

OVERVIEW OF FATIGUE IN CANCER PATIENTS WHICH UNDERGO CHEMOTHERAPY

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Abstract

One of the side effects of chemotherapy in cancer patients is fatigue. Fatigue is a feeling of tired, exhausted, or lack of energy that can that may take in several days, weeks, or months. The purpose of this study was to identify fatigue on cancer patients which undergo chemotherapy. The population of this study was adult cancer patients that undergoing chemotherapy in the Dharmais Cancer Hospital Jakarta. The research method was descriptive with a sample size of 95 respondents. The sampling technique used consecutive sampling. The data collection used questionnaires by respondents and accompanied by the researcher. The result of this study showed that 53 (55.8%) of respondents experienced mild fatigue, and 42 (44.2%) of respondents experienced severe fatigue. Fatigue in cancer patients undergo chemotherapy often causes by physical and psychological problems. The predisposing of fatigue in patients undergoes chemotherapy including cancer burden, treatments of cancer, nutritional problems, infections, and psychological factors including depression, anxiety, and stress. Therefore, identification of the causes of fatigue is needed to prevent more severe fatigue in cancer patients undergo chemotherapy.

Keywords: cancer, chemotherapy, fatigue

BACKGROUND

Fatigue is a common symptom in patients with cancer (Piper et al. 1998 ; Yeşilbalkan, ÖU., Karadakovan, A., & Göker, E., 2009). According to The National Comprehensive Cancer Network (NCCN), Cancer Related Fatigue (CRF) is a “distressing persistent, subjective sense of tiredness or exhaustion related to cancer treatment that is not proportional to recent activity and that interferes with usual functioning” (Mock et al., 2007, p.1 ; Given, B., 2008).

Compared with fatigue experienced by healthy individuals, cancer related fatigue is more severe, more distressing, and less likely to be relieved by sleep or rest (Kwak, SM., et al., 2011).

The incidence of fatigue among patients with cancer is well-documented, with 75%-99% of patients who undergo chemotherapy describing it as increasing with every cycle (Nail & Jones, 2001 ; Kuchinski, AM., Reading, M., Lash, AA. 2009).

The experience of fatigue in 90% cancer patients at some point during the course of their illness and it has been noted to worsen when cancer treatment begins (Barnes & Bruera, 2002; Escalante et al., 2001; Yeşilbalkan, ÖU., Karadakovan, A., & Göker, E., 2009). Diminished performance status and the presence of disease-related symptoms often cause fatigue before treatment with chemotherapy (Grant, Golant, Rivera, Dean, & Benjamin, 2000; Yeşilbalkan, ÖU., Karadakovan, A., & Göker, E., 2009), but fatigue also can be worsened by pain, anemia, sleep disturbance, and nutritional, mood, and activity issues (National Comprehensive Cancer Network [NCCN], 2008; Yeşilbalkan, ÖU., Karadakovan, A., & Göker, E., 2009).

Patients who experience severe and persistent fatigue have a truly impaired quality of life, as this condition affects their social activities, leisure time, work and responsibilities (Romito et al. 2011).

Factors contributing to fatigue are surgery, chemotherapy, pain, sleep disturbance, anemia, gastrointestinal disturbance, and emotional distress (Anderson, N.J., & Hacker, E.D, 2008). Fatigue has a significant impact on the overall quality of life. In the fatigue study, of the 419 patients with cancer who participate in a telephone interview, 78% experienced fatigue during the course of their treatment. Fatigue adversely affected patients in their daily lives more than did pain (61% vs 16%). The fatigue study involved a telephone survey of 379 patients with cancer who had previously received chemotherapy. Seventy-six percent of the patients reported experiencing significant fatigue at least a few days each month during their most recent chemotherapy cycle (Errihani, H, & Tazi, EM, 2011).

Until now, overview of fatigue overview in cancer patients undergoing chemotherapy still necessary to developed in Indonesia. Therefore, based on the description above, author interested in conducting research on the description of fatigue in cancer patients undergoing chemotherapy.

The general purpose of this study was to describe of fatigue in cancer patients undergo chemotherapy in inpatient unit and ambulatory short of care Dharmais Cancer Hospital Jakarta.

Whereas the specific purposes of this research are: 1) indentifyng fatigue in cancer patients undergo chemotherapy, 2) identify the age, Hb, stage of cancer, types of chemotherapy, cycles of chemotherapy, sex, type of cancer, pain, sleep quality, nausea and vomiting, anxiety, depression, physical activity in cancer patients undergo chemotherapy.

RESEARCH METHODS

This study was descriptive. The sample was cancer patients undergo chemotherapy at the Dharmais Cancer Hospital Jakarta in 2013 and the number of sample was 95. The samplin metode used consecutive sampling with inclusion and exclusion criteria. Instruments used in this research was Questionnaire Revised

Schwartz Cancer Fatigue Scale which is a questionnaire to assess fatigue in cancer patients.

Researchers identify potential respondents with medical records that are ajusted to the inclusion and exclusion criteria. Then, the questionnaires filed out by respondents with assisted by researchers. Data analysis was to know the description of fatigue in cancer patients undergo chemotherapy.

RESULT

Table 1.
Distribution of respondents by age and hemoglobin levels in the Dharmais Cancer Hospital, June 2013 (n = 95)

Variable	Mean	Median	SD	Min	Max
Age	45,54	46,00	10,102	21	65
Hb	10,88	10,600	1,3798	6,3	13,8
				95% CI	
				43,48 ; 47,49	
				21 – 65	

Table 1 describe the results of the analysis of the mean respondents age in this study was $45,54 \pm 10,102$ years (95% CI: 43,48 ; 47,49) with the age range of 21 – 65 years. While the average level of haemoglobin range of 6,3 g/dl -13,8 gr/dl.

Table 2.
Distribution of respondents by sex and types of cancer in the Dharmais Cancer Hospital, June 2013 (n = 95)

Variable	Frequency	Percentage
Gender		
Male	26	27,4
Female	69	72,6
Types of cancer		
Ca	37	38,9
Mammae	13	13,7
KNF	10	10,5
LNH	6	6,3
Ca Kolon	5	5,3
	4	4,2

Variable	Frequency	Percentage
Ca Ovarium	20	21,1
Ca Cerviks		
Another		

Table 2 describe the distribution of respondents were female as much as 69 respondents (72.6%), as well as the distribution of respondents by types of cancer is breast cancer by nearly half as much as 37 respondents (38.9%)

Table 3.

Distribution of respondents by stadium of cancer, types of chemotherapy, and cycles of chemotherapy in the Dharmais Cancer Hospital, June 2013 (n = 95)

Variable	Frequency	Percentage
Stage of Cancer	2	2,2
Stage 1	27	28,4
Stage 2	52	54,7
Stage 3	14	14,7
Stage 4		
Types of chemotherapy	29	30,5
FAC	12	12,6
Cisplatin	4	4,2
Paxus	50	52,6
Lain-lain	9	9,5
Cycles of chemotherapy	13	13,7
Cycle 1	27	28,4
Cycle 2	18	18,9
Cycle 3	28	29,5
Cycle 4		
Cycle > 4		

Table 3 describe the distribution of respondents stadium of cancer was

stadium 3 of 52 respondents (54.7%). The following analysis data result obtained types of chemotherapy combination of FAC as much as 29 respondents (30.5%), and nearly half undergo cycles of chemotherapy more than 4 reaching 28 respondents (29.5%).

Table 4.

Distribution of respondents by pain, sleep quality, nausea and vomiting in the Dharmais Cancer Hospital, June 2013 (n = 95)

Variable	Frequency	Percentage
Pain		
Nothing	13	13,7
Mild	29	30,5
Moderate	45	47,4
Severe	8	8,4
Sleep Quality	17	17,9
Good	78	82,1
Bad		
Nausea and Vomiting	11	11,6
Normal	33	34,7
Mild	37	38,9
Moderate	11	11,6
Severe	3	3,2
Worse / Very severe		

Table 4 describe the distribution of respondents by level of pain was obtained almost half of the respondents experienced moderate pain as much as 45 respondents (47.4%), and nearly all respondents are poor sleep quality as much as 78 respondents (82.1%). The frequency distribution by nausea and vomiting showed that nearly half of respondents had experienced nausea and vomiting in the category were as much as 37 respondents (38.9%).

Table 5.

Distribution of respondents by anxiety, depression, and physical activity in the Dharmais Cancer Hospital, June 2013 (n = 95)

Variable	Frequency	Percentage
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Variable	Frequency	Percentage
Anxiety		
Normal	34	35,8
Borderline	35	36,8
Abnormal	26	27,4
Depression		
Normal	59	62,1
Borderline	20	21,1
Abnormal	16	16,8
Physical Activity		
Pasif	33	21,1
Minimal	42	44,2
active	20	34,7
Active		

Table 5 showed that almost half of respondents experienced a borderline anxiety as much as 35 respondents (36.8%), and almost were not experience depression as much as 59 respondents (62.1%). The frequency distribution of respondents by physical activity showed that nearly half of the respondents included in the category of activity minimal as much as 42 respondents (44.2%).

Table 6.
Distribution of respondents fatigue in the Dharmais Cancer Hospital, June 2013 (n = 95)

Variable	Frequency	Percentage
Fatigue		
Mild	53	55,8
fatigue	42	44,2
Severe		
fatigue		

Table 6 showed that almost half of the respondents experienced severe fatigue that was 42 respondents (44.2%).

DISCUSSION

Describe of Fatigue in Cancer Patients which Undergo Chemotherapy

The research result showed that nearly half (44.2%) of respondents experienced severe fatigue. Fatigue is common symptom experienced by cancer patients and cancer survivor. Fatigue may be defined as a distressing, persistent, subjective sense of tiredness or exhaustion related to cancer or cancer treatment that is not proportional to recent activity and interferes with usual functioning. Fatigue is multidimensional symptom because it encompasses physical, mental, and emotional aspects. Patients can experience fatigue anywhere along the spectrum of cancer care (Escalante & Manzullo, 2009). Several factors play the occurrence of fatigue, however, no specific predictive factors have been identified in the literature. Age is considered a predictive factor though the evidence is conflicting. Younger patients, less than 34 years do better than older patients. Similarly, men over 75 years of age were found to experience 11 times more fatigue than their younger counterparts (Narayan & Koshy, 2009).

The mean age of respondents was 45,54 years old with the age range 21-65 years. It was consistent with the theory that older people had higher fatigue than younger. The age effect on the incidence of fatigue because the higher a person's age, the ability to regenerate cells will decrease. It may lead to the incidence of fatigue in cancer patients receiving chemotherapy.

CONCLUSIONS

1. The result of the study showed that the mean age was 45,54 years old with the age range 21-65 years old. While the mean of hemoglobin level was 10.881 with the lowest value was 6.3 g/dl and the highest was 13.8 g/dl.
2. Overview the majority gender of respondents (72.6%) were women. The types of cancer was almost half of the respondents (38.9%) were breast cancer, and the most (54.7%)

were stage 3. The types of chemotherapy were received almost a half of respondent (30.5%) was a type of FAC chemotherapy combination.

3. Almost a half (44.2%) of respondents experiencing mild fatigue and almost a half (47.4%) of respondents had moderate pain. Sleep quality of respondent (38.9%) experienced moderate nausea and vomiting.

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