Brief Report

Primary Extranodal Gastrointestinal Lymphoma: A Single Center Experience from Southern Iran – Report of Changing Epidemiology

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Abstract

Objectives: Gastrointestinal lymphoma is the most common type of extranodal non-Hogkin's lymphoma. The proportion and different types of primary extranodal gastrointestinal non-Hodgkin's lymphoma are different in various geographic locations. Therefore, in this study we tried to evaluate the various types of extranodal gastrointestinal non-Hodgkin's lymphoma in affiliated hospitals of the Shiraz University of Medical Sciences as the largest referral center in the southern Iran.

Design: During 5 years (2005 – 2010), the pathology archives and clinical charts of all patients diagnosed with primary gastrointestinal non-Hodgkin's lymphoma in the affiliated hospitals of the Shiraz University of Medical Sciences were evaluated. All demographic and pathologic findings were recorded.

Results: During these 5 years, there were 110 cases with the diagnosis of primary gastrointestinal lymphoma. The most common location was stomach followed by small intestine and colon. The most common type was diffuse large B cell type. There were only two cases of immunoproliferative small intestinal lymphoma.

Conclusion: The pattern of gastrointestinal lymphoma in Iran is very similar to the Western countries. Compared with 40 years ago, it seems that the epidemiology of this lymphoma has changed.

Keywords: Epidemiology, gastrointestinal lymphoma, Iran

Cite this article as: Geramizadeh B, Keshtkar Jahromi M. Primary extranodal gastrointestinal lymphoma: A single center experience from southern Iran –Report of changing epidemiology. *Arch Iran Med*. 2014; **17(9):** 638 – 639.

Introduction

The most common site of extranodal non-Hodgkin's lymphoma (NHL) is the gastrointestinal (GI) tract.[1] Primary extranodal NHL of the GI tract accounts for 4% – 20% of all NHLs and 30% – 45% of extranodal NHLs.[2] The proportion and location of different types of lymphoma are different by the ethnic background of the patients studied.[3] Epidemiologic studies have shown great difference in the patterns of GI tract NHL in different geographic parts of the world.[4] Also, it seems that the epidemiologic pattern in GI tract lymphoma is changing.[5]

Our center is the largest referral center in southern Iran. In this study, we have tried to evaluate the type, clinical presentation, location, age and sex of the GI tract primary NHL in comparison with other parts of the world in the affiliated hospital of the Shiraz University of Medical Sciences.

Material and Methods

The pathology files in all hospitals affiliated with the Shiraz University of Medical Sciences (as the single referral center of the entire geographic area of southern Iran) were studied (2005 – 2010). All cases reported as primary NHL of the GI tract were selected according to the pathology report and patient's clinical chart. Meanwhile, demographic data were collected from clinical charts. It is worth noting that all diagnoses were confirmed by immunohistochemistry.

Results

During 5 years (2005 to 2010), there were 110 patients with the clinicopathologic diagnosis of primary NHL of the GI tract. The mean age was 42.08 ± 21.67 years (3 – 76 years of age). There were 30 females and 80 males.

We found 58 cases in the stomach and 35 cases in the small intestine. We also had 17 cases of NHL in the colon as the primary site of involvement. Of these 110 cases, there were 71 cases of diffuse large B cell as the most common type of GI lymphoma. Tables 1 and 2 show other types in these 110 patients.

The most common type of lymphoma in all locations, including stomach, small and large intestines, and all age groups was diffuse large B cell lymphoma.

The most common presenting symptom was abdominal pain in 95% of the patients, followed by weight loss (80%) and diarrhea (35%). Less common symptoms included anorexia, melena and abdominal distension. The patients were treated by surgery, chemotherapy and radiation alone or in combination.

Discussion

Clinicopathologic features of extranodal NHL of GI tract differs in different parts of the world. [4]

Forty years ago, physicians from Iran reported several cases of IPSID (immunoproliferative small intestinal disease) and its high

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Accepted for publication: 20 June 2014

Table 1. Various characteristics of the GI tract NHL in from 2005 to 2010.

Subjects	Number (Percentage)
Male	80 (72.8%)
Female	30 (27.2%)
Age, mean age (SD, range)	42.08 ± 21.76
Lymphoma	
Diffuse large B cell	72 (65.5%)
Extranodal marginal zone (MALT type)	22 (20%)
IPSID**	2 (1.8%)
Burkitt's type	11 (10%)
Follicular	1 (0.9%)
Peripheral T cell	2 (1.8%)
PTLD*	2 (1.8%)
Location	
Stomach	58 (52.8%)
Small intestine	35 (31.8%)
Colon	17 (15.4%)

*Post transplant lymphoproliferative disorder; ** Immunoproliferative small intestinal disorder

Table 2. GI tract NHL by the site and type of lymphoma

Location	DLBL *	MALT **lymphoma	lymphoma Burkitt's	Follicular	T cell lymphoma	PTLD***	Total
Stomach	48	7	---	1	1	1	**58**
Small Intestine	11	12 (including IPSID****)	10	---	1	1	**35**
Colon	13	3	1	---	---	---	**17**
Total	**72**	**22**	**11**	**1**	**2**	**2**	**110**

*diffuse large B cell lymphoma; **Mucosal associated lymphoid tissue; ***Post transplant lymphoproliferative disorder; ****Immunoproliferative small intestinal disease.

incidence in the Middle East compared to other parts of the world, especially the Western countries.[7] However, it seems that the pattern of lymphoma in the GI tract has significantly changed[5] and the distribution of NHL in the GI tract is going to be similar to the Western countries. In this study, we evaluated all the cases with pathologically confirmed primary extranodal NHL of the GI tract in the Shiraz University of Medical Sciences. Although this is a hospital-based study, however since Shiraz University of Medical Sciences is the largest referral center in the South of Iran, the results can be reproducible. The most common location of this tumor was stomach, similar to the Western countries such as the UK and North America.[8] Also, the most common type of primary NHL of the GI tract was DLBL (diffuse large B cell lymphoma) (65.5%) similar to other reports from Canada, which studied all the NHL from the GI tract during 5 years and showed a high percentage of the diffuse large B cell type.[8]

Small intestine has been reported as the second most common location of primary NHL of the GI tract in reports from the West. The most common type of NHL in this location has been MALT and DLBL[9] which is similar to our results in Iran as a Middle Eastern country. Among the cases of MALT, we found only two cases of IPSID in our study over 5 years. This decrease has also been reported from other countries such as Tunisia due to the improvement in hygiene.[10]

As a conclusion, this study confirms the change in the epidemiology of GI tract NHL in southern Iran compared with previous results from the same center.

Conflict of Interest: There is no conflict of interest

Funding: *Nil.*

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