermittent vomiting and diagnosed as primary gastric lymphoma.

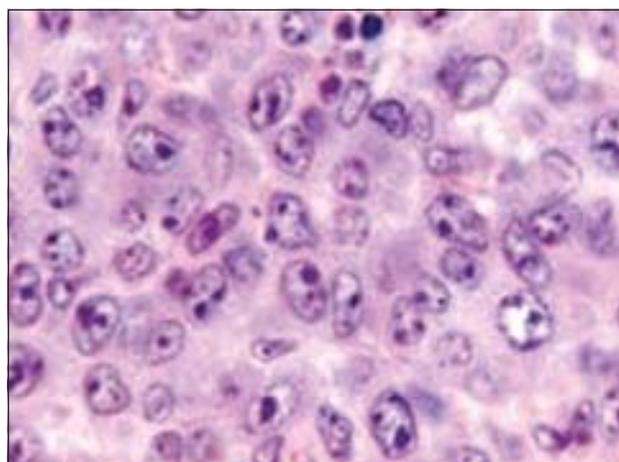
**Key words:** gastric lymphoma; primary.

### Case Report:

A 50 years old Muslim gentleman was admitted in Medicine department with the complaints of epigastric pain for 6 months and intermittent vomiting for 2 months. Pain which was episodic initially, became persistent subsequently without any radiation and relation with food, dull aching in nature. He also complained of recurrent vomiting for the last two months, vomitus contained undigested food materials but was not bile or blood stained or coffee ground in nature. He denied of having any constitutional symptoms like fever, weight loss etc. Patient was a farmer, non-alcoholic; had a history of smoking about 18 pack years. He is normotensive and nondiabetic and denied history of contact with tuberculosis patient. On physical examination he was neither anemic nor icteric; lymphadenopathy and bony tenderness were absent. Skin survey appeared normal. Pulse was 76 beats/min, regular; Blood pressure was 130/90 mmHg. Per abdominal examination revealed epigastric tenderness

only. Cardiovascular and respiratory system examination revealed no abnormality.

On investigation, Complete Blood Count with peripheral blood film was unremarkable, ESR was 22mm at 1<sup>st</sup> hour, CXR PA view was normal. 12 lead ECG, S. Electrolyte, S. creatinine, S. lipase were also normal. S. bilirubin, SGPT, S. Albumin, Prothrombin Time were within normal range. S. LDH was 391 U/L. Endoscopy revealed ulceroproliferative, fungating growth at the distal body and antral part of stomach with nodular surface and areas of necrosis which bled on touch and biopsy was taken from the affected areas and was sent for histopathology.

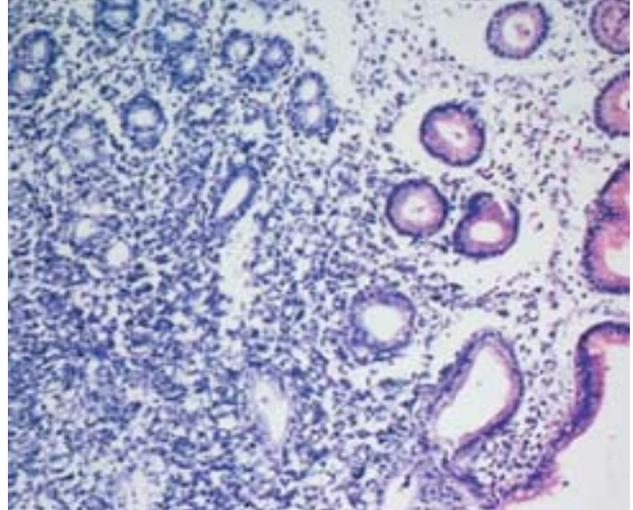


**Fig.-1:** Diffuse large B-cell non-Hodgkin lymphoma. Large cells with abundant cytoplasm and large round-ovoid nuclei with thick nuclear membrane and multiple prominent nucleoli.

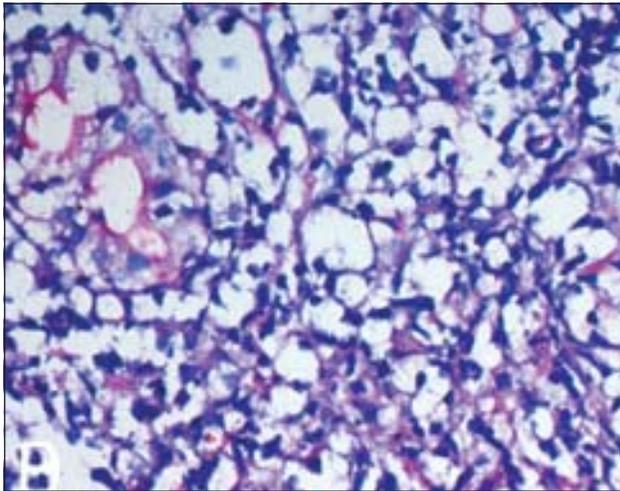
1. Assistant Professor, Medicine, Dhaka Medical College & Hospital.
2. Post Graduate Trainee, Medicine, Dhaka Medical College & Hospital.
3. Medical Officer, Medicine, Dhaka Medical College & Hospital.
4. Medical Officer, National Institute of Neuroscience.
5. Student, Masters of Public Health, State University of Bangladesh.
6. Professor, Pathology, BSMMU.
7. Professor, Medicine, Dhaka Medical College & Hospital.

**Correspondence:** Dr. Sarmistha Biswas, Assistant Professor, Medicine, Dhaka Medical College & Hospital, e-mail: sarmibiswas365@gmail.com

Histopathological examination of the specimen revealed lamina propria containing many lymphocytes which displaced the crypts which is compatible with non – Hodgkin’s lymphoma [Fig 2]. Immunohistochemistry revealed LCA, CD20, CD79a positivity and CD3, Pancytokeratin, KAPPA, LAMDA negativity on neoplastic cells [Fig 3]. So they concluded it as “Non-Hodgkin lymphoma, B cell type.” CT scan of chest and abdomen revealed no abnormality. Bone marrow examination was unremarkable. So we concluded that this was a case of primary gastric lymphoma (Non-Hodgkin lymphoma, B cell type) and referred to surgery department for local resection and adjuvant therapies.



**Fig.-2:** lamina propria containing many lymphocytes which displaced the crypts (H & E 200x)



**Fig.-3:** Inflammatory infiltrate in the muscularis propria showing plasma cells and preponderance of lymphocytes (A. H & E 600x B. PAS 400x)

### Discussion:

Non-Hodgkin lymphoma (NHL) is a collective term for a heterogeneous group of lymphoproliferative malignancies with differing patterns of behavior and responses to treatment.<sup>1</sup>

The gastrointestinal (GI) tract is the predominant site of extranodal NHLs. Several reports have shown that about 5-7% of all gastric malignancies are primary malignant lymphomas<sup>2</sup>. It consists about 20% in the small bowel and 0.4% in the large gut of all the malignancies of the respective site<sup>3</sup>. The most common site of extranodal lymphoma is the stomach<sup>4</sup>. But compared with carcinoma incidence, NHL is rare, representing 2% to 8% of all gastric malignancies. Most of the NHLs (80-90%) are of B cell origin.

According to Dawson et al<sup>7</sup>, gastric lymphomas are defined as primary when the stomach is involved primarily and if associated intra abdominal lymphadenopathy present, it corresponds to the expected lymphatic drainage of the stomach. There will be no palpable subcutaneous nodes, mediastinal nodes and organomegaly as well as no abnormal leucocytes on peripheral blood film or bone marrow aspirate. Most patients are usually in their sixth decade.<sup>8</sup> Males are more affected and it is more common in white population.<sup>9</sup>

The most common complaints are epigastric pain, weight loss, nausea and vomiting. Occasionally a palpable abdominal mass is found. Night sweats and subcutaneous nodes are rare. Features of obstruction, bleeding and perforation are uncommon. Usually the features donot differ much from that of gastric carcinoma.<sup>10</sup>

Regarding investigations, complete blood count with peripheral blood film, chest radiographs and bone marrow aspirates should be done to rule out metastasis. The diagnosis is usually made on endoscopic biopsy. The common findings are a diffuse infiltrative process, superficial ulceration or polypoidal mass protruding into the lumen.<sup>11</sup> CT scan of abdomen can figure out the extent of the lesion and metastasis; but it cannot differentiate metastatic lymphadenopathy from reactive hyperplasia.<sup>10</sup> Endoscopic ultrasound is fairly accurate in detecting the presence of perigastric lymphadenopathy and depth of invasion.<sup>12</sup> Immunohistochemistry and flow cytometry of the biopsied material should be performed to confirm the diagnosis and for accurate sub typing. Ann Arbor staging system is not optimal to stage primary GI lymphomas, now Paris staging system is used widely for this type of malignancies<sup>13</sup>.

As an association of gastric lymphomas with antigenic stimulation by chronic *Helicobacter pylori* gastritis has been found, so the current standard treatment for early stage disease is antibiotic therapy to eradicate the infection.

Though surgical resection remains the primary treatment, with the improvement in antineoplastic regimens specially in the treatment of NHL's, now-a-days multimodality therapy of neoadjuvant chemotherapy and stomach preservation has become more popular.<sup>14,15</sup> CHOP regimen alone (Cyclophosphamide, doxorubicin, vincristine, prednisolone) or with addition of some newer drugs like rituximab (R-CHOP) have shown promising result in the treatment of primary gastric lymphoma.<sup>16</sup> Chemotherapy is also preferred in widespread disease. Radiotherapy is the choice when the tumor is incompletely excised.<sup>15</sup>

The histologic subtype and grade of lymphoma can have a significant impact on prognosis. Five year survival rate for low grade stage IE & IIE disease ranges from 80-90%; whereas high grade of such lymphomas ranges 39-74%. The spread of the disease to serous layer of the stomach and intra abdominal lymph nodes also indicate poor prognosis<sup>17</sup>.

**Conflict of Interest:** None

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