

Assessment of Psychological Problems for Patients with Acute Myelogenous Leukemia

تقييم المشاكل النفسية لمرضى ابيضاض الدم النقوي الحاد

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الخلاصة:

الهدف: تقييم المشاكل النفسية لمرضى ابيضاض الدم النقوي الحاد ومعرفة العلاقة بين بعض المتغيرات الديموغرافية مثل (الجنس، العمر، الحالة الزوجية، المستوى التعليمي) والمشاكل النفسية لهؤلاء المرضى.

المنهجية: دراسة وصفية استعمل فيها أسلوب التقييم للفترة من ٢٠ أيلول ٢٠١٤ إلى ٣٠ تشرين الثاني ٢٠١٤ لدراسة المشاكل النفسية لمرضى ابيضاض الدم النقوي الحاد. عينة غرضية (غير احتمالية) اختيرت في الدراسة وقد تكونت من (٥٠) مريض في مستشفى بغداد التعليمي ومستشفى مدينة الامامين الكاظمين التعليمي. تم جمع بيانات الدراسة عن طريق مقابلة المرضى الراقيدين والمراجعين في المستشفيات المذكورة أعلاه. تكونت استمارة التقييم من جزأين شملت المعلومات الديموغرافية والسريية المرضى والجزء الآخر تعلق بتقييم المشاكل النفسية لمرضى ابيضاض الدم النقوي الحاد. تم إجراء الثبات لأداة التقييم من خلال الدراسة الاستطلاعية وتم التحقق من مصداقية الأداة من خلال عرضها على مجموعة من الخبراء. تم تحليل البيانات من خلال أسلوب الإحصاء الوصفي (التكرار والنسب المئوية) والإحصاء الاستنتاجي (المتوسط الحسابي) والانحدار المنطقي.

النتائج: كشفت النتائج ان مرضى ابيضاض الدم النقوي الحاد الذين يعانون من المشاكل النفسية كانت غير مقبولة، و هناك علاقة معنوية بين المشاكل النفسية لهؤلاء المرضى و مكان الإقامة للمرضى.

الاستنتاج: نستنتج من الدراسة بأن غالبية الفقرات ذات العلاقة بالمشاكل النفسية لمرضى ابيضاض الدم النقوي الحاد كانت واطنة او خارج المقارنة مما يعكس ضراوة تلك المشاكل .

التوصيات: أوصت الدراسة بزيادة الوعي والتثقيف الصحي والنفسي للمرضى المصابين بابيضاض الدم النقوي الحاد.

Abstract:

Objective: To assess the psychological problems in patients with acute myelogenous leukemia, and to find out the relationship between socio-demographic characteristics such as (age, sex, marital status, educational level, and occupation) and psychological problems for those patients.

Methodology: A descriptive study used the assessment approach from 20th September 2014 to 30th November 2014 in order to study the psychological problems in acute myelogenous leukemia patients with the psychological problems. Non probability (purposive) sample is selected for the study which includes (50) patients diagnosed with acute myelogenous leukemia were treated at Baghdad teaching hospital and City Imams Kazimain Teaching Hospital or the patients who visited the outpatient clinic in the same hospital for medical follow-up and further treatment. Data were gathered through the patients` interviewed. Assessment questionnaire consist of two parts contains demographic characteristic, the other part concerning about assessment the psychological problems for patients with acute myelogenous leukemia. Reliability and validity of this tool is determined through application of a pilot study and panel of experts. Data were analyzed through the application of descriptive statistical (frequencies and percentages), inferential statistical (chi square).

Results: The Overall results revealed that the psychological problems in acute myelogenous leukemia patients with psychological problems was unacceptable, and there is significant correlation between the psychological problems related for these patients and was region (residency) of patients.

Conclusions: The study concluded that the majority of the items related to psychological problems for patients with acute myeloid leukemia were low or out of the comparison, reflecting the ferocity of those problems.

Recommendations: The study recommended to increase awareness and psychological education for patients with acute myelogenous leukemia.

Key wards: psychological problems, socio-demographic, acute myelogenous leukemia

INTRODUCTION:

Acute myeloid leukemia (AML) is a cancer of the myeloid line of blood cells, characterized by the rapid growth of abnormal white blood cells that accumulate in the bone marrow and interfere with the production of normal blood cells. AML is the most common acute leukemia affecting adults, and its incidence increases with age. Although AML is a relatively rare disease, accounting for approximately 1.2% of cancer deaths in the United States, its incidence is expected to increase as the population ages⁽¹⁾.

The symptoms of AML are caused by replacement of normal bone marrow with leukemic cells, which causes a drop in red blood cells, platelets, and normal white blood cells. These symptoms include fatigue, shortness of breath, easy bruising and bleeding, and increased risk of infection. Several risk factors and chromosomal abnormalities have been identified, but the specific cause is not clear. As an acute leukemia, AML progresses rapidly and is typically fatal within weeks or months if left untreated⁽²⁾.

AML has several subtypes; treatment and prognosis varies among subtypes. Five-year survival varies from 15–70%, and relapse rate varies from 33–78%, depending on subtype. AML is treated initially with chemotherapy aimed at inducing a remission; patients may go on to receive additional chemotherapy or a hematopoietic stem cell transplant. Recent research into the genetics of AML has resulted in the availability of tests that can predict which drug or drugs may work best for a particular patient, as well as how long that patient is likely to survive⁽³⁾.

The care plan for patients with AML should be emphasized on comfort, minimize the adverse effects of chemotherapy, promote preservation of veins, manage complications, and provide teaching and psychological support.⁽⁴⁾

Prior studies have also pointed out the associations between anxiety, anger, fear and depression in patients with other types of cancers. It will be informative to explore the association between these symptoms in AML survivors, and whether intervention on one symptom has effect on the others⁽⁵⁾.

Patients with AML are forced to live with the uncertainties associated with an acute illness. It can be puzzling and frightening to hear that have leukemia and that no treatment is recommended. Healthcare providers must speak frequently and honestly to deal with any fears and clarify any misunderstandings about this sometimes confusing disease. Some patients and families benefit from psychological counseling to help them cope with the strong emotions that can accompany this diagnosis⁽⁶⁾.

OBJECTIVES:

To assess the psychological problems in patients with acute myelogenous leukemia, and to find out the relationship between socio-demographic characteristics such as (age, sex, marital status, educational level, and occupation) and psychological problems for those patients.

METHODOLOGY:

Quantitative design (a descriptive study) is employed through the present study from 20th September 2014 to 30th November 2014 in order to study the psychological problems for acute myelogenous leukemia patients.

Non probability (purposive) sample is selected for the study which includes (50) patients diagnosed with acute myelogenous leukemia were treated at Baghdad teaching hospital and City Imams Kazimain Teaching Hospital or the patients who visited the outpatient clinic in the same hospital for medical follow-up and further treatment. Data were gathered through the patients` interviewed. Each interview takes approximately (30) minute for each patient.

Assessment questionnaire consists of two parts: Part one contains demographic characteristic. Part two concerning of the ppsychological problems for acute myelogenous

leukemia patients: It is consisted of (23) items which are measured on 3 levels of Likert rating scale, always (3), sometimes (2), never (1).

Reliability of this tool is determined through application of a pilot study and validity verified through the panel of (10) experts. Data were analyzed through the application of descriptive statistical (frequencies and percentages) and inferential statistical (chi square).

RESULTS:

Table (1) Distribution of sample by their characteristics

No.	Variables	F.	%	Cumulative%
1.	Age (years)	F.	%	Cumulative%
1.1.	Less than 20	1	2	2
1.2.	20 – 29	2	4	6
1.3.	30 -39	10	20	26
1.4.	40 – 49	16	32	58
1.5.	50 and more	21	42	100
	Total	50	100	
2.	Gender	F.	%	Cumulative%
2.1.	Male	31	62	62
2.2.	Female	19	38	100
	Total	50	100	
3.	Level of education	F.	%	Cumulative%
3.1.	Intermediate School graduate	9	18	18
3.2.	High School graduate	21	42	60
3.3.	Institute graduate	17	34	94
3.4.	college graduate	3	6	100
	Total	50	100	
4.	Marital status	F.	%	Cumulative%
4.1.	Married	33	66	66
4.2.	Single	16	32	98
4.3.	Widowed	1	2	100
	Total	50	100	
5.	Occupational Before	F.	%	Cumulative%
5.1.	Employed	1	2	2
5.2.	Retirement	14	28	30
5.3.	Private works	15	30	60
5.4.	House wife	8	16	76
5.5.	Unemployed	12	24	100
	Total	50	100	
6.	Occupational After	F.	%	Cumulative%
6.1.	Yes	21	42	42
6.2.	No	29	58	100
	Total	50	100	
7.	Region	F.	%	Cumulative%
7.1.	Town	16	32	32
7.2.	Rural	34	68	100
	Total	50	100	
9.	Monthly Income	F.	%	Cumulative%
9.1.	Sufficient	17	34	34
9.2.	Barely Sufficient	11	22	56

9.3.	Insufficient	22	44	100
	Total	50	100	

F. = frequency; %= percent

This table shows that the distribution of age indicated that the majority of samples' ages were 50 years old and more, that were accounted for (42 %). Most of sample (62 %) were male. The levels of education represents that most of sample (42%) was from high School. (66%) of sample was married. (30 %) were Occupational before treatment Private works, Majority of sample (58%) were no occupational after treatment. (68 %) of them region were from rural. (44%) of sample had insufficient monthly income.

Table(2) Descriptive statistics of psychological domain items for patient after acute myelogenous leukemia

Sub Domains	Psychological Domain Items	always		sometime		never		M.S	RS	E.
		F	%	F	%	F	%			
Positive feelings	1. Tumors like other disease can be curable	8	16	23	46	19	38	2.22	74	L
	2. I feel that life still beautiful	12	24	15	30	23	46	2.22	74	L
	3. I feel that I still useful for my family and society	7	14	22	44	21	42	2.28	75.9	L
	4. Illness made me feels about suffering of other patients	8	16	31	62	11	22	2.06	68.6	L
Negative feelings	5. I lost my role and my importance in the family	5	10	26	52	19	38	2.28	75.9	L
	6. I became hate myself because of the illness	5	10	28	56	17	34	2.24	74.6	L
	7. I feel tense and worry	12	24	26	52	12	24	2	66.6	O.C
	8. I feel that I need for crying	13	26	12	24	25	50	2.24	74.6	L
Self-Esteem	9. I feel that I still capable and competent for all works	13	26	15	30	22	44	2.18	72.6	L
	10. I still capable to doing daily works	19	38	12	24	19	38	2	66.6	O.C
	11. What I introduce to my family and my children's convincing for me	19	38	6	12	25	50	2.12	70.6	L
	12. My role is active in the society	17	34	21	42	12	24	1.9	63.3	O.C
Thinking	13. I thinks a lot about what happed to me	34	68	14	28	2	4	1.36	45.3	O.C
	14. I thinks a lot about (my future) my illness prognosis	16	32	17	34	17	34	2.02	67.3	L
	15. I thinks a lot about the future of my children's and my family	36	72	11	22	3	6	1.34	44.6	O.C
	16. I thinks a lot about the costs of my illness	33	66	14	28	3.0	6.0	1.4	46.6	O.C
Memory & concentration	17. I suffers from forgetting	13	26	27	54	10	20	1.94	64.6	O.C
	18. I can follow up others conversation obviously	15	30	16	32	18	36	2.02	67.3	L

	19. I remember previous events happened to me	19	38	13	26	17	34	1.92	64	O.C
Body Image	20. I hurt for being in this image	33	66	4	8	13	26	1.6	53.3	O.C
	21. I don't desire anyone to see my body	33	66	8	16	9	18	1.52	50.6	O.C
	22. My body image is not satisfy for others	35	70	9	18	6	12	1.42	47.3	O.C
	23. I feel that my body image hurt others	33	66	6	12	11	22	1.56	52	O.C

f= Frequency; %= percentage; MS= Mean of scores; M.S= Moderate significant; S. =Significant; Sig. = Significance, RS= Relative Sufficiency , L = Low , O.C= Out of Comparison,

This table indicates that the evaluation of relative sufficiency was low on 11 (48%) items and 12 (52%) was out of comparison.

Table (3)Association between ages, gender, level of education, region, monthly income, occupational before treatment, occupational after treatment and sample scores.

Scores		Good	Fair	Poor	Total	χ^2 obs.	Sig.
Age		F	F	F	F		
Less than 20 years		1	1	0	2	7.156	NS
20 – 29 years		4	6	6	16		
30 -39 years		3	14	4	21		
40 – 49 years		4	4	2	10		
50 years and more		0	1	0	1		
Total		12	26	26	50		
P≤0.05 df = 8							
Scores		Good	Fair	Poor	Total	χ^2 obs.	Sig.
Gender		F	F	F	F		
Male		8	17	6	31	0.971	NS
Female		4	9	6	19		
Total		12	26	12	50		
P≤0.05 df = 2							
Scores		Good	Fair	Poor	Total	χ^2 obs.	Sig.
Level of Education		F	F	F	F		
Intermediate School graduate.		3	4	2	9	6.452	NS
High School graduate.		2	15	4	21		
Institute graduate.		6	6	5	17		
College graduate.		1	1	1	3		
Total		12	26	12	50		
P≤0.05 df = 6							
Scores		Good	Fair	Poor	Total	χ^2 obs.	Sig.
Occupational before treatment		F	F	F	F		
Employed		4	7	1	12	20.805	HS
Retirement		3	15	11	3		
Private works		5	1	0	5		
House wife		0	2	0	0		

Unemployed	0	1	0	0			
Total	12	26	12	12			
P≤0.05 df = 8							
Occupational after treatment	Scores	Good	Fair	Poor	Total	χ² obs.	Sig.
		F	F	F	F		
Yes		6	10	0	16	7.933	HS
No		6	16	12	34		
Total		12	26	12	50		
P≤0.05 df = 2							
Region	Scores	Good	Fair	Poor	Total	χ² obs.	Sig.
		F	F	F	F		
Town		4	21	4	29	0.211	NS
Rural		2	16	3	21		
Total		6	37	7	50		
P = 0.900 df = 2							
Monthly Income	Scores	Good	Fair	Poor	Total	χ² obs.	Sig.
		F	F	F	F		
Barely Sufficient		1	8	2	11	0.279	NS
Insufficient		5	29	5	39		
Total		6	37	7	50		
P = 0.870 df =2							

This table indicates that there is no significant association between ages, gender, level of education, region, monthly income and sample scores, while there is high significant association between occupational before treatment, occupational after treatment and sample scores.

DISCUSSION:

Through the data analysis distribution of demographic variables (Table 1.), the present study reported the age majority is 50 years old and more who were accounted for 21 (42 %). Most of the sample are male 31 (62 %), 21 (42%) were Nursing High School graduate. 33 (66%) of the nurses were married.

The results of this study agree with study done by Jim, et al., (2014) that reveals the age majority is 50 years old and more. Most of the samples were male, Nursing High School graduate. Most of the nurses were married⁽⁷⁾.

15 (30 %) were Occupational before Private works, Majority of them 29 (58%) were no occupational after. 34 (68 %) of them region were from rural. 22 (44%) of them had insufficient monthly income.

These results disagree with study done by Bevans, et al., (2011) that indicates most of patient Occupational before was employed, majority of them were occupational after. Majority of them region were from Town. Most of them had insufficient monthly income⁽⁸⁾.

The opinion of researcher for this difference because increase in effect of psychological problems on daily life activities.

Table2. Reported that the evaluation of relative sufficiency was low on 11 (48%) items (Tumors like other disease can be curable. I feel that life still beautiful, I feel that I still useful for my family and society, Illness made me feels about suffering of other patients, I lost my role and my importance in the family, I became hate myself because of the illness, I feel that I need for crying, I feel that I still capable and competent for all works, What I introduce to my family and my children's convincing for me, I thinks a lot about (my future) my illness

prognosis, I can follow up others conversation obviously), and 12 (52%) was out of comparison(I feel tense and worry, I still capable to doing daily works, My role is active in the society, I thinks a lot about what happed to me, I thinks a lot about the future of my children's and my family, I thinks a lot about the costs of my illness, I suffers from forgetting, I remember previous events happened to me, I hurt for being in this image, I don't desire anyone to see my body, My body image is not satisfy for others, I feel that my body image hurt others). This result disagree with results obtained from study done by Alibhai, et al., (2007) which indicated that most of items were moderate relative sufficiency⁽⁹⁾. The opinion of researcher for this difference because changes in cultures and life style of patients from one country to another.

Table 3. Indicates that there is no significant association between ages, gender, level of education, region, monthly income and psychological problems score, while there is high significant association occupational before, occupational after treatment. This result disagree with results obtained from studies done by Fung , et al.,(2012) and Fung , et al.,(2013) which indicated that there is significant association between ages, gender, level of education, region, monthly income and psychological problems score ^{(10),(11)}. This difference because changes in cultures and life style of patients from one country to another.

CONCLUSIONS

The study concluded that the majority of the items related to psychological problems for patients with acute myeloid leukemia were low or out of the comparison, reflecting the ferocity of those problems.

RECOMMENDATIONS:

The study recommends increasing awareness and psychological education for patients to provide a better psychosocial life.

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