

Persistence of the Benefits of a Structured Psychiatric Intervention for Breast Cancer Patients with Lymph Node Metastases

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The aim of this study was to investigate the persistence of clinical effectiveness of a 5 week structured group intervention program for Japanese breast cancer patients. A total of 47 patients with breast cancer completed the full program. The results of the Profile of Mood States (POMS) scores were compared before, immediately after, and 6 months after the intervention program. As analysed by POMS scores, the clinical effectiveness of a structured group intervention program persisted for 6 months for patients without nodal metastases. In contrast, the intervention program did not show a lasting effect for patients with nodal metastases.

This study demonstrated the short-term effectiveness of structured interventions among Japanese cancer patients, but persistence of the effects of intervention was found only among patients without nodal metastases. For patients with nodal metastases, additional intervention would be needed.

Key words : Breast cancer, Psychiatric intervention, Group intervention, Profile of Mood States (POMS), Metastasis

INTRODUCTION

Psycho-oncology, the psychosocial aspect of oncology, has been gaining increasing acceptance in Japan. In the United States, psychosocial intervention for cancer patients has attracted much attention. Spiegel et al. reported that breast cancer patients receiving group psychotherapy had a longer life span than the control group [1]. Richardson et al. showed that an educational intervention program for patients with hematological malignancies could increase their life span when compared with a control group receiving no intervention [2]. Fawzy et al. also reported that malignant melanoma patients who received 6 weeks of structured group intervention showed improvement in emotional discomfort [3], augmentation of immune function [4], and a decrease in recurrence and mortality [5].

In Japan, several studies have demonstrated that 30-40% of cancer patients suffer

from psychiatric disorders such as major depression and adjustment disorders. [6-8] Therefore, we have been applying psychiatric group intervention to help alleviate the psychiatric problems. Our previous results demonstrated that, in the short-term, structured intervention was effective in improving psychological distress in cancer patients [9]. Therefore, the purpose of this study was to monitor the clinical effectiveness of the group intervention program for a longer time in patients. In this article, the persistence of clinical effectiveness of intervention was related to the presence of metastases to the axillary lymph nodes.

PATIENTS AND METHODS

From November 1996 through to November 1997, a total of 57 patients were recruited for this study. Patients who were interested in psychosocial intervention after an explanation by the surgeon-in-charge (Y.T.), were referred to the psychiatrist

(T.H.). Patients who had given written consent participated in a semi-structured interview for psychiatric evaluation. Four to 8 patients were assigned to each group dependant upon surgical schedules. Once a group was established, the intervention program proceeded without change in its members. The program was a 5-week structured group intervention for breast cancer patients, which was originally developed by Fawzy *et al.* [3]. The patients were asked to participate in a series of meetings once a week. Each session took 90 minutes and consisted of psycho-education, problem-solving, psychological support, relaxation training, and guided imagery as described below in more detail.

Psycho-education: elaborated on the relationship between stress and immune function, the relationship between coping style and cancer progress, the relationship between social support and cancer progress, and the Type C (cancer-prone) personality.

Problem-solving: presented advice from health professionals and/or patients themselves on how to face and solve the difficulties of life as a cancer patient.

Psychological support: involved encouragement and support of cancer patients by health professionals and/or patients themselves.

Relaxation training: focused on teaching relaxation techniques such as progressive muscle relaxation and autogenic training.

Guided imagery: tried to teach the patient to imagine immune cells fighting cancer cells, with the cancer cells eventually being weakened and destroyed.

The data of the Profile of Mood States (POMS) at entry and at the end of the fifth session were analysed. Also, 6 months after completion of the program, the same psychological inventories were mailed to all patients for completion. The POMS consisted of 65 items and was calculated to produce scores indicating psychological distress such as Depression, Lack-of-vigor, Aggression-Hostility, Fatigue, Tension-Anxiety, Confusion and Total Mood Disturbances [10]. The inventory was translated into Japanese and its reliability and validity has been confirmed among Japanese subjects [11].

For this study, POMS scores were compared between pre-, post-intervention, and 6 months post completion. Statistical analysis was performed by the Student's paired t-test using the Statview 4.5 Macintosh software (Abacus Concepts Inc. California, 1996).

RESULTS

Of the 57 patients, 5 failed to complete all the sessions, and 5 failed to complete the inventories satisfactorily. The final data was analyzed from the remaining 47 patients. Table-1 shows their characteristics. The mean age was 51.3 ± 8.8 years (29-76). Regarding surgical intervention, 29 patients underwent mastectomy, 8 had mastectomy and breast reconstruction, and 10 received lumpectomy and radiation therapy. Fourteen patients showed metastases to the axillary lymph nodes. All patients had a Karnofsky performance status of over 80. Table 2 shows the POMS scores pre-, post-intervention and 6 months later among patients without lymph

Table 1 Subjects

Number	47
Age (mean \pm SD) and Range	51.3 ± 8.8 (29-76)
Operative procedures	
Mastectomy	29
Mastectomy+Reconstruction	8
Lumpectomy	10
Nodal metastases	(+) 14 (-) 33
Post-operative chemotherapy	(+) 7 (-) 40
Karnofsky performance status	All > 80
Marital status	Married = (42), Single = (1), Widowed = (3), Divorced = (1)

node metastases, illustrated in Figure 1. Table 3 shows the data for patients with lymph node metastases, illustrated in Figure 2.

As shown in Table 2, the POMS scores

amongst patients without lymph node metastases revealed significant differences in Depression ($p=0.023$), Lack-of-Vigor ($p=0.054$), Tension-Anxiety ($p=0.0009$), Confusion ($p=0.055$) and Total Mood

Table 2 Comparative findings of Profile of Mood States among patients without lymph node metastases (N=33)

	Pre-intervention	Post-intervention	6 months later	p-value*
Depression	10.9 ± 9.1	7.4 ± 5.0	6.6 ± 6.2	0.0068
Lack-of-Vigor	30.3 ± 5.3	28.1 ± 6.3	26.3 ± 5.8	0.0024
Aggression-Hostility	4.3 ± 5.2	4.0 ± 3.8	4.5 ± 3.7	0.9240
Fatigue	5.8 ± 3.8	5.2 ± 4.8	6.0 ± 4.7	0.9188
Tension-Anxiety	11.8 ± 8.1	7.1 ± 3.9	8.3 ± 4.3	0.0165
Confusion	8.2 ± 4.3	6.8 ± 2.8	7.3 ± 4.3	0.2064
Total Mood Disturbances	71.2 ± 28.7	58.5 ± 19.7	58.9 ± 22.5	0.0251

*p-value between pre-intervention and 6 months later

Table 3 Comparative findings of Profile of Mood States among patients with lymph node metastases (N=14)

	Pre-intervention	Post-intervention	6 months later	p-value*
Depression	9.1 ± 6.4	9.4 ± 6.2	8.5 ± 8.9	0.4016
Lack-of-Vigor	31.4 ± 6.3	29.8 ± 6.9	28.9 ± 7.2	0.1369
Aggression-Hostility	1.8 ± 1.4	4.0 ± 3.7	5.6 ± 6.0	0.0322
Fatigue	6.0 ± 6.0	4.7 ± 3.3	6.5 ± 4.9	0.9227
Tension-Anxiety	10.4 ± 4.3	7.7 ± 5.3	8.2 ± 4.5	0.0399
Confusion	7.1 ± 4.6	6.6 ± 4.1	6.9 ± 4.1	0.6162
Total Mood Disturbances	65.8 ± 21.1	62.1 ± 24.4	64.5 ± 28.6	0.4482

*p-value between pre-intervention and 6 months later

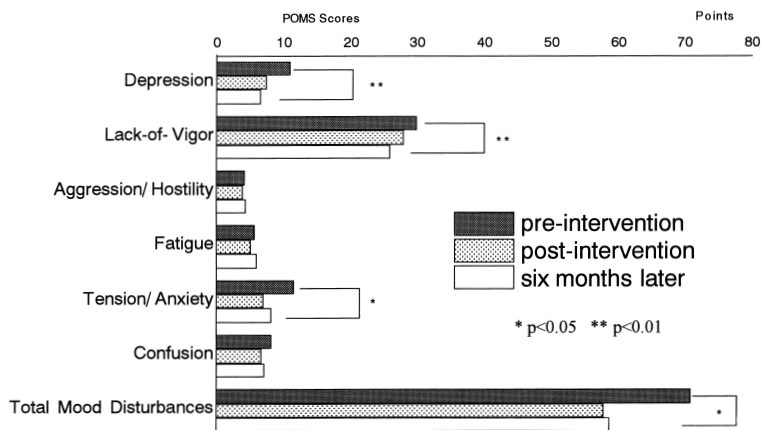


Fig. 1 Changes in the Profile of Mood States scores among patients without nodal metastases

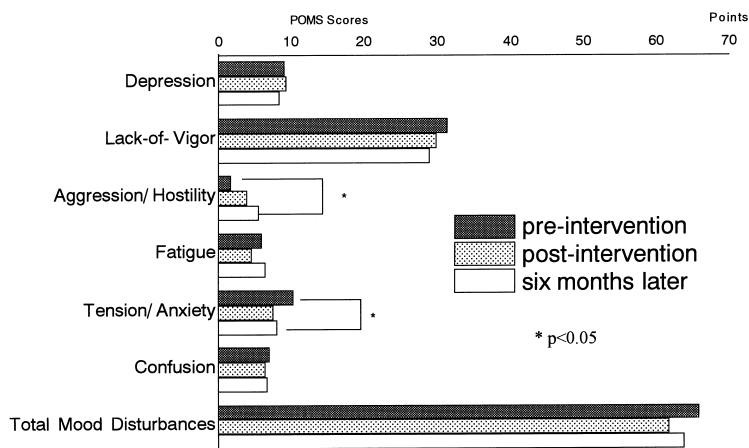


Fig. 2 Changes in the Profile of Mood States scores among patients with nodal metastases

Disturbances ($p=0.015$) before and after intervention. Also, a comparison of the data pre-intervention and 6-months later, still revealed significant differences in Depression ($p<0.01$), Lack-of-Vigor ($p<0.01$), Tension-Anxiety ($p<0.05$) and Total Mood Disturbances ($p<0.05$). In other words, the effectiveness of this structured intervention program persisted for 6 months among the patients without lymph node metastases.

On the other hand, the POMS scores of patients with lymph node metastases decreased slightly after the fifth session in terms of Fatigue, Tension-Anxiety, Confusion and Total Mood Disturbances. However, these scores returned to pre-intervention levels by 6 months post completion of the program. There were no significant differences in the scores of Depression and Lack-of-Vigor. The score for Aggression-Hostility was found to be gradually increasing, producing a significant difference between the time of entry and 6 months post intervention.

DISCUSSION

Our previous studies [9] showed that structured intervention performed both for individuals and groups basis was effective for easing psychological discomfort among Japanese breast cancer patients. The patients who received individual intervention were also interested in group sessions, because they wanted to share their knowledge on breast cancer. On the other hand, patients assigned to group intervention were hesitant

to talk to each other in the earlier sessions. Therefore, the structured interventions were modified to create a new version of a group-based intervention, which was then used in this study. Consistent with Fawzy's work [3], the results of our studies revealed significant improvement in Depression, Vigor, Tension-Anxiety, Confusion and Total Mood Disturbances. Structured intervention is effective on a short-time basis in improving emotional distress. The improvement is probably produced by verbalization and mutual understanding of the shared sufferings, and also by mutual psychological support. It is widely accepted that a social support network would be beneficial for cancer patients [12]. In this context, intervention proved to be sufficiently meaningful to cancer patients in supplying a social support network and some groups have voluntarily continued regular meetings since completion of the intervention without the involvement of health professionals.

Whether this kind of short-term intervention might produce long-term benefits in alleviation of psychological discomfort amongst cancer patients is controversial. Fawzy's studies have demonstrated the long-term effects of this kind of structured intervention [3–5]. The present study also revealed that psychological benefits persist for 6 months among breast cancer patients without nodal metastases. However, this time period is insufficient for patients with lymph node metastases. More importantly, the scores of Aggression-Hostility were gradually

increasing amongst those who had lymph node metastases. If a patient suffers from severe adverse effects of chemotherapy, such as nausea and vomiting, the aggression-hostility factor increases. In any case, aggression and hostility are central themes in psychotherapy for cancer patients [13].

In conclusion, this study has demonstrated that the effectiveness of structured intervention for Japanese cancer patients persists for six months among breast cancer patients without metastases to axillary lymph nodes. In other words, this program is sufficient for early breast cancer patients without nodal metastases. However, this study also demonstrates that this program is insufficient for those with nodal metastases, so that further modifications, including additional intervention, would be required.

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