Assessment of the Factors that Contribute to Lymphoma's Patient in Hematology Wards at Baghdad Teaching Hospitals.

تقييم العوامل المساهمة للإصابة لدى مرضى الاورام اللمفية في ردهات امراض الدم لمستشفيات بغداد التعليمية

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الخلاصة :

خلفية البحث :ان العوامل و الظروف التي تزيد من احتمال العرضة لأي مرض، مثل الاورام اللمفاوية اللاهودجكين والهودجكين، عند أي انسان، قد تتضمن عوامل وراثية أي متصلة بخصائص المورثات، إضافة إلى عوامل ترتبط بالبيئة أو نمط المعيشة و الظروف الحياتية مثل التدخين و التغذية السيئة والسمنة أو تعاطي المسكرات أو ظروف العمل (مثل التعرض المستمر للمواد المشعة).

الهدف: تهدف الدراسة إلى تقييم العوامل المساهمة للإصابة لدى مرضى الأورام اللمفاوية، وتحديد العلاقة بين العوامل و الصفات الديموغرافية لهم.

المنهجية: اجريت دراسة وصفية في ردهات أمراض الدم لمستشفيات بغداد التعليمية للمدة من 4 تشرين الأول 2014 ولغاية 5 أيار 2015 ،اختيرت عينة غير احتمالية من (32) مريض في ردهات أمراض الدم في مستشفيات بغداد التعليمية (مستشفى مدينة بغداد التعليمي، مستشفى الكاظمي التعليمي، مستشفى اليرموك التعليمي، مستشفى دار التمريض الخاص). تم جمع البيانات من خلال استخدام استبانة مصممة و مكونة من جزأين، الجزء الاول شمل صفحة البيانات الديموغرافية و تحتوي (7) فقرات والجزء الثاني شمل صفحة (14) فقرة للمعلومات الطبية للمريض. حددت ثبات الاستبانة من خلال اجراء الدراسة المصغرة و حددت مصداقيتها من خلال مجموعة من الخبراء (10)، استخدمت اجراءات التحليل الاحصائي الوصفي (التكرارات، النسبة المئوية و اجراءات التحليل الاستنتاجي (معامل الثبات، الارتباط) في تحليل البيانات بإستعمال الحقيبة الاحصائية للعلوم الاجتماعية، السادس عشر.

النتائج :اظهرت نتائج الدراسة بأن هناك من نصف من عينة الدراسة ذكور و أعمارهم من 65 فما فوق. أغلب عينة الدراسة كانت تعاني من زيادة بالوزن. واظهرت نتائج الدراسة كذلك وجود علاقة بين العمر و الجنس وكتلة الجسم وعوامل مرضى الأورام اللمفاوية اللاهودجكين والهوجكين.

الاستنتاج: أستنتجت الدراسة الى أن السمنة والتدخين والعامل الوراثي والعمل بالإشعاع ونقص المناعة وأمراض الروماتزم من أكثر العوامل التي تسهم في الإصابة لدى مرضى الأورام اللمفاويه اللاهوجكن والهوجكن.

التوصيات :اوصت الدراسة بضرورة تقديم برنامج للتثقيف الصحي من قبل العاملين في وزارة الصحة حول عوامل الخطورة، اصدار كتيب لكل المرضى في ردهات امراض الدم ، بالإضافة الى توصية وزارة الصحة لتقليل وقت أو سنين العمل لفريق العمل في العلاج الكيمياوي و الاشعاعي.

Abstract

Background: The factors and conditions that contribute to any disease, such as Hodgkin and Non-Hodgkin lymphoma and anyone and may include genetic which are related to the characteristics of genes, as well as factors associated with the environment or lifestyle and circumstances Life, such as smoking and poor nutrition or obesity or alcohol abuse or working conditions (such as the constant exposure to radioactive materials).

Objectives: the study aims to assess the factors that contribute to lymphoma's Patient in Hematology wards and to find out the relationship between the factor of lymphoma's patient and some variables like (Age, Gender, Marital Status, Occupational Status, Education Status, Ownership of Housing, Body mass Index (BMI))

Methodology s: A descriptive study was started from 4th October 2014 to 5th May 2015. Non-probability sample of (32) Lymphoma patients who in hematology wards at (4) Baghdad Teaching Hospitals. The data (questionnaire) were collected from 3rd April to 4th May of 2015; by interviewed technique used which include two parts: **Part 1:** Patients' demographic characteristics which include (7) items. **Part 2:** Include (14) item medical information for study samples at hematology wards. Validity of the instruments was determined through use of panel of (10) experts, the reliability of the tool determined (r = 0.92) which was adequately reliable. A pilot study was conducted on a purposive sample of (10) patients which were selected from Baghdad Teaching Hospital in hematology ward. The data were analyzed by using descriptive statistical measures which included frequencies, percentages; mean of score (Severity) as well as the use of inferential statistical measures which include correlation and reliability coefficient for the Pilot study were used for the data analysis under application of the statistical package of social science (SPSS) ver. (16).

Results: the findings of the study indicated that more than half of patient' ages between (65 and above) years old who were males accounted for 18 (56.2%), and majority of the samples 14 (43.8%) who were obese and total mean of score for (14) studied items for Hodgkin and Non-Hodgkin lymphomas patients factors were (1.47) at moderate severity mean of score. The study indicated that there is a significant relationship between age group, gender, Body Mass Index and factor for Hodgkin and Non- Hodgkin lymphoma patient.

Conclusions: the study conclude that the obesity, smoking, genetic factor, exposure to radioactive materials, Immune deficiencies and Rheumatic disease are a major of the factors that contribute to Lymphoma.

Recommendations: the study recommended that Specific health education program by the staff at ministry of health sabout lymphoma risk factors for patients. A booklet should be designated and distributed to all patients at hematology wards. Recommended MOH to reduce radiotherapy and chemotherapy staff work time or years of employment.

Keywords: Assessment, Factors, lymphoma's Patient, Hematology wards.

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Introduction

Lymphomas were classified according to the Formulation which recognizes sixteen types. The latest lymphoma classification, the 2008 classification, largely abandoned the Hodgkin" and Non-Hodgkin grouping. Instead, it over 80 different forms of lymphoma in four groups [1]. The lymphatic system is part from the immune system; the lymphatic includes the lymph vessels, Lymph, lymph node are found in the neck lymph node, arms, thorax, abdomen reign, and groin. Inter Lymph nodes store white blood cells. They trap and remove micro-orgasms or harmful substances that may be in the lymph and other parts of the lymphatic system include the tonsils, thymus, and spleen. Lymphatic tissue is found in other parts of the human body including the skin, stomach, and small intestine [2]. The lymphomas are a heterogeneous of tumors that originate of the neoplastic growth of lymphoid tissue; most Non-Hodgkin lymphomas involve malignant B lymphocytes; only 5% involve T lymphocytes, incidence increases with each decade of life; the average age at diagnosis is 50 to 65 year [3].

A risk factor is affects chance of getting a disease such as tumors. Different tumors have different factors. Some factors, like smoking, can be controlled. others, such as a person's age or family history, cannot be changed. Hodgkin and Non-Hodgkin lymphomas persons are often very hard to know how much that risk factor may have contributed to the lymphoma[4]. The researcher has realized the importance of this problem and has been very interested in determine risk factors of lymphoma Patients. In general, there is no particular predilection for lymphoma among specific ethnic groups, although lymphoma is more frequent in Western than in Asian populations. lymphoma is rare; kindreds with high frequencies of NHL and HL have been reported [5]. In fact, the risk factors of lymphoma affect more than another or developing the situation of disease. According to incidence in Iraq is increase after the last war. this news must take carefully to prevent possible factor can lead to get patient with lymphoma.

Objectives of the study:

The study aims to assess the factors that contribute to lymphoma's Patient in Hematology wards and to find out the relationship between the factor of lymphoma's patient and some variables like (Age, Gender, Marital Status, Occupational Status, Education Status, Ownership of Housing, Body mass Index (BMI)).

Methodology

Design of the study: A descriptive study was carried out in order to achieve the aims. The study was started from 4th October 2014 to 5th May 2015.

Setting of the Study: The study has been conducted on patients who were hematology wards at four Hospitals: Baghdad Teaching Hospital in Baghdad city, Al-Kadhimiyia Teaching Hospital, Al-yarmouk Teaching Hospital, and Hospital nursing home private.

Sample of the Study: Non-probability sample of (32) patients who in hematology wards at B.T.H.

Data Collection Methods: The data were collected from 3rd April to 4th May of 2015; by interviewed technique.

Study Instrument: A questionnaire format is designed and constructed by the researcher and literatures to measure the variable include two parts: **Part 1:** Patients' demographic characteristics which include (7) items: age, gender, marital status, occupational status, educational status, ownership of housing, weight and high to measure body mass index and **Part 2:** Include (14) item medical information for study samples at haematology wards.

Validity of the Instrument: Validity of the instruments was determined by panel of (10) experts. **Pilot study and Reliability of the questionnaire:** A pilot study was conducted on a purposive sample of (10) patients which were selected from Baghdad Teaching Hospital in hematology ward. The reliability of the tool determined (r = 0.92) which was adequately reliable.

Statistical data analysis: The data were by using descriptive and inferential statistical and Pilot study were used for application of the statistical package of social science ver.(10.0).

Results:

Table1: Participants' demographical Characteristics .

List	Demographical Characteristics	Groups	F.	%
1.	Age group	15-24	3	9.4
		25-34	4	12.5
		35-44	2	6.2
		45-54	0	0
		55-64	5	15.6
		65 and above	18	56.2
2.	Gender	Male	18	56.2
		Female	14	43.8
3.	Marital Status	Single	6	18.8
		Married	21	65.6
		Divorced	3	9.4
		Widowed	2	6.2
4.	Occupational Status	Employee	3	9.4
		Unemployee	5	15.6
		Self-employee	9	28.1
		Retired	11	34.4
		Farmer	2	6.2
		Housewife	2	6.2
5.	Educational status	Illiterate	6	18.8
		Reads and writes	2	6.2
		Primary graduate	9	28.1
		Intermediate graduate	5	15.6
		Secondary graduate	4	12.5
		Institute graduate	3	9.4
		College and post graduate	3	9.4
6.	Ownership of Housing	King	10	31.2
		Rent	13	40.6
		Joint	9	28.1
7.	Body Mass Index (BMI)	Less than 20 Kg/m^2	2	6.2
		20-24.9 Kg/m^2	3	9.4
		25-29.9 Kg/m^2	9	28.1
		30-39.9 Kg/m^2	14	43.8
		40 and above Kg/m^2	4	12.5

Table(1): reveals that the majority of patient' ages between (65 and above) years old who were accounted for (56.2%). (56.2%) were males, (65.6%) of them were married. (34.4%) of them were Retired, (28.1%) of samples were Primary graduate. (40.6%) of patient had Rent house. Most of the samples 14 (43.8%) were 30-39.9 Kg/m2 (BMI).

Table 2: Mean of Score for (14) Items Medical information for Lymphoma's patient.

No.	Items	No F	Yes F	M.S	Severity
1.	Do you smoke cigarette?	6	26	**1.81**	H
2.	Do you drink alcohol?	25	7	1.22	L
3.	Are there a family member has suffered lymphoid tumors?	7	25	**1.78**	H
4.	Are you exposed to radioactive materials at work?	5	27	**1.84**	H
5.	Are you exposed to chemical materials at work?	5	27	**1.84**	H
6.	Already taken chemotherapy	26	6	1.19	L
7.	Did you perform the organ transplant process in your body (such as a kidney transplant)	22	10	**1.31**	M
8.	Do you suffered from Viral hepatitis?	24	8	**1.25**	M
9.	Do you suffer from Immunity deficiency Virus?	29	3	1.09	L
10.	Do you suffered from Stomach ulcer	24	8	**1.25**	M
11.	Do you suffered from a lack of immune?	4	28	**1.88**	H
12.	Do you suffered from Increase in thyroid gland secretions?	25	7	1.22	L
13.	Do you suffered from recreant rheumatoid fever?	7	25	**1.78**	H
14.	Do you suffered from Bacterial endocarditis?	27	5	1.16	L
	Total mean of scores			**1.47**	**M**

f=Frequency; MS= Mean of scores ; (L=Low, M=moderate, H=high severity mean of score).

Table(2) reported that total mean of score for (14) studied items were (1.47) at moderate severity mean of score. The result indicated that Most of there were a high and moderate severity relative to items (1, 3, 4, 5, 7, 8, 10, 11, and 13) but remaining items (2, 6, 9, 12, and 14) was low severity.

Table 3: Correlation among Factors and their Demographic Characteristics.

Correlation	Age group	Gender	Marital Status	Occupation Status	Education status	Ownership of Housing	BMI	Risk factors
Age group	1	-.814**	.453**	.178	.049	-.051-	.775**	.675**
Gender		1	-.211-	-.169-	.009	.036	-.585**	-.721**
Marital Status			1	.296	.264	.002	.272	.141
Occupation Status				1	.157	.107	.296	-.114-
Educational status					1	-.008-	.109	.027
Ownership of Housing						1	.018	-.154-
BMI							1	.546**
Risk factors								1

**. Correlation is significant at the 0.01 level (2tailed).

Table(3): indicated that there is a significant relationship between age group, gender, Body Mass Index and the factor for Hodgkin and non-Hodgkin lymphoma's patient. The findings reported that there is no significant relationship with remaining items.

Discussion:

After the study data analysis distribution of demographic variables, reported that more than half of patient' ages between (65 and above) years old who were males accounted for 18 (56.2%). The majority of the samples (65.6%) of them were married, (34.4%) of them were Retired. Regarding the subjects of educational levels, most of the studied samples indicate a Primary graduate level was (28.1%), and most of the studied samples reveals that (40.6%) of patient had Rent house. Regarding the body mass index of the samples 14 (43.8%) who were obese at level (30-39.9 Kg/m2). This finding agrees with a descriptive study" Risk of Hodgkin and Non-Hodgkin Lymphoma in Firemen" which was indicated that major of the sample age above 65(90%), and more common in men than woman rate (14.6 men and 10.5 women) [6]. Discussion by researcher, regarding to marital status (65.6%) there was relationship between age (65 and above), and occupation status (retired), related to past exposure to radiation or chemical material and to stress from not working, finally, according to primary education most of the study sample have knowledge deficit. Table (2) Reported that total mean of score for (14) studied items were (1.47) at moderate severity mean of score. The data analysis for (14) items of the questionnaire reported that Most of the study samples' answers were "Yes" for items (1, 3, 4, 5, 11, and 13) "Do you smoke cigarette? ''You have one of your family members infected with cancer of the lymph gland'' ''The nature of your business control be exposed to radioactive material'' ''The nature of your business control be exposed to chemical materials'' ''Do you suffered from Immune deficiencies'' Do you suffered from Rheumatic disease'' were highly factors for patient with HLs and NHLs. Related to items (7, 8, and 10) " It was already laying organ in your body (such as a kidney transplant)", "Do you suffered from Viral hepatitis", and "Do you suffered from Stomach ulcer", the result indicated that (22, 24, and 24) from patients answer "Yes" and the remaining (10, 8, and 8) was answer "No" that there were moderate risk factors. Findings table (2), agrees with study which was reported that most of factors for lymphomas patients were "higher among the heaviest smoked cigarettes and tobacco smoke", Family history of hematological cancers, autoimmune disease, and rheumatoid arthritis", and "exposure to a number of chemical and radiology waves [6]. This result agrees with study which was showed that people with HIV infection strongest risk factor [7]. The findings showed that immunity deficiency and autoimmune disease was strongly factor for lymphoma [8]. Regarding items (2, 6, 9, 12, and 14), "Do you drink alcohol?", " Already taken chemotherapy", "Do you suffered from Immunodeficiency syndrome (HIV/AIDS)", "Do you suffered from Increase in thyroid gland secretions", "Do you suffered from Endocarditis disease", The finding indicated that most of these items answer "No" were Low risk factors (Low severity). This finding agrees with case control study which was reported that alcohol drinking didn't show any excess risk [9]. The findings show that there is strongly positive relationship between (age, Body mass index, and factors. But the study result shows that there is strongly negative relationship between gender and risk factors for patients with lymphomas. This finding agrees with study which was reported that there is a significant relationship between patient age,

gender, body weight   and lymphomas risk factors [6]. The results of the present study reveal that there is no significant relationship between "Marital Status, Occupational Status, Educational status, Ownership of Housing and factors for lymphomas.

Conclusions

The study conclude that the obesity, smoking, genetic factor, exposure to radioactive materials, Immune deficiencies and Rheumatic disease are a major of the factors that contribute to Hogdkin and non-Hogdkin Lymphoma's patient.

Recommendations

According to the findings of the study the researcher recommend that specific health education should be presented from ministry of health about lymphoma risk factors for patients. A booklet should be designated and distributed to all patients at hematology wards. Recommended ministry of health to reduce radiotherapy and chemotherapy staff work time or years of employment.

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