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Are We Aware of Anxiety and Depression in Patients with Newly Diagnosed Acute Leukemia?

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Abstract

Objectives: We aimed to assess the status of anxiety and depression in newly diagnosed acute leukemia patients.

Material and Method: In this prospective, observational, cross-sectional study, we aimed to assess the risks of anxiety and depression in newly diagnosed acute leukemia patients who were admitted to hematology clinic of Ministry of Health İstanbul Training and Research Hospital in 2016.

Results: A total of 21 patients including 13 (61.9%) patients with Acute Myeloid Leukemia (AML) and 8 (38.1%) patients with Acute Lymphoblastic Leukemia (ALL) were evaluated in the study. The median age of the patients was 45 years (range: 21-69) and the number of female patients were 11 (52.4%). Only eight (38.1%) patients, who were diagnosed with AML in five (38.5%) patients and ALL in three (37.5%) patients, have revealed to have anxiety. The anxiety rates were 45.5% (n:5) in the female patients and only 30% (n:3) in the male patients. The difference was not statistically significant (p>0.05). Depression was recorded in 17 (81%) patients and the rates of depression were 84.6% (n:11) in AML patients, 75% (n:6) in ALL patients, 81.8% (n:9) in the female, and 80% (n:8) in the male patients.

Conclusion: The assessment of anxiety and depression in patients with acute leukemia from the admission to hospital is substantial for the adherence to treatment. Both are distinctively more common in those patients and trigger each other causing a vicious circle. A professional support to improve their psychological status should be provided during the treatment of these patients.

Keywords: Acute leukemia; Anxiety; Depression

Introduction

Leukemia is a clonal malignant disease, in which progenitor cells can be encountered in bone marrow, peripheral blood and tissues, and occurs due to the disruption of normal development process in the bone marrow. Leukemia is classified and named by their clinical course and the cell clone that they are derived from. While patients with certain types of leukemia can be followed without treatment, other patients, who are diagnosed with acute myeloid or acute lymphoblastic leukemia, are rapidly admitted and started on high-dose chemotherapy [1,2].

The diagnostic tests for leukemia including bone marrow biopsy, urgent admission, the long length of stay in hospital, chemotherapy, and the name of disease are the significant sources of stress for patients. In addition, expected side effects such as nausea and hair loss make the process harder. Therefore, it is crucial for this group of patients to assess the risks of anxiety and depression and provide appropriate professional support and medical care when it is needed. In our study, we aimed to assess the risks of anxiety and depression in newly diagnosed acute leukemia patients who were admitted to hematology clinic to receive chemotherapy and provide necessary professional support along with treatment revisions and follow-up according to our findings.

Material and Methods

In this prospective, observational, cross-sectional study, we aimed to assess the risks of anxiety and depression in newly diagnosed acute leukemia patients who were admitted to hematology clinic of Ministry of Health İstanbul Training and Research Hospital in 2016. Hospital Anxiety and Depression Scale (HADS) was used to assess depression with the patients' demographic characteristics.

HADS is an assessment scale developed by Zigmond and Snaith to determine the risks and assess the severity of anxiety and depression [3]. The validation and reliability of the scale in Turkey were carried out by Aydemir et al. [4]. The questionnaire has a total of 14 questions; seven of which measured anxiety (odd numbers) and the remaining seven (even numbers) measured depression. Each question was scored from 0 to 3. The scoring order of each question in the questionnaire was different. Questions were numbered as 1, 3, 5, 6, 8, 10, 11 and 13 that indicated decreasing severity with the scores including 3-2-1-0. On the other hand; questions were numbered as 2, 4, 7, 9, 12 and 14

that indicated increasing severity with the scores including 0-1-2-3. The cut-off value for the total score of the odd-numbered questions assessing anxiety was 10; while it was 7 for the even-numbered questions assessing depression.

Statistical analysis

Statistical analysis was performed using SPSS v17.0 (SPSS Inc; Chicago, IL, US). Descriptive statistics were performed for patients' characteristics. Categorical values were compared using chi-square test. Spearman's correlation analysis was used to analyze the correlation between anxiety and depression.

Results

A total of 21 patients including 13 (61.9%) patients with acute myeloid leukemia (AML) and 8 (38.1%) patients with acute lymphoblastic leukemia (ALL) were evaluated in the study. The median age of the patients was 45 years (range:21-69) and the number of female patients were 11 (52.4%). Only five patients (23.8%) had co-morbidity (Tables 1-3).

Characteristics	n	%
Gender		
Female	11	52.4
Male	10	47.6
Diagnosis		
AML	13	61.9
ALL	8	38.1
Co-morbidity		
Yes	5	23.8
No	16	76.2

Table 1: The characteristics of the patients with acute leukemia.

HADS		AML	ALL	AML+ALL
Anxiety	(0-10 points)	8	5	13
	(11-21 points)	5	3	8
	Mean ± SD		10.3 ± 5.4	
Depression	(0-7 points)	2	2	4
	(8-21 points)	11	6	17
	Mean ± SD		12.1 ± 5.1	

Table 2: The correlation between the diagnosis and the scores with Hospital Anxiety and Depression Scale (HADS).

HADS		Female	Male	Total
Anxiety	(0-10 points)	6	7	13
	(11-21 points)	5	3	8
Depression	(0-7 points)	2	2	4
	(8-21 points)	9	8	17

Table 3: The correlation between the gender and the scores with Hospital Anxiety and Depression Scale (HADS).

Only eight (38.1%) patients, who were diagnosed with AML in five (38.5%) patients and ALL in three (37.5%) patients, have revealed to have anxiety. The anxiety rates were 45.5% (n:5) in the female patients and only 30% (n:3) in the male patients. The difference was not statistically significant ($p>0.05$). Depression was recorded in 17 (81%) patients and the rates of depression were 84.6% (n:11) in AML patients, 75% (n:6) in ALL patients, 81.8% (n:9) in the female, and 80% (n:8) in the male patients. Neither anxiety nor depression had a

significant correlation with the existence of co-morbidity and gender ($p>0.05$). Correlation analysis revealed a positive correlation between anxiety and depression ($r=0.846$; $p<0.01$) (Tables 2 and 3).

Discussion

Worrying is a normal part of life. One can worry about different matters during daily life. The most common reasons for worry include work, exams, health and financial issues. It makes us prepared to cope with daily troubles and helps protecting ourselves by making quick decisions in times of potential danger. Anxiety, on the other hand, is a state of worry, fear, tension and distress. Some theorists believe that anxiety results from inner conflicts, while others define it as a learned behavior [5,6]. Depression can be defined as a chronic state of low-mood, sadness, melancholy or sorrow that can alter a person's social function and daily life activities. While a short state of being sad or in a low-mood can be wrongfully named as depression in daily life, clinical depression is a medical diagnosis and is substantially different than the above-mentioned use of term. It is characterized by intense and persistent depressed mood that impairs a person's daily functioning [7-9]. Symptoms or conditions that commonly occur during the usual course of daily life, s headache, nausea or common cold, may alter the patient's mental state until the symptoms resolve. It is obvious that the mental health of the patient is profoundly affected during the treatment of acute. Conceding of the diagnosis, obligation to receive treatment in hospital, some signs including, nausea, vomiting, and hair loss during the treatment process, staying away from social life, and concerning about the treatment response affect negatively the patient's mental state. Therefore, it is crucial to assess the risks of anxiety and depression of those patients, and to provide appropriate professional support and medical care when they need [10]. There are several studies evaluating the correlation of anxiety and depression with various diseases including diabetes mellitus, rheumatoid arthritis, asthma and cardiovascular diseases [11-16]. The number of studies about new treatment agents and combinations in acute leukemia are increasing, yet there are limited studies about anxiety and depression. There are a number of research focused on anxiety and depression in solid tumors, however, the same interest is not observed in the field of hematologic malignancies [17,18]. Psychological and medical supports at the time of diagnosis and during treatment are essential to revitalize the patient's desire to live and increase the adherence to treatment. In our study, acute leukemia significantly causes anxiety and depression in the patients. Depression was distinctively more common than anxiety in overall subject group and there was a positive correlation between depression and anxiety. Depression indicates deep impact of diseases in the patients' mood and necessitates a professional support to recover their psychological damage [19-21].

Conclusion

The assessment of anxiety and depression in patients with acute leukemia from the admission to hospital is substantial for the adherence to treatment. Both are distinctively more common in those patients and trigger each other causing a vicious circle. A professional support to improve their psychological status should be provided during the treatment of these patients.

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