Patient's knowledge and Believes Regarding the Risk Factors of Leukemia in Marjan Hospital

معارف المرضى ومعتقداتهم بخصوص عوامل الخطورة لسرطان الدم في مستشفى مرجان

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الخلاصة:

خلفية البحث: سرطان الدم هو تغيرات لخلايا طبيعية تبدء في خلايا النخاع والدم .وتنقسم الى النوع الحاد، وهو الذي يؤثر على الخلايا التي لم تتطور كليا و المزمن الذي يتقدم ببطء، عوامل الخطورة لنمو سرطان الدم تزداد وهناك (حالة واحدة لكل 100,000) لأشخاص اعمارهم من 65 الى 69 سنة وحوالي (10 حالات لكل 100,000) لأشخاص اعمارهم اكثر من 70. معلومات المرضى ومعتقداتهم بخصوص عوامل الخطورة ممكن ان تشمل: المواد الكيمياوية، الاشعاع، التعرض للغازات المنبعثة من تدخين السكائر.

الاهداف: تهدف هذه الدراسة الى تقييم معارف ومعتقدات المرضى فيما يخص عوامل الخطورة لمرض سرطان الدم وايجاد العلاقة بين بعض المتغيرات الديموغرافية ومعلومات ومعتقدات المريض بخصوص عوامل الخطورة لهذا المرض.

المنهجية: اجريت دراسة وصفية لتقييم معارف ومعتقدات المرضى فيما يتعلق بعوامل الخطورة لمرض ابيضاض الدم, وكانت فترة الدراسة من شهر كانون الثاني / 2018 الى حزيران / 2018، وقد اختيرت عينة مناسبة غير غرضية لهذا الغرض متكونة من 50 مريض من الراقدين في مستشفى مرجان. تم تطوير استبانة بعد مراجعة المصادر الخاصة بالموضوع وتم جمع العينة بطريقة المقابلة. يتكون الاستبيان من ثلاثة اجزاء، المعلومات الديموغرافية، معارف المرضى و معتقداتهم تجاه المرض.

النتائج: معظم المرضى (40 %) كانت اعمارهم (31-36)، الذكور اكثر من الاناث (60 %) معظمهم (80 %) متزوجون، (50 %) منهم يقطنون الحضر اضافة الى ذلك (52 %) هم خريجو الدراسة الابتدائية بينما (76 %) كانت حالتهم المادية كافية، اوضحت النتائج ان المرضى يعتقدون ان التدخين هو من عوامل الخطورة، معظمهم يعتقد ان الخوف والقلق التعب والاحباط، الفقر، الطعام الملوث والشد النفسي. المرض غير قابل للشفاء. هناك علاقة بين متغيرات المريض المعارف والمعتقدات بدلالة احصائية تبلغ احتمالية اقل من P > 0.001.

الاستنتاج: بالرغم من استحالة منع مرض سرطان الدم هناك عوامل خطورة ممكن ان تكون مسببة لهذا المرض، ويختلف الناس من حيث معرفتهم به وكذلك اتجاهاتهم بهذا الخصوص. الدراسة الحالية اوضحت انه توجد علاقة ذات دلالة احصائية بين معارف المرضى ومعتقداتهم والخصائص الديموغرافية.

التوصيات: زيادة وعي المرضى فيما يتعلق بعوامل الخطورة لهذا المرض وكيفية تقليل تعرض الاشخاص لها بواسطة جهود وزارة الصحة.

الكلمات المفتاحية: سرطان الدم، معارف المرضى ومعتقداتهم.

ABSTRACT:

Background: Leukemia is a cancerous changes begin in a marrow cell and blood. It is divided into a cute type, acute leukemia which affects the cells that are not completely developed, and Chronic which is slowly progressed, There is an increasing rate in the risk factors regarding leukemia cases particularly in ages 65 to 69 years old and this represented (1 case per 100,000) while patients aging 70 and over constituting about (10 cases per 100,000). Knowledge of patients and believes regarding the risk factors may include chemical substances, radiation, exposure to benzene comes from cigarette smoke.

Aims of the study: The aim of the present study was to assess patient's knowledge and believes about the risk factors of leukemia, and to find out the relationships between some of socio demographic variables and patient's knowledge and believes regarding the risk factors.

Methodology: A descriptive design study was carried out to assess the knowledge and believes of patients with leukemia regarding the risk factors of this disease, the period of this study was Jan \ 2018 to June \ 2018, Convenient non probability sampling method was used, the sample consisted of (50) patients who admitted to Marjan Hospital. Questionnaire developed after comprehensive review of literatures related to this topic, it was completed during patient's interview. It consisted of 3 parts: the socio demographic data, Knowledge of patients and believes regarding the risks factors of Leukemia.

Results: Most of the patients age (40%) between (31-36) years old Male patients were more than female (60%). The majority of them (80%) were married. Half of them lived in urban area, in addition their level of education (52%) of them had primary school level, while (76%) of them had sufficient economic status. the result declared that most of patient believed that smoker is risk factor of leukemia. The majority of them did not believed that fear and anxiety, life events (fatigue and frustration), the poverty, contaminated food, stress, and the disease can't be cured. There were significant relationships between all the variables and patients believes and knowledge scores at P > 0.001.

Conclusion: Although it is impossible to prevent leukemia there are various risk factors which may cause this disease, and patients may have different knowledge and believes toward those factors. The current research findings declared that there were significant relationship between patients knowledge and believes with the their sociodemographic data.

Recommendations: Increase Patients awareness about risk factors of leukemia and how to minimize the exposure to them through the ministry of health effort.

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INTRODUCTION

Leukemia is a disease (cancer of the marrow and blood). It has four major types one of them is acute myeloid leukemia, the other one is chronic myeloid type, acute lymphoblastic Leukemia and chronic lymphocytic leukemia which is the most common type. Acute leukemia usually progress rapidly which affect cells that are not fully matured. These cells cannot carry out their usual functions, while, chronic leukemia often growth gradually, and patients have large amounts of developed cells in general [1, 2].

In patients with myeloid leukemia, a cancerous change initiates in a marrow cell that usually forms the blood cells " red blood cells", various forms of white cells and platelets, In case of lymphocytic (lymphoblastic) leukemia, the cancerous alteration initiates in a marrow cell which usually formulae lymphocytes "another type of white cell". The four main types of leukemia are further classified into subtypes. Understanding the subtype of this disease is vital because the management approach may be based on the subtype [3, 4].

However, the majorities of patients detected with leukemia had no specific activating events and did not identify the causes which were triggering this condition there are numerous causes which can be detected, such as radiation exposure, chemotherapy or chemical substances and being over the age of 65. In addition to the hereditary and environmental factors that are thought to be linked to leukemia.

Nearly half of the whole nationwide individuals exposed to benzene develops from cigarette smoke. Benzene is also originated in some manufacturing locations; nevertheless, the firm rule in using this substance can reduced its exposure in the place of work [5]. The opportunity for increasing the risk factors for developing leukemia increases between the ages from 30 to 34 years (about 1 case per 100,000 people). For people over 70, the incidence rate remains to increase [6].

A major increasing ratio of leukemia cases ascend after treatment with chemotherapy "especially with alkylating agents or topoisomerase II inhibitors" or radiation therapy for other cancers, such as lymphoma, myeloma and breast cancer. AML may grow in certain people who have hereditary genetic factor which decrease their capability to eradicate the contributing causes [7, 8, and 9]. However, many researches and scientists reported that there are several risk factors which may be recognized as causative factors for this disease. Although, it's impossible to prevent leukemia, because the actual causes are unknown. A risk factor may aggregate people opportunity for having the disease. Though some persons catch the disease if they didn't have risk factors [10, 11].

In Iraq there are few studies regarding this subject, therefore the researchers interested to study this subject to find out the social demographic characteristic of patients with leukemia and to identify the relationship between the socio demographic variables and patients' knowledge and believes about the risk factors of leukemia.

AIMS OF THE STUDY

The aim of the present study was to assess patient's knowledge and believes about the risk factors of leukemia, and to find out the relationships between some of socio demographic variables and patient's knowledge and believes regarding the risk factors.

METHODOLOGY

A descriptive design study was carried out to assess the knowledge and believes regarding risks factors of leukemia during the period from Jan 2018 to Jun 2018. Formal

permissions were obtained from the hospital and college of nursing to accomplish the present study.

Instrument and variables of the study: questionnaire was reconstructed after a comprehensive revision of the related articles and literatures which include:

Part I: Sociodemographic characteristics such as: Age, Gender, Marital status, Address, Occupation and Socioeconomic status.

Part II: Knowledge about the risks factors of disease.

Part III: Believes about leukemia risk factors.

Sampling: the study population is a purposive sample consisted of (50) patients with leukemia were chosen from Marjan hospital. The inclusion criteria for chosen the study sample were include, all patients between the age 18 years and 65 years. Willing to participate in this study and had no psychiatric problems.

Method of data collection: all data and information were gathered from the participants after their agreement by using the face to face interview technique. Data collections took about 20 minutes for each patient. A statistical Analysis were computed using (SPSS).

RESULTS:

Table (1): Socio demographic characteristic of the study sample

Socio demographic data		Frequency	Percent
Gender	Male	34	68.0
	Female	16	32.0
	Total	**50**	**100**
Age	25-30	17	34
	31-36	20	40
	More than 37 years	13	26
	Total	**50**	**100**
Residency	City	26	52
	Rural	24	48
	Total	**50**	**100**
Marital Status	Single	4	8
	Married	44	88
	Widowed	2	4
	Total	**50**	**100**
Level of Education	Primary	26	52
	Secondary	17	34
	Academic	7	14
	Total	**50**	**100**
Occupations	Private work	12	24
	Employed	10	20
	Retired	8	16
	Not working	20	40
	Total	**50**	**100**
Economic Status	Sufficient	8	16.0
	Sufficient to some extent	38	76.0
	insufficient	4	8.0
	Total	**50**	**100**

This table showed the socio demographical data of the sample, (40%) of patients ages were within age group (31-36) years. (68%) of them were male. From the result of the table it is indicated that (52%) lived in urban area; according to patient's marital status the majority of

them (88%) were married. In regard to working condition (40%) of them were not working and their socioeconomic state showed that (76%) were sufficient to some extent.

Table (2): relationship between sociodemographic data and patients knowledge about the risk factors

Items		Frequency	Percent
Radiation is harmful and may cause leukemia	Yes	21	42
	No	29	48
	Total	**50**	**100**
Do you know what leukemia means?	Yes	29	58
	No	21	42
	Total	**50**	**50**
Leukemia affect other organs of the body	Yes	41	82
	No	9	18
	Total	**50**	**100**
Smoking is the cause of leukemia	Yes	26	52
	No	24	48
	Total	**50**	**100**
Drink alcoholic beverages	Yes	12	24
	No	38	76
	Total	**50**	**100**
Leukemia is related to low resistance	Yes	17	
	No	33	
	Total	**50**	**100**
Male are at high risk for leukemia	Yes	31	62
	No	19	38
	Total	**50**	**100**
Hereditary is a main cause for leukemia	Yes	26	52
	No	24	48
	Total		**100**
The cause of leukemia is anemia?	Yes	20	40
	No	30	60
	Total	**50**	**100**
The cause of leukemia is viruses	Yes	29	58
	No	21	42
	Total	**50**	**100**

Table (2) illustrated that (58%) of the study sample know the meaning of the disease and (82%) of the sample agreed that the disease effects other part of the body, in addition more than half of them considered smoking, hereditary and viruses were important risks factors in causing this disease (52, 52, 58) respectively.

Table (3): patient's believes about the risk factors of leukemia

Causes of leukemia		Frequency	Percent
I feel Leukemia is a Serious Disease?	Yes	44	88
	No	6	12
	Total	**50**	**100**
I think the environment is a cause of	Yes	36	72
	No	14	28

leukemia	Total	50	100
Disease can be caused fear and anxiety	Yes	18	32
	No	32	68
	Total	**50**	**100**
The disease is related to a punishment of God	Yes	25	50
	No	25	50
	Total	**50**	**100**
Leukemia is related to life events (fatigue and frustration)	Yes	21	42
	No	29	58
	Total	**50**	**100**
Poverty may be a cause of leukemia	Yes	20	40
	No	30	60
	Total	**50**	**100**
Leukemia is related to poor hygiene	Yes	37	74
	No	13	26
	Total	**50**	**100**
This disease is related to envy	Yes	26	52
	No	24	48
	Total	**50**	**100**
I believe that this disease is related to contaminated food	Yes	19	38
	No	30	60
	12	1	2
	Total	**50**	**100**
Stress or tension are the main causes	Yes	18	36
	No	32	64
	Total	**50**	**100**
Leukemia is a disease that cant not be cured	Yes	20	40
	No	30	60
	Total	**50**	**100**

Table (3) indicated that (88%) of the sample considered this disease is a serious, and most of them believed that this diseases is related to environment, a punishment of God, poor hygiene, and envy (72%0%, 74%, 52%) respectively. However, the majority of them didn't believed that fear and anxiety, life events (fatigue and frustration), the poverty, contaminated food, stress, and the disease can't be cured.

Results indicated that (42%) of patients had poor knowledge regarding the risk factors of their disease, and 36% had moderate knowledge, while (22%) had high score of knowledge.

Table (4): relationship between sociodemographic data and patients knowledge about the risk factors

Knowledge / Sociodemographic data		Knowledge scores					
		poor	Moderate	high	total	Chi-Square	df
Gender	Male	20	13	0	33	29.664[a] sig.	2
	Female	1	5	11	17		
	Total	**21**	**18**	**11**	**50**		
Age (years)	25-30	10	7	0	17	40.829[a]	4
	31-36	11	9	0	20		
	37 and more	0	2	11	13		
	Total	**21**	**18**	**11**	**50**		

Marital statue	Single	0	4	0	4	12.121[a]	4
	Married	21	12	11	44		
	Widow	0	2	0	2		
	Total	**21**	**18**	**11**	**50**		
Level of Education	Primary	19	7	0	26	35.652[a]	4
	Secondary	2	10	5	17		
	College	0	1	6	7		
	Total	**21**	**18**	**11**	**50**		
Economic Status	Sufficient	1	7	0	8	16.194[a]	4
	Sufficient to some extent	16	11	11	38		
	Insufficient	4	0	0	4		
	Total	**21**	**18**	**11**	**50**		

Table (4) illustrated that there were significant relation between male and female regarding patient's knowledge concerning the risk factors and it seems that male (20) patients had poor knowledge more than female, in relation to patients ages it indicated that patients ages between (31-36) years had lowest score (poor) knowledge than the others ages groups, in addition there were significant relations between all the age's groups concerning this item P> 0.001, however, regarding to others items the table declared that (21) of married patients had poor knowledge and most of patients had moderate knowledge.

Table (5): relationship between the sociodemographic data and patients believes regarding the risks factors of their disease

Believes		Patient believes about the risk factors scores					
	Sociodemographic data	poor	Moderate	high	total	Chi-Square	df
Gender	Male	17	8	8	33	25.758[a]	2
	Female	0	17	0	17		
	Total	**17**	**25**	**8**	**50**		
Age (years)	25-30	15	0	6	21	42.636[a]	4
	31-36	2	12	2	16		
	37 and more	0	13	0	13		
	Total	**17**	**25**	**8**	**50**		
Marital statue	Single	4	0	0	4	13.235[a]	4
	Married	11	25	8	44		
	Widow	2	0	0	2		
	Total	**17**	**25**	**8**	**50**		
Level of Education	Primary	17	1	8	26	46.154[a]	4
	Secondary	0	17	0	17		
	College	0	7	0	7		
	Total	**17**	**25**	**8**	**50**		
Economic Status	Sufficient	8	0	0	8	30.650[a]	4
	Sufficient to some extent	5	25	8	38		
	Insufficient	4	0	0	4		
	Total	**17**	**25**	**8**	**50**		

Table (5) indicated that most female patients had moderate score of believers and (17) male patients had the poor score regarding their believes about the risk factors of the diseases, and all ages groups had different scores related to their believes regarding the risk factors of this disease, the ages group between (25-30) had poor score, while only (8) male had the highest score of believes, concerning the marital status, and the level of education most patients had low score for their believes about the risk factors of their disease. In addition only

married patients, secondary school level and patients with sufficient in come to some extents (25, 17, 17) respectively had moderate score of believes. There were significant relationships between all the variables and patients believes scores at P > 0.001.

DISCUSSION

The current study presents the demographic characteristics which revealed that the participants were young adult, most of them were male, The finding showed that patients knowledge and believes related to risk factors of leukemia were different, they believed that leukemia may occur in male more than female this study disagreed with [12, 13] who declared that women patients were more affected than men, residence in of ruler area, and married had this disease than others [14, 15], in addition, this study declared that a large number of patients ages were more than 30 years old this is finding is come a long with other study conducted by [6, 12. 14]. However various study carried out in Europe found that the disease incidence in single patients was higher than married patients they reported that single people had higher incidence than those of other marital status among [6, 14, 15].

This study showed that there were some variances that occur in the knowledge, and beliefs of patient with insufficient income when compared with patients of sufficient income P~0.001. this is similar to other study carried out by [13, 15] they declared that there were differences in patients knowledge and believes related to socioeconomic status of patients.

However more than half of patients did not think that alcohol is considered important risk factors, Studies reported that people who drink alcohol heavily are at great risk factor in the (USA) about (3.5%) of death are attributable to alcohol [16]. while the present study sample didn't know that alcohol can be important risks factor in causing leukemia.

The current study findings illustrated that most of the patients did know that the exposing to radiation is a risk factor in causing and they thought that hereditary and stress may cause this disease they considered it genetic, this is come along with other studies finding [17, 18].

There were various studies declared that a large number of patients believed that most of the significant risk factors for Leukemia such as, smoking, punishment of God [13, 19, and 20], and poor hygiene in addition to envy [21]. Moreover, there were confirmation of traditions associated with cancer, such as the belief that cancer is infectious, or cancer may be perceived as a sentence from God. and a fetal disease which cant cured. they consider it as stigma, they reported that there are numerous causes that make cancer is stigmatized. Most of persons may considered cancer is a fatal disease and incurable, in addition cancer symptoms or the side effects of therapy may be exaggerated and can develop some change in appearance which may be considered stigma. Even Fears from the diagnostic tests, treatment and management can cause humiliation.

CONCLUSION

The current study illustrated that most of patients had poor knowledge and believes regarding the risk factors of their disease, and about half of them had moderate knowledge and believes, while the lowest percentage had high knowledge and believes concerning the risk factors of their disease. In addition there were significant relationship between patients knowledge and believes with the their socio-demographical data.

RECOMMENDATIONS

Increase Patients awareness about risk factors of leukemia and how to minimize the exposure to them through the ministry of health effort, the decision makers play a great role in putting down the roles that reduce the harmful fumes and other chemical substances to spread

in the environment and give instruction in work places to make sure that people will adopt the healthy behaviors in this regard.

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