Fatigue, Sleep Disturbances, and Mood Distress in Patients With Lung Cancer During Chemotherapy

Hsiu-Ling Chou, PhD
Department of Nursing, Far Eastern Memorial Hospital, Department of Nursing, Oriental Institute of Technology New Taipei City, and School of Nursing, National Yang-Ming University, Taipei, Taiwan.

Background: The clinical caregivers who care for cancer patients are very clear that patients rarely present with a single symptom distress. In fact, cancer patients present with multiple symptoms distress that can be attributed to their disease or treatments. Recently, interest in the symptom management of cancer patients has shifted from individual symptoms to symptom cluster. Therefore, fatigue, sleep disturbances, and mood distress are common problems among the lung cancer patients who have received chemotherapy. The majority, albeit limited number of research studies on such symptoms as fatigue, sleep disturbance, or depression associated with cancer, is focused on one symptom or cross section studies, few studies have used a longitudinal to explore the multiple symptoms experienced by cancer patients.

Objective: The aim of this study was to investigate the long-term relationship between effect of fatigue, sleep disturbances, and mood distress in lung cancer patients.

Methods: A longitudinal, repeated-measures design was used to assess subjective symptoms (fatigue, sleep disturbance, anxiety, and depression). A total of 75 adult patients with lung cancer were enrolled from a single medical center at 3 assessment time points: prior to the initiation of chemotherapy (baseline, T1), Day 8 in the first cycle (C1d8, T2), Day 28 in the first cycle (C1d28, T3). All patients with pathologically proven lung cancer in the Division of Hematology/Oncology of a medical center in northern Taiwan were recruited to participate in the study. The clinical stage of lung cancer participants was defined by the American Joint Committee on Cancer staging system. Inclusion criteria were patients (1) 18 years or older; (2) with newly diagnosed lung cancer; (3) mentally competent, with ability to communicate in Mandarin or Taiwanese; (4) having a performance status score lower than 2 on the Eastern Cooperative Oncology Group (ECOG) performance status rating; and (5) with hemoglobin greater than 11 g/dL. Symptom distress was measured individually by 4 questionnaires (General Fatigue Scale, Pittsburgh Sleep Quality Index, Profile of Mood States (Anxiety, and Depressive). Descriptive, repeated measurements and correlational statistics were used to evaluate data.

Results: Statistical analysis identified the association of symptom distress. Of the 75 participants in our final cohort, 38 were males, and 37 were females. Age, ECOG performance status, clinical stage, cell type, and chemotherapy regimens did not significantly differ between the male and female groups except for the higher smoking rate in the male group (87.5%) compared with the female group (16.7%; P < .001). This indicated that most characteristics of the participants between male and female patients had no significant difference. There were significant differences over time in the changes of fatigue, sleep disturbances, anxiety and depression scores (p <0.01). These changes suggest that the physiological, psychological, and behavioral alterations in the patients were stimulated at the eighth day and then fell considerably at the 28th day after the first cycle of chemotherapy, returning to their scores before chemotherapy or less. Gender had a significant over time effect on sleep disturbances, anxiety and depression scores (p <0.01). Female patients reported more sleep disturbances, anxiety, and depression than male patients. There was a moderately strong correlation fatigue, sleep disturbances, anxiety and depression.

Conclusions: The results of the 4 questionnaires reveal that all the participants significantly felt more fatigue and sleep disturbance at T2 than they did at T1. However, the scores of their feelings in both fatigue and sleep disturbance at T3 dropped considerably, returning almost to their scores at T1.
investigators have in recent years sought to understand the relationship among cancer chemotherapy, and symptoms. It is expected that these findings can serve as important evidence to guide clinical nurses in the care of the cancer patients with fatigue, sleep disturbances, and mood distress during the course of chemotherapy, and improve the quality of care and strategies to manage fatigue for lung cancer patients undergoing chemotherapy.

Implications for Practice: In clinical practice, reduction of the symptom distress through the oncology nursing interventions can improve the quality of life in cancer patients. It reveals that the early assessment of symptom distress in cancer patients undergoing chemotherapy is a critical issue for oncology nurses. Oncology nurses may be able to apply our study finding to predict or monitor multiple distress symptoms in lung cancer patients undergoing chemotherapy. Furthermore, nurses can use these study findings to better understand the patients who need more attention to improve their quality of life.

Title:
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References:


Abstract Summary:
In clinical practice, reduction of the symptom distress through the oncology nursing interventions can improve the quality of life in cancer patients. Oncology nurses may be able to apply our study finding to predict or monitor multiple distress symptoms in lung cancer patients undergoing chemotherapy.

Content Outline:
1. Introduction
Cancer patients with chemotherapy often have multiple concurrent symptom distress. Some of the common symptoms, such as pain, fatigue and sleep disturbance, occur together or have been correlated in terms of intensity. The aim of this study was to investigate the long-term relationship between effect of fatigue, sleep disturbances, and mood distress in lung cancer patients.

II. Body

A. Main Point #1. A longitudinal, repeated-measures design was used to assess subjective symptoms (fatigue, sleep disturbance, anxiety, and depression).

1. Supporting point #1 a). A total of 75 adult patients with lung cancer were enrolled from a single medical center at 3 assessment time points: prior to the initiation of chemotherapy (baseline, T1), Day 8 in the first cycle (C1d8, T2), Day 28 in the first cycle (C1d28, T3).

b). Symptom distress was measured individually by 4 questionnaires General Fatigue Scale, Pittsburgh Sleep Quality Index, and Profile of Mood States (Anxiety, and Depressive).

B. Main Point #2. The most characteristics of the participants between male and female patients had no significant difference.

1. Supporting point #1 a). Of the 75 participants in our final cohort, 38 were males, and 37 were females. Age, ECOG performance status, clinical stage, cell type, and chemotherapy regimens did not significantly differ between the male and female groups except for the higher smoking rate in the male group (87.5%) compared with the female group (16.7%; \( p < 0.001 \)).

C. Main Point #3. There were significant differences over time in the changes of fatigue, sleep disturbances, anxiety and depression scores (\( p < 0.01 \)).

1. Supporting point #1 a). These changes suggest that the physiological, psychological, and behavioral alterations in the patients were stimulated at the eighth day and then fell considerably at the 28th day after the first cycle of chemotherapy, returning to their scores before chemotherapy or less.

D. Main Point #4. Gender had a significant over time effect on sleep disturbances, anxiety and depression scores (\( p < 0.01 \)).

1. Supporting point #1 a). Female patients reported more sleep disturbances, anxiety, and depression than male patients.

III. Conclusions

It is expected that these findings can serve as important evidence to guide clinical nurses in the care of the cancer patients with fatigue, sleep disturbances, and mood distress during the course of chemotherapy, and improve the quality of care and strategies to manage fatigue for lung cancer patients undergoing chemotherapy.

First Primary Presenting Author
Primary Presenting Author
Hsiu-Ling Chou, PhD
Department of Nursing, Far Eastern Memorial Hospital, Department of Nursing, Oriental Institute of Technology New Taipei City, and School of Nursing, National Yang-Ming University
Director & Professor
Banciao Dist
Author Summary: Professor Hsiu-Ling Chou is the Director of Nursing department, Far Eastern Memorial Hospital, Taiwan. She has worked in the nursing field for more than 30 years. Her special field is oncology nursing and hospice. She has numerous awards and citations for cancer nursing-related activities and nursing training programs. She also has many publications and book chapters relating to cancer nursing and nursing education.