PRIMARY GASTRIC LYMPHOMA IN CLINICAL PRACTICE 1994-2002

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Abstract

Objectives: Is to identify the clinicopathological characteristics, the investigations to reach the diagnosis, and the therapeutic way of management of gastric lymphoma.

Subjects & Methods: A retrospective analysis of 17 patients admitted to Al-Kadhimiya Teaching Hospital from March 1994 to February 2002. The data were collected from three sources: registration department, oncology and histopathology departments. The data include full history and clinical examination of the patients, investigations done, histopathological result and the line of management.

Results: The study shows, male more than female (1.4:1 ratio), the age range 61-65 years, main symptoms and signs, are weight loss epigastric pain and pallor, the most common site is in the pyloric area. Histopathological result in most cases is of low grade lymphoma. 10 cases treated surgically but the remaining 7 cases were inoperable.

Conclusion: Gastric lymphoma is uncommon tumor of the stomach but its incidence was increased in the recent years. Surgery has the main role in the treatment especially in the early stage, chemotherapy used in all patients.

Keywords: Primary Gastric Lymphoma, Chemotherapy

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Introduction

Primary gastric lymphoma accounts for between 1-5% of all gastric malignancies[1]. Even when confounding factors such as the decreased incidence of gastric carcinoma are taken into account the incidence of primary gastric lymphoma seems to be increasing[2]. Survival has been shown to depend on the histological grade at presentation[3]. Patients with low-grade disease with low depth of infiltration and radical resection of the gastric lymphoma have been shown to have the best prognosis[4]. In a prospective study Ruskone-Foumestraux et al[4] showed that the combination of surgery and chemotherapy in patients with high grade disease was associated with an improved survival compared with patients treated with chemotherapy alone.

Recent interest in the relation between Helicobacter (H) pylori and gastric carcinoma[4] has prompted an analysis of the presence of this organism in patients with gastric lymphoma. Wotherspoon et al[4] found a 92% incidence of H pylori in 110 patients with gastric lymphoma, an order similar to that found in patients with gastric carcinoma but much higher than in the general population. Many primary gastric lymphomas are now recognized to be B cell lymphomas of mucosa associated lymphoid tissue (MALT). While MALT is not normally found in the gastric mucosa, it may develop after chronic inflammation such as is seen with H pylori infection. It has been proposed that MALT, acquired in response to infection provides a background for the development of both gastric carcinoma and lymphoma[5]. In five of six patients with low-grade primary gastric lymphoma, H pylori eradication therapy has been shown to lead to a regression of the lymphoma[6].

Clinical experience in routine general hospital practice suggests that very few cases of primary gastric lymphoma, even in patients with low-grade disease, present at such an early stage as those seen in a tertiary referral center[9].

This study aimed to identify the clinicopathological characteristics, the investigations and the therapeutic way of management. We also assessed the presentation and importance of the stage and grade of these tumors at diagnosis, the prognosis, how the patients were treated (by radiotherapy or chemotherapy with or without surgery).

Subjects & Methods

For the period 1994-2002 a retrospective analysis of 132 patients attended to Al-Kadhimiya Teaching Hospital were identified from Registration Department and Oncology Department as gastric malignancy, 17 cases were

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included as primary gastric lymphoma proved by histopathological examination.

All cases notes were retrieved and details recorded of patient age, sex, presenting symptoms, clinical features, investigations done including the result of histopathological examination. The diagnosis of primary gastric lymphoma was based on the criteria described by Isaacscon et al[7].

The sites of the tumors were localized and they were staged according to the Ann Arbor classification (stage IE, confined to the stomach; stage IIE, with local lymph node spread). The presence or absence of 'B' symptoms (which includes weight loss), was also recorded. Patients with secondary involvement of the stomach by either Hodgkin's disease or non-Hodgkin's lymphoma were excluded.

The method of treatment of the patients were recorded, (whether the tumors are operable or not), by surgery, chemotherapy alone or after surgery. All the above findings are compared with the results of studies done on primary gastric lymphoma in other parts of the world.

Results

In this retrospective study the total cases of primary gastric lymphoma is 17 cases, 10 males and seven females, sex ratio of 1.4:1. (Table-1) Their ages ranged from 25 to 75 years, but the highest percentage in the age group ranging from 61-65 years, 3 patients were under 40 years. No distinctive racial or geographical pattern in Iraq was noticed.

Table 1: Sex and gastric lymphoma

Sex	Number	%
Male	10	58.8
Female	7	41.1
Total	17	100

The duration of symptoms ranged from 1 to 9 months with a mean of 6.2 months. The clinical presentation was non specific, weight loss 82.3%, and abdominal pain 70.5%, vomiting 52.9%, loss of appetite 35.2%, bleeding in form of melaena 23.5%, and heamatemesis 5.8% (Table-2). On examination of those patients 47.1% have pallor, epigastric mass in 41.1%, and upper abdominal tenderness in 29.4% and hepatomegaly in 11.7% (Table-3).

Table 2: Symptoms in gastric lymphoma

Symptom	No.	% from total
Abdominal pain	12	70.5
Vomiting	9	52.9
Weight loss	14	82.3
Loss of appetite	6	35.2
Malena	4	23.5
Hematamesis	1	5.8

Table 3: Signs in gastric lymphoma

Sign	No.	% from total
Pallor	8	47.1
Epigastric mass	7	41.1
Upper abdominal tenderness	5	29.4
Hepatomegally	2	11.7

All patients were investigated for their illnesses; ultrasound was done to see the thickness of the wall of stomach and any metastasis to the adjacent structure or to the liver. While OGD was done in 88.2% (15 patients) and in 11.7% (2 patients), OGD showed the site of the tumor and taking biopsy for histopathological examination, Ba-meal was done 47.1% (8 patients) which show filling defect (fingerprint-like appearance), dilated stomach due to obstruction in the pylorus. C.T scan was perform in 17.6% (3 patients), and not available in the rest patients.

Eleven patients were treated surgically 64.7%, while the remaining were treated by chemotherapy with or without surgery 29.4% (5 patients), or palliative 23.9 % (4 patients) because they are inoperable (Tables 5 & 6). The tumor was localized in 15 cases (8 in pylorus, 3 in the fundus, 2 in prepyloric area, 2 in the lesser curvature) and diffuse type involving the entire stomach in 2 (Table-4). As far as histopathological characters, the low grade types of lymphomas have the highest percentage 53%, while the high grade types of lymphoma account for 35%.

Table 4: Site of the tumor

Site of tumor	No.	%
Pylorus	8	47.1
Fundus	3	17.6
Prepyloric	2	11.7
Lesser curvature	2	11.7
Diffuse	2	11.7
Total	17	100

Table 5: Mode of treatment in gastric lymphoma

Mode of treatment	No.	% of total
Surgery	11	64.7
Chemotherapy after surgery or alone	5	29.4
palliative	4	23.5

Table 6: Role of surgery in the removal of the tumor

Surgical operation & removal of the tumor	No	% of total
Operable	8	72.7
Inoperable	3	27.2
Total	11	100

The regional lymph nodes were hugely enlarged, oedematous, but discrete in all patients. The liver and spleen were free of tumor in all cases. Grossly the localized tumors were indistinguishable from carcinoma, but usually there is no sharp demarcation between the tumor and the surrounding gastric mucosa in primary lymphoma. The diffuse tumors were seen in a bulky stomach with extensive oedema and increased vascularlity of the gastric wall. The cut section was typically of fish-flesh appearance. The regional lymph nodes were grossly enlarged, congested, oedematous, and fleshy in consistency and not matted together.

According to Ann Arbor system[8] all our patients were in stage IE or IIE as in no case was there any evidence of extra- abdominal spread. All of the 6 patients in stage IE (tumor localized to the stomach and regional lymph nodes free) underwent radical subtotal gastrectomy. The 2 patients in stage IIE (tumor in the stomach with involvement of regional lymph nodes) were treated by total gastrectomy (Table-7).

Table 7: Type of surgical operation in treatment of gastric lymphoma

Type of surgery	No.	% of total
Total gastrectomy	2	25
Subtotal gastrectomy	6	75
Total	8	100

The remaining patients in our study was inoperable at time of presentation diagnosed by OGD and biopsy and they were treated by chemotherapy alone or palliative by correction the anemia and nutritional supports.

Discussion

Although this series of patients with primary gastric lymphoma is small, certain features of the disease as seen in Iraq are noteworthy and may be compared with those reported from other parts of the world.

Most published reports put the occurrence of primary gastric lymphoma at about 1-5% of total gastric malignant tumors[1,2], the 17 patients with primary gastric lymphoma who are the subject of this study were encountered among 132 patients with malignancy of the stomach, an incidence of 12.3% which is more than double the highest reported figure in the other series .This increased prevalence of primary gastric lymphoma relative to carcinoma of the stomach in Iraq probably reflects the increased incidence of gastrointestinal lymphomas in general in this part of the world .

The average age at diagnosis of primary gastric lymphoma was 62.5 years, considerably higher than that reported in other studies[9]. As reviewed by Hertzer and Hoerr[10], the average age of the patients at the time of diagnosis in four series reported from North America was between 55-60 years. The male predominance and the other features of the disease in our cases are similar to those reported by other workers[1,9].

The common site of the tumors were in the pylorus followed by the lower third of the body of the stomach which is approximately like what in far east and Japan[11], this may be due to similar nutritional habits.

As far as histopathological characters, the low grade types of lymphomas have the highest percentage 53%, while the high grade types of lymphoma account for 35%, this is opposite to what is mention by other reports[11,12], which could be due to the small population have been calculated. Early MALT tumors are being missed because of their non-specific symptoms and their "gastritis" type of appearance at endoscopies. Testes for H pylori are not available during our study and H pylori eradication therapy was used in last years of the study.

Over the past few years, flexible endoscopic ultrasonography provides the more sensitive modality for diagnosis and staging of primary gastric lymphoma, it is also reliable in assessing the depth of the invasion and to lesser extent in detecting metastatic spread to the regional lymph

nods[13] while C.T. scan with contrast can detect lymph nods enlargement especially in the celiac and para-aortic lymph nods but unreliable in assessing the extent of mural invasion[14].

In agreement with other authors[15], we found the stage of the disease, the grade of the tumor and the resection of the tumor to be the most important prognostic indicators in primary gastric lymphoma. Patients whose tumor was resected at the time of diagnosis had the most favorable prognosis and the longest symptoms free survival.

In this series as well as those of others[15] surgical resection of the tumor, with or without chemotherapy seems to offer the best chance of long survival.

Early diagnosis must be attempted in any case of upper abdominal pain and weight lost in elderly patients. Wider use of endoscopy with biopsy may increase the number of accurate diagnosis at an early and respectable stage.

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