Stress Level among Mother for Children with Acute Lymphoblastic Leukemia

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ABSTRACT

Acute lymphoblastic leukaemia (ALL) is the most prevalent kind of cancer in children and one of the main causes of mortality from illness in developed countries [1] . It is characterized by the proliferation of lymphoid progenitor cells and their malignant transformation in the bone marrow, blood, and extramedullary locations [2]. With an average rate of about 41 cases per million people between the ages of 0 and 14 and about 17 cases per million people between the ages of 15 and 19, leukemia accounts for the greatest number of childhood cancer cases and is the leading cause of cancer-related mortality for children in the United States (US). EVERYONE Children with acute lymphoblastic leukemia are usually treated with multi-agent consolidation that includes high-dose methotrexate and re-induction therapy after induction therapy with steroids, vincristine, and asparagine, with or without anthracycline [3].

A descriptive design study was conducted to assess the stress Level among Mother for Children With Acute Lymphoblastic Leukemia to find out the relationship between this Stress Level among Mother for Children With Acute Lymphoblastic Leukemia and their demographic characteristics like children's(age ,education level mother , ...) . The study started from the period of 19th September 2022 to the 15th of March 2023.

A non-probability sample of 50 children with ALL are selected based on the study criterion and the mothers consent. The data were analyzed by using the IBM Statistical Package of Social Sciences Version 22. The data was collected by constructed questionnaire consist of two parts, part (1) related to mother for children with cancer' sociodemographic characteristics; part (2) to assess stress level among parents for children with cancer. The questionnaire validity was determined through a panel of (10) experts and the reliability was determined through a pilot study. The data were analyzed by the application of descriptive and inferential statistical analysis procedures by using (SPSS version 22). The study concludes that most of the children with ALL had moderated level. It is recommendation that mother and children receive psychosocial support to help them cope with illness and its treatment. Creation of a psychosocial counseling center to promote the psychological well-being of parents of children with acute lymphoblastic leukemia by providing care and lowering stress.

Keywords: Mother; Stress; Acute Lymphoblastic Leukemia

مستوى الاجهاد النفسي (التوتر) لدى الأمهات للأطفال المصابين بمرض سرطان الغدد الليمفاوية الحاد

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الملخص

سرطان الدم الليمفاوي الحاد (ALL) هو النوع الأكثر شيوعا من السرطان لدى الأطفال، وهو سبب رئيسي للوفاة بسبب المرض في البلدان المتقدمة (١). وهو عبارة عن تحول خبيث وانتشار الخلايا السلفية اللمفاوية في نخاع العظام والدم و مواقع خارج النخاع (٢). يمثل سرطان الدم أكبر عدد من حالات سرطان الأطفال وهو السبب الرئيسي للسرطان فيما يتعلق بوفيات الأطفال في الولايات المتحدة (الولايات المتحدة) بمعدل متوسط يبلغ حوالي ٤١ حالة لكل مليون شخص تتراوح أعمارهم بين (٠ – ١٤) سنة وحوالي ١٧ حالة لكل مليون شخص تتراوح أعمارهم بين

(١٥-١٩) سنة. يتكون علاج الأطفال المصابين بسرطان الدم الليمفاوي الحاد عادة من العلاج التحريضي بالستيرويدات والفينكريستين والأسباراجين مع أو بدون أنثراسيكلين، يليه الدمج متعدد العوامل بما في ذلك جرعة عالية من الميثوتريكسيت والعلاج إعادة التحريض (٣.(
أجريت دراسة تصميمية وصفية لتقييم مستوى التوتر لدى أمهات الأطفال المصابين بسرطان الدم الليمفاوي الحاد لمعرفة العلاقة بين مستوى الإجهاد لدى أمهات الأطفال المصابين بسرطان الدم الليمفاوي الحاد وخصائصهم الديموغرافية مثل (العمر، مستوى التعليم للام ، .....) بدأت الدراسة في الفترة من ١٩ سبتمبر ٢٠٢٢ إلى ١٥ مارس ٢٠٢٣.
تم اختيار عينة غير احتمالية مكونة من ٥٠ طفلاً مصاباً بسرطان الدم الليمفاوي الحاد (ALL) بناءً على معيار الدراسة وموافقة الأمهات. تم تحليل البيانات باستخدام الحزمة الإحصائية IBM للعلوم الاجتماعية الإصدار ٢٢. تم جمع البيانات عن طريق استبيان مكون من جزأين، الجزء (١) المتعلق بالأم للأطفال المصابين بالخصائص الاجتماعية والديموغرافية للسرطان؛ الجزء (٢) تقييم مستوى التوتر لدى أولياء الأمور للأطفال المصابين بالسرطان. تم تحديد صدق الاستبانة من خلال لجنة مكونة من (١٠) خبراء وتم تحديد ثباتها من خلال دراسة تجريبية. وتم تحليل البيانات بتطبيق إجراءات التحليل الإحصائي الوصفي والاستدلالي باستخدام برنامج SPSS)الإصدار ٢٢). وخلصت الدراسة إلى أن معظم الأطفال المصابين بسرطان الدم الليمفاوي الحاد لديهم مستوى معتدل. أوصت بضرورة تقديم الدعم النفسي والاجتماعي للأطفال والأمهات لتسهيل مواجهتهم للمرض وعلاجه. إنشاء عيادة استشارات نفسية واجتماعية للأطفال المصابين بسرطان الدم الليمفاوي الحاد، لمواصلة الرعاية لهم، وتقليل التوتر، وبالتالي دعم نفسية والديهم.

الكلمات المفتاحية: الأم، الاجهاد النفسي، سرطان الدم الليمفاوي الحاد

1. Introduction

Leukemia is inherited malignancy disease and genetic disorder in children occur due to increase abnormal formation of WBC in the bone marrow. Leading to overcrowding and affect other cell like RBC and platelet. The prevalence rate of age-adjusted leukemia in the United States is 12.8 per 100,000 individuals each year [(1)]. mentioned that symptoms acute lymphoblastic leukemia include swelling or bleeding due to thrombocytopenia, anaemia-related pallor and weakness, and neutropenia infection. While the presenting symptoms of child's with ALL during diagnosis, reflect invasion of the liver, spleen, lymph nodes,

and mediastinum is normal. Extramedullary central nervous system (CNS) leukaemia or testicles may require complex therapeutic modifications [4].

The literature on parental distress shows that it declines over time and that levels are greater at the time of diagnosis when compared to norms and controls [6] .The findings of a systematic review that family members may experience higher levels of distress than cancer patients. Parents of children with cancer experience high anxiety [7]. In addition to adding to her burden, a mother's physical and mental well-being may be negatively impacted by caring for her child. Mothers expressed more stress than fathers did in a recent study. Various studies have shown that mothers presentation symptoms such as hopelessness, despondency, anger, stress, anxiety, and distress .The life situations of these mothers demand exceptional psychological resource [8].

2-Ethical Approval

The ethical approval depends on committee for science oncology unit at Al-Hassan Al-Mojtaba Teaching Hospital. The objectives and methodology of this study were outlined to all participants in the current study to obtain their approval verbally.

3-Results and Discussions

The Results of the Study Table Distribution of mothers by their demographic characteristics (n=100)

NO.	Variables	Valid	F	%
1.	Mother age	20-30	18	36.0
		31-40	22	44.0
		More than 40	10	20.0
		Total	50	100.0
2.	Occupation	Unemployed	11	22.0
		Earner	19	38.0
		Employed	18	36.0

		Retired	2	4.0
		Total	50	100.0
6.	Living level	Enough	24	48.0
		To some extent	17	34.0
		Not enough	9	18.0
		Total	50	100.0
7.	Education level of the mother	No read	8	16.0
		Primary	19	38.0
		Secondary	12	24.0
		Diploma	7	14.0
		Bachelor's	4	8.0
		Total	50	100.0
8.	Residence	Urban	34	68.0
		Rural	16	32.0
		Total	50	100.0
	NO. child cancer gander	NO:1 NO:2 NO:>3 Total	47 ٣ ٠ ٥٠	94 ٦ ٠ ١٠٠

Table 2: The Total level of stress among mother about child with ALL (n=50).

Total level of stress			
Level of anxiety	D	F	P
	Sever	30	60
	Moderate	15	30
	Mild	5	10
	Total	5	100

In this table, which represents the level of stress among mothers for children with ALL, it appears that the level of stress is severe and

prevails among them by 60%, while themoderate level of anxiety is 30% and 10% for mild.

Table 3: Association between stress among mother and demographic characteristics.

NO.	Variables		Sum of Squares	Df	Mean Square	F	Sig.
1.	Living level	Between Groups	0.770	2	0.385	0.833	0.441 NS
		Within Groups	21.730	47	0.462		
		Total	22.500	49			
2.	Occupation	Between Groups	2.273	3	0.758	1.723	0.175 NS
		Within Groups	20.227	46	0.440		
		Total	22.500	49			
3.	Residence	Between Groups	0.827	1	0.827	1.832	0.182 NS
		Within Groups	21.673	48	0.452		
		Total	22.500	49			
4.	Mother age	Between Groups	5.805	18	0.322	0.599	0.873 NS
		Within Groups	16.695	31	0.539		
		Total	22.500	49			
58.	Education level of themother	Between Groups	`1.862	4	0.466	1.015	0.410 NS
		Within Groups	20.638	45	0.459		
		Total	22.500	49			

Df= Degrees of freedom F= Frequency. Sig=Significant NS=Non Significant at P>0.05

This table that there are no statistically significant association between stress level among parents for children with ALL demographic characteristics at less than (0.05).

Discussion

Agreeing to the table (2), which speaks to the level of uneasiness among guardians for children with cancer, it shows up that the level of uneasiness is extreme and wins among them by 60%, whereas the direct level of uneasiness is 30% and 10% for mellow, These comes about are a Huge run of the test taken in Karbala governorate, which endures from extraordinary uneasiness as a result of the troublesome

conditions that are spoken to by cancer. Hence, Consideration must be paid to the family in expansion to the child.

Agreeing to another investigate that concurs with our consider, found tall levels of uneasiness among guardians of children with cancer, almost 70% of guardians had gentle and tall level of uneasiness [8].Concurring to another investigate that opposes this idea with our think about, Almost 56.4% of the guardians were found to have mellow level of uneasiness, 16.8% were found to have direct level of uneasiness, and 26.7% were found to have extreme level of uneasiness [9]. According to a study conducted among male adults in India, the rate of mild anxiety was found to be 24.4% [10].

Agreeing to the table (3) that there are no factually noteworthy affiliation between uneasiness level among guardians for children with cancer statistic characteristics at less than (0.05), But for gander, there are factually critical relationship between uneasiness level among Guardians for children with cancer and gander at (0.028).

REFERENCES:

1- Gutiérrez Camino, Á. (2016). *Genetic variants involved in Childhood Acute Lymphoblastic Leukemia Susceptibility.*(Doctoral disteration).Retrivedfrom https://addi.ehu.es/bitstream/handle/10810/20554/TESIS_GUTIERREZ_CAMINO_ANGELA.pdf?sequence=1

2- Terwilliger, T., & Abdul-Hay, M. J. B. C. J. (2017). Acute Lymphoblastic Leukemia: A Comprehensive Review and 2017 Update. *Blood cancer journal,* 7(6), e577-e577. https://doi.org/10.1038/bcj.2017.53

3- Kato, M., & Manabe, A. (2018). Treatment and biology of pediatric acute lymphoblastic leukemia. Pediatrics International, 60(1), 4-12.

4- Hamner, T., Latzman, R. D., Latzman, N. E., Elkin, T. D., & Majumdar, S. (2015). Quality of life among pediatric patients with

cancer: Contributions of time since diagnosis and parental chronic stress. *Pediatric blood &Cancer*, 62(7), 1232-1236. doi.org/10.1002/pbc.25468.

5- Haase, J. E., Kintner, E. K., Monahan, P. O., Robb, S. L., & Grom, G. (2013). The Experiences of Children Chemotherapy-Induced Nausea, Vomiting, and Taste Changes (CINVATC). Cancer nursing, 36(1), 30-37. 13. Hall, D. L. et al. (2016). Psychological distress and subsequent medical costs in a cohort of privately insured patients with breast cancer. Journal of Clinical Oncology, 34(21), 2608-2614.

6- Isabel, Tan, XW., Mordiffi, SZ., Lopez V, Leong K. (2021). Psychological Distress in Parents of Children with Cancer: A Descriptive Correlational Study. Asia Pac J Oncol Nurs (pp 94_95).

7- Bhattacharya, K., Pal, S., Acharyya, R., Dasgupta, G., Guha, P., & Datta, A., (2015). Depression and anxiety in mothers of children with cancer and how they cope with it: a cross-sectional study in eastern India. ASEAN Journal of Psychiatry, 17(1), 2.

8- An, E., Lo, C., Hales, S., Zimmermann ,C., Rodin, G.(2018). Demoralization and death anxiety in advanced cancer. Psychooncology. ;27(11):2566-2572.

9- Azad Rahmani, Arman Azadi, Vahid Pakbour, Safieh Fadhan, Ebrahim Ali, (2018),Indian journal of palliative care,24 (1),82

10- Basher, M., Karim, M., Sultana, N., Hossain, K., Kamal, M., (2014). Parent stress in childhood cancer. Bangladesh Med J.;41:8-13.