

Evaluation of quality of life of patients hospitalized with leukemia and lymphoma

Avaliação da qualidade de vida de pacientes com leucemia e linfoma hospitalizados

Thais Conceição Cruz¹, Nicolly Del Carmen Parra Molina Mattos², Natali dos Santos Nascimento³, Samara de Souza Marques⁴, Camila Reinbold Rezende⁵, Cássio Magalhães da Silva e Silva⁶

¹Corresponding author. Salvador, Bahia, Brazil. ORCID: 0000-0002-47002885. thais.fisio94@gmail.com

²Salvador, Bahia, Brazil. ORCID: 0000-0002-85339737. nicollymolina@hotmail.com

³Salvador, Bahia, Brazil. ORCID: 0000-0002-3473-4921. natali.nascimento16@gmail.com

⁴Salvador, Bahia, Brazil. ORCID: 0000-0002-103707907. samara14marques@hotmail.com

⁵Universitary Hospital Professor Edgard Santos. Contemporary Society. Salvador, Bahia, Brazil.

ORCID: 0000-0003-1989-2531. camilareinbold@outlook.com

⁶Federal University of Bahia. Salvador, Bahia, Brazil. ORCID: 0000-0002-9119-5418. cassioms@ufba.br

RESUMO | INTRODUÇÃO: As neoplasias malignas, leucemias e linfomas, são responsáveis por alterar o metabolismo dos pacientes, atrelado a isso, o tempo de internamento hospitalar prolongando em conjunto com os tratamentos antineoplásicos impactam na qualidade de vida dos pacientes oncológicos. **OBJETIVO:** Avaliar a qualidade de vida de pacientes oncológicos em tratamento quimioterápico durante internamento hospitalar. **MATERIAIS E MÉTODOS:** Estudo analítico, longitudinal e observacional, com 15 pacientes internados em hospital público, de grande porte, e alta complexidade, no período de fevereiro a julho de 2017. A coleta de dados ocorreu em três etapas: primeiro, quinto e décimo dia de internamento utilizando o questionário Fact-G. **RESULTADOS:** No período de realização do estudo, 56 pacientes foram internados na enfermaria 1B do HUPES. Desses, 25 pacientes foram considerados elegíveis. Após o início do estudo, ocorreram 10 altas antes do décimo dia, totalizando uma amostra final de 15 pacientes. A idade variou de 20 a 66 anos, sendo que a mediana, em anos, foi de 31 (35,80 16,61), 53% foram do sexo feminino. Quanto ao tipo de câncer, 53% tinham leucemia. Durante o tempo de internamento, não foi observada diferença significativa da qualidade de vida entre o primeiro, quinto e décimo dia de internamento hospitalar. **CONCLUSÃO:** Apesar dos pacientes estarem hospitalizados, a qualidade de vida manteve-se relativamente preservada.

PALAVRAS-CHAVE: Neoplasias. Qualidade de vida. Leucemia. Linfoma.

ABSTRACT | BACKGROUND: Malignant neoplasms, leukemias and lymphomas, are responsible for altering the metabolism of patients. Linked to this, the length of hospital stay associated with antineoplastic treatments have an impact on quality of life of cancer patients. **OBJECTIVE:** To evaluate the quality of life of cancer patients undergoing chemotherapy and hospitalization. **MATERIALS AND METHODS:** Analytical, longitudinal and observational study, with 15 patients of a high complexity public hospital, between the period of February 2017 to July 2017. The data collection took place in three stages: first, fifth and tenth day of hospitalization, using the Fact-G questionnaire. **RESULTS:** During the period of study, 56 patients were admitted in the Nursery 1B of the Hospital. Of these, 25 patients were considered eligible. After the beginning of the study, there were 10 discharges before the tenth day, totaling a final sample of 15 patients. The age ranged from 20 to 66 years, and the median, in years, was 31 (35.80 16.61); 53% were women. Regarding the type of cancer, 53% had leukemia. During the hospitalization, no significant difference in quality of life was observed between the first, fifth and tenth day. **CONCLUSION:** Despite the patients are hospitalized and under chemotherapy, the quality of life has remained relatively preserved.

KEYWORDS: Neoplasms. Life style. Quality of life. Muscle strength. Leukemia. Lymphoma.

Introduction

Cancer is a set of diseases of a multifactorial etiology, characterized by abnormal tissue propagation, which escapes from the control of the organism, tending to autonomy and perpetuation. Leukemia is a malignant neoplasm of white blood cells while lymphoma is a type of cancer that originates in the lymph nodes of the lymphatic system. It is estimated that in 2030 there will be 21.4 million of new cases and 13.2 million deaths from this pathology.

Hospitalized adult patients may develop physical decline during and after treatment, as reduced mobility is evidence of numerous impairments, which directly interfere with their quality of life. Absence of activity, drug therapy and bed restriction can also cause excessive muscle fiber relaxation and, consequently, physical deconditioning.

Inactivity causes the onset of muscle weakness and atrophy. The muscle tissue loses about 10 to 15 percent of their strength per week due to immobilization. Chemotherapy, radiotherapy and length of hospital stay can directly impact on the patient's quality of life. In the oncology field of study, quality of life is the subjective perception that a person has about their disability and its satisfaction about their present level of functionality. It is also observed that patients under cancer treatment have a compromised quality of life, therefore, it is increasingly necessary to develop studies with the purpose of promoting humanization in the care of patients undergoing treatment.

In order to improve the quality of care for cancer patients, the evaluation of quality of life may help in clinical practice and also guide therapeutic intervention strategies, produce new protocols and analyze the success of oncologic treatment during hospitalization.

The objective of this study was to evaluate the quality of life of cancer patients under chemotherapy treatment during hospitalization.

Methods

This is a longitudinal and observational study, carried out from February 2017 to July 2017, with oncological patients admitted in the Nursery 1B of the Hospital Universitário Professor Edgard Santos (HUPES), located in the city of Salvador, in the state of Bahia, Brazil. This research project was approved by the Ethics and Research Committee of HUPES, under the opinion n° 1,805,649 (CAAE 60028616200000049). Patients received instruction on the research procedures and signed the Term of Consent

Free and Clarified

The study consisted of 15 oncological patients, considering as inclusion criteria: patients with leukemia or lymphoma, age older than 18 years and admitted to the unit during the data collection period. Patients were excluded if they were in contact or airborne isolation, with inability to answer information contained in the questionnaire applied in the evaluation, or those with clinical instability.

The data collection took place in three stages: first, fifth and tenth day of hospitalization. The social, demographic and clinical data were collected through the patients' charts, being inserted in the evaluation form. Quality of life was assessed using the FACT-G Questionnaire in Portuguese. The request to access and use the questionnaire was made through the website www.facit.org. The FACT-G is a functional scale that evaluates the general quality of life of cancer patients in the last seven days, composed of 27 items. Each item of the questionnaire was answered based on the caption: 0 = not at all; 1 = a little; 2 = more or less; 3 = very; 4 = very much. The maximum score to be obtained is 108, divided into four domains: physical well-being, composed of 7 items (score 0-28 points); social and family welfare, consisting of 7 items (score 0-28 points); emotional well-being, composed of 6 items (score 0-24 points); functional well-being, composed of 7 items (score 0-28 points). Scores were obtained according to the scoring standards previously established as described in the FACT-g Scoring Manual. The formula for calculating the scores was provided together with the questionnaire obtained.

The values of each domain were summed, multiplied by the number of questions and divided by the number of items answered (since the patients had the option of not responding to any item); in order to obtain the final result, the domains were added and the overall quality of life score could be obtained. Thus, higher values correspond to a better quality of life in its various dimensions.

The questionnaire was completed through an interview conducted by the same evaluator. In order to maintain the anonymity of the patients, they were identified by the medical record number.

Statistical analysis

Descriptive statistics were used to analyze demographic and clinical data. For the numerical

variables, a central tendency measure (average and median) and dispersion measure (standard deviation and interquartile range) were used. To verify the normality of the distribution, the Kolmogorov-Smirnov normality test was used. The Kruskal-Wallis test was used to establish the statistical significance of the variables. The level of significance was set at $p < 0.05$. Statistical analysis was performed using the Statistical Package for the Social Sciences, version 14.0 (SPSS Inc., Chicago, IL, USA).

Results

At the time of the study, 56 patients admitted to the Nursery 1B were considered eligible. Of these, 25 were included in the research. Ten of these patients were discharged before the tenth day, which left a final sample of 15 patients. (Figure 1)

Figure 1. Sample selection process. Salvador- Ba, 2017. The age ranged from 20 to 66 years, and the median, in years, was 31 (53-20), 53% were female. The most prevalent cancer was leukemia, 53%, Table 1

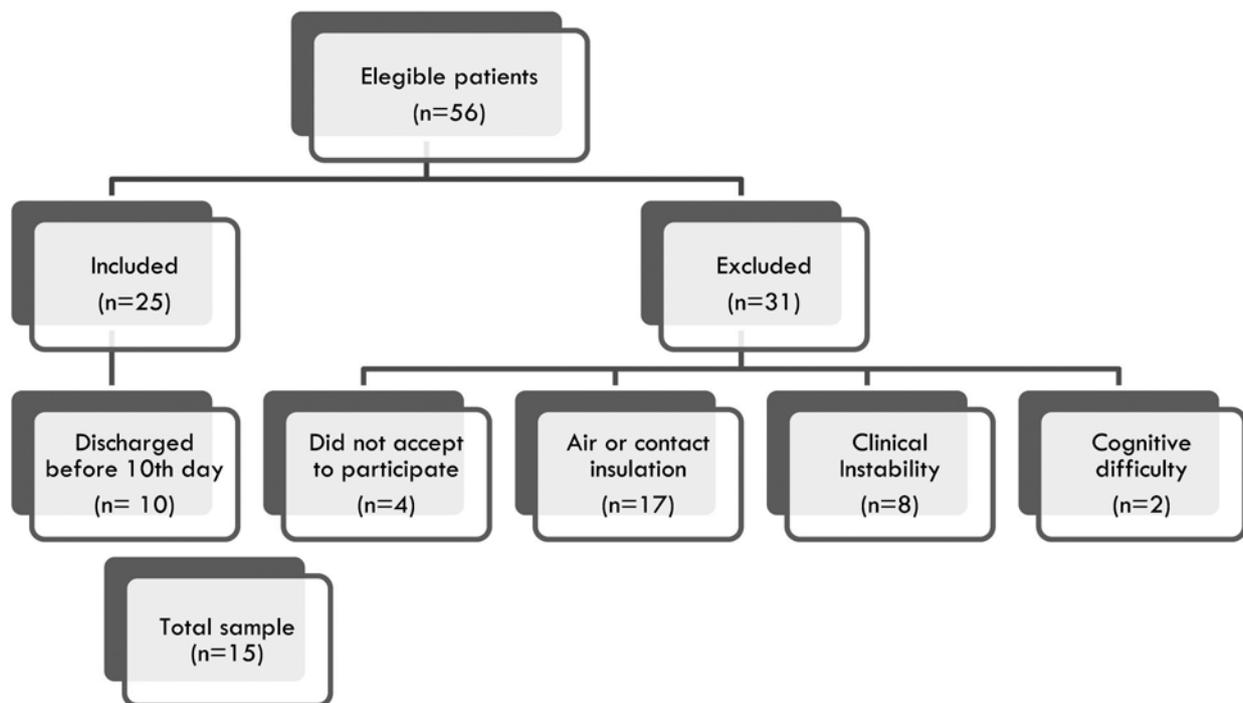


Table 1. Demographic and clinical characteristics of hospitalized cancer patients. Salvador-Ba, 2017

Variable	n=15
Age (years), median (IQ)	31 (53-20)
Weight (kg), median (IQ)	57 (65-48)
Female, n (%)	9 (53)
Marital status, n (%)	
Single(a)	6 (40)
Married(a)	9 (60)
Occupation, n (%)	
No	11 (73)
Yes	4 (27)
Type of Cancer, n (%)	
Leukemia	8 (53)
Lymphoma	7 (47)
Chemotherapy, n (%)	
Cycle 1	11(74)
Cycle 3	2 (13)
Cycle 4	2 (13)

n: number of patients; % percentage; kg: kilogramas

Figure 2 shows the FACT-G scores obtained during the hospitalization of the patients. It can be seen that there was no significant difference between length of hospital stay and quality of life on the first, fifth and tenth days ($P = 0.728$)

Figure 2. Median, first quartile, third quartile and maximum and minimum value of quality of life on the first, fifth and tenth day of hospitalization of cancer patients. Salvador-Ba, 2017

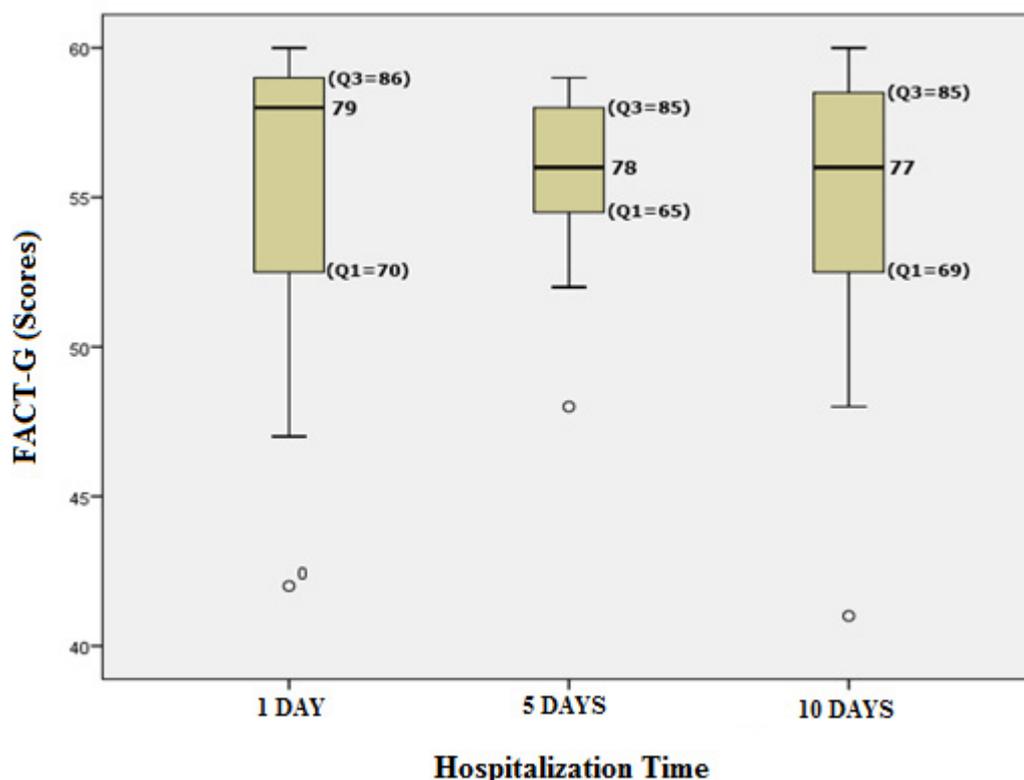


Table 2 presents the values of all FACT-G domains on the first, fifth and tenth days of hospitalization, in order to verify which of these domains changed during the hospitalization of cancer patients. Note that there was no relevant variation between days of hospitalization. Among the domains, similar results were found, with the functional domain being the most compromised, obtaining a lower score.

Table 2. Distribution of the median of domains and scores of the FACT-G questionnaire of hospitalized oncology patients. Salvador-Ba, 2017

VARIABLE	DAY 1 Median	DAY 5 Median	DAY 10 Median
Domain			
Physical well-being	23	23	21
Social/Family well-being	19	17	18
Emotional well-being	20	21	22
Functional well-being	16	17	16
Score			
FACT-G	79	78	77

FACT-G: Functional Assessment of Cancer Therapy – General

Discussion

The constant indexes in the analysis suggest that the quality of life of oncology patients undergoing chemotherapy did not show significant changes over the length of hospital stay, so that they did not exhibit oscillations on the first, fifth and tenth days of hospitalization.

The results obtained in the present study were not consistent with the literature and previous studies, in which it was found that the length of hospital stay affects the quality of life of oncology patients. Possibly, the cause that justifies the results observed in this analysis is directly related to the sample size. In addition, the treatment period can justify the results, since the majority of the patients were in the first cycle of chemotherapy and it is noticed that in this cycle, most of the side effects are not yet present. Additionally, the short 10 days period in which the three evaluations were performed may have influenced the results.

Immobility causes damage to muscle function, which ranges from a daily decrease in muscle strength of 1.3% to 3% and 10% during a week of inactivity. In the period of inactivity, we can also notice a change in the patient's emotional state, regardless of the reason that led to a prolonged period

of bed rest. In addition to loss of muscle strength and endurance, other symptoms such as anxiety, depression, emotional instability and social isolation can also be noticed. In addition to significantly improving the quality of life of immobilized patients, the prescription and execution of physical exercises are essential to attenuate the negative effects of immobility and length of hospital stay. However, the present study did not evaluate this effect.

Studies have shown that the reduction in the level of physical activity generates an increase in dependence, a decrease in self-esteem and activities in society, limitations in family life and signs of pessimism. We should also consider that patients with anxiety and depression are more susceptible to a reduction of external and social activities, adopting a more reclusive and passive lifestyle. This situation can lead to muscle deconditioning and, as a consequence, a deterioration in the quality of life.

Analyzing the studies that evaluated the quality of life and the functionality of hospitalized patients, it was noted that hospitalization can cause a significant functional decline followed by deconditioning. The main goal has been the reduction of functional impairment and the limitations imposed to perform the daily life activity in the treatment after hospital discharge. The lack of ability to perform

independently the activities of the daily routine was the element that most directly affected the quality of life of the patients. Based on these data, the result of the present study may suggest a good service in the unit, considering the performance of the Physical Therapists as an important factor for the treatment of patients. For the treatment of this category of patients, the Physical Therapy aims to remove them from the situation of hypomobilism and excessive bed rest, to prevent loss of muscle tissue, in addition to improving the quality of life.

However, the present study presented important limitations, such as patient early discharges and evaluation difficulties. Sometimes the procedures caused discomfort for some patients during the conduction, due to fatigue and asthenia caused both by the cancer itself, as well as by the side effects of chemotherapy. Concomitantly, we suggest conducting new research investigating other factors that influence the quality of life of cancer patients.

Conclusion

This study found that although the patients were hospitalized, the quality of life remained relatively preserved.

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Authors' contributions

Cruz TC, Nascimento NS, Mattos NCPM, Marques SS, Rezende CR, Silva CMS participated in the study design, data collection and interpretation and paper writing.

Competing interests

No financial, legal or political competing interests with third parties (government, commercial, private foundation, etc.) were disclosed for any aspect of the submitted work (including but not limited to grants, data monitoring board, study design, manuscript preparation, statistical analysis, etc.).

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