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Identification of Quality Indicators of End-of-Life Cancer Care From Medical Chart Review Using a Modified Delphi Method in Japan

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End-of life care is one of the principle components of cancer care. Measurement of the quality of care provided for end-of-life cancer patients is an important issue. The aim of this study was to identify the quality indicators (QIs) for end-of-life cancer care for Japanese patients using a medical chart review. A modified Delphi method for the development of QIs was adopted. Seventeen multi-professional specialists participated by rating the appropriateness and feasibility of potential QIs. Thirty QIs for end-of-life cancer care were ultimately identified within 4 domains: (1) symptom

control, (2) decision-making and preference of care, (3) family care, and (4) psychosocial and spiritual concerns. These QIs will be useful for monitoring and evaluating end-of-life care for Japanese cancer patients. The QIs are feasible for use in any clinical setting and cover a comprehensive area in accordance with the World Health Organization's (WHO) definition of palliative care including physical, psychosocial, and spiritual concerns.

Keywords: palliative care; neoplasms; quality indicators; Delphi technique; terminal care; quality of life

Recently there has been an increased emphasis on measuring and monitoring the quality of cancer care for the purpose of improving clinical practice.¹⁻⁴ End-of life care is one of the principle components of cancer care; therefore, measuring the quality of care that is provided for end-of-life cancer patients is an important issue.⁵⁻⁷

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In the United States, Earle et al identified quality indicators (QIs) of end-of-life cancer care from an administrative database using the Delphi method.⁸ Those indicators included aggressiveness of care, hospice use, ER (emergency room) visits, and ICU (intensive care unit) admissions. They also measured and validated reliability of data extraction from the cancer registry and the Medicare database.^{9,10} In Canada, Barbera et al measured Earle's QIs and identified factors related to poor quality end-of-life care.¹¹ Furthermore, Grunfeld et al investigated 14 QIs of end-of-life care from the cancer registry, medical claims, and palliative care databases based on Earle's QIs and additional expert panel interview.¹² Although QIs that are identified using administrative databases are timely and economic,⁸ it is difficult to use this method in Japan because of an insufficiency in the cancer registry, inaccessibility of medical claims, and immaturity of palliative care databases.

As an alternative method, Wenger et al developed QIs from medical chart reviews and interviews.¹³ In the ACOVE (Assessing Care of Vulnerable Elders)

project, they selected 22 conditions to develop QIs. The potential candidates for QIs were extracted from existing guidelines, systematic literature review, and expert opinions. The potential candidates were reviewed by experts, and final QIs were identified for each domain.¹⁴ As for end-of-life care, 14 indicators were identified which included issues of surrogate decision makers, advance directives, documentation of care preferences, life-sustaining treatment, and treatment of distress such as pain, dyspnea, and spiritual issues.¹⁵ Although these QIs were measured for vulnerable community-dwelling older patients in the United States, the results regarding measurement of end-of-life care were not sufficient in that sample.¹⁶ QIs from medical chart review cover a broader range of end-of-life care issues than those from an administrative database¹⁷; therefore, it is worthwhile to develop more appropriate QIs according to culturally specific end-of-life care models.

In Japan, the Ministry of Health, Labor, and Welfare has strongly supported the dissemination of specialized palliative care services. National Medical Insurance has covered inpatient palliative care units (PCUs) for terminal cancer patients since 1990, and the number of PCUs has dramatically increased from 5 in 1991 to 162 in 2006. On the other hand, the growth of home-based palliative care programs has been slow, and care provided by palliative care teams was not covered by National Medical Insurance until 2002.^{18,19} Although the number of PCUs has increased, they provide care for only 5% of cancer deaths. In 2004, only 6% of cancer deaths occurred at home, and over 80% of cancer deaths occurred in general wards. Therefore, QIs that are applicable to all clinical settings are desirable. In addition, the Japanese concept of a good death is slightly different from Western countries.^{20,21} The QIs that are adequate for Japanese end-of-life settings are required to evaluate quality end-of-life care. The aim of this study was to identify QIs for end-of-life cancer care using medical chart reviews in Japan.

Methods

We adopted the modified Delphi method as the consensus technique for development of the QIs.^{22,23} Participants included 17 multi-professional specialists: 5 palliative care physicians, 1 medical oncologist, 1 general medicine physician, 3 psycho-oncologists, 3 nurses, 2 sociologists, 1 medical ethicist, and 1 expert

on Delphi methodology. This study was conducted from October 2004 to September 2005.

First, we used the modified Delphi method to develop the QIs from a systematic literature review and the opinions from an expert panel (communication via Internet). Ninety-six potential candidates for QIs were listed. Second, participants rated each potential QI from medical chart review using a 9-point Likert scale for appropriateness of quality end-of-life cancer care (inappropriate 1-3, intermediate 4-6, appropriate 7-9) and feasibility for extraction (infeasible 1-3, intermediate 4-6, feasible 7-9). Third, we summarized those items with high ratings and deleted items that were equal to or less than 6 for appropriateness or feasibility. This left a total of 60 items. Fourth, the summary (median and difference between maximum and minimum) of the 60 items was returned to the participants, and the participants rated each of the 60 potential QIs using the same method. Finally, we summarized this second round of ratings, and the final QIs were identified. Throughout the above-mentioned steps, participants discussed via the Internet.

During the first step, we listed potential QIs that should be documented in the medical chart upon admission to the medical service or during the last 2 weeks before the patient died. When participants were rating each of the QIs, we made the following assumptions: (1) each QI should be used to measure the quality of end-of-life cancer care, (2) each QI should be extracted from the medical chart during the 2 weeks prior to the patients' death with meticulous reliability, and (3) each QI should apply in all clinical settings including general wards, PCUs, and home care.

The criteria of adoption of the final QIs included: (1) a median rating above or equal to 7 in both appropriateness and feasibility, and (2) the difference between maximum and minimum rating equal to or less than 4. All analyses were performed using the SAS statistical package, version 9.1 (SAS Institute, Cary, NC).

Results

Through the modified Delphi process we identified 30 QIs of end-of-life cancer care within the following 4 domains: (1) symptom control, (2) decision-making and preference of care, (3) family care, and (4) psychosocial and spiritual concerns. The final QIs and median, minimum, and maximum rating for

Table 1. Final QIs Identified Using the Modified Delphi Method^a

	Appropriateness ^b			Feasibility ^c		
	Median	Min	Max	Median	Min	Max
I. Symptom control						
1. Presence or absence of pain	9	9	9	9	9	9
2. Degree of pain	9	8	9	8	6	9
3. Physician's prescription order for pain management	9	9	9	9	8	9
4. Presence or absence of dyspnea	9	9	9	9	4	9
5. Physician's prescription order for dyspnea	9	7	9	9	7	9
6. Presence or absence of delirium or agitation	9	6	9	8	5	9
7. Physician's prescription order for delirium or agitation	9	6	9	8	5	9
8. Observation and care of mouth	9	7	9	7.5	4	9
II. Decision making and preference of care						
9. Patient's preference of place of care	9	8	9	8	6	9
10. Patient's insight of disease	9	7	9	8	4	9
11. Patient's preference of care or advance directives	9	5	9	7	6	9
12. Discussion of strategy of care among physicians and nurses	9	7	9	9	5	9
13. Time of patient's enrollment in palliative care program and documented medical history	9	5	9	9	5	9
III. Family care						
14. Configuration of family relationships	9	7	9	9	3	9
15. Key person involved in patient care	9	7	9	9	7	9
16. Family's preference of place of care	9	7	9	7	4	9
17. Family's preference of explanation of medical condition	9	7	9	8	7	9
18. Explanation of medical condition to patient or family	9	7	9	9	7	9
19. Family's preferences or expectations	9	5	9	7	3	9
20. Discussion with family about do-not-resuscitate order	9	7	9	9	5	9
21. Explanation to family about course of disease until death	8	6	9	7	3	9
22. Explanation to family of patient's impending death	9	6	9	8	6	9
23. Explanation to family 1 week prior to patient's death	9	6	9	7	6	9
24. Care strategy for family	8.5	5	9	7.5	2	9
IV. Psychosocial and spiritual concern						
25. Degree and content of patient's anxiety	9	8	9	7	6	9
26. Emotional reaction to explanation of medical condition	9	7	9	7	4	9
27. Patient's preference of daily living	9	7	9	7	5	9
28. Patient's religion	7.5	7	9	7	4	9
29. Patient's preference for bowel and bladder excretion	8	7	9	7	4	9
30. Coordination of social resources when patient had no family or friends	8.5	5	9	8	4	9

a. All QIs were documented in the medical chart at the admission of medical service or during the last 2 weeks before the patient's death.

b. Inappropriate 1-3, intermediate 4-6, appropriate 7-9.

c. Infeasible 1-3, intermediate 4-6, feasible 7-9.

both appropriateness and feasibility are shown in Table 1.

Symptom Control

Concerning symptom control, the following 8 QIs were identified: the presence or absence of pain, degree of pain, physician's prescription order for pain management, presence or absence of dyspnea, physician's prescription order for dyspnea, presence or absence of delirium or agitation, physician's

prescription order for delirium or agitation, and observation and care of mouth.

Decision Making and Preference of Care

As for decision making and preference of care, 5 QIs were identified: patient's preference of place of care, patient's insight of disease, patient's preference of care or advance directives, discussion of strategy of care among physicians and nurses, and time of

patient's enrollment in a palliative care program and documented medical history.

Family Care

For family care, 11 QIs were identified: configuration of family relationships, key person involved in patient care, family's preference of place of care, family's preference of explanation of medical condition, explanation of medical condition to patient or family, family's preferences or expectations, discussion with family about do-not-resuscitate order, explanation to family about the course of the disease until the patient's death, explanation to the family about impending death of the patient, explanation to the family about the care strategy for the family, and explanation to the family of impending death about 1 week prior to the patient's death.

Psychosocial and Spiritual Concern

Concerning psychosocial and spiritual concerns, 6 QIs were identified: degree and content of patient's anxiety, emotional reaction to explanation of medical condition, patient's preferences or desires related to daily living, patient's religion, patient's preference of bowel and bladder excretion, and the coordination of social resources when the patient had no family or friends.

Discussion

We identified 30 QIs for end-of-life cancer care by using the modified Delphi method and the expertise of a multi-professional review panel. Henceforth, we are now able to monitor and evaluate the quality of care using these QIs. First, they are feasible for use in any clinical setting. Second, the measurement is a relatively simple procedure, and there are no burdens for patients and families. Third, these QIs cover a comprehensive area in accordance with WHO's definition of palliative care including physical, psychosocial, and spiritual concerns.²⁴

As for symptom control, these QIs cover pain, dyspnea, and delirium. These are major symptoms for end-of-life cancer patients.²⁵ Pain and dyspnea are distressing for the patient. Documentation of these symptoms is essential for clinical practice among physicians and nurses, and treatment should

be ordered in anticipation of discomfort to prevent unnecessary suffering. In addition, delirium-related symptoms are distressing for family members.²⁶

As for decision making and preference of care, place of care is an important issue for Japanese cancer patients.²¹ The preference of care and advanced directives are more emphasized by ACOVE's end-of-life QIs.¹⁵ In addition, QIs identified in this study cover more comprehensive aspects of care including patient insight²⁷ and coordinated care.²⁸

Family care is an important aspect of Japanese end-of-life care. In the WHO's definition of palliative care, family care is emphasized.²⁴ Family consent and involvement in decision making for end-of-life care issues are unique characteristics in the Japanese people.²⁹⁻³¹ Therefore, identifying the configuration of family relationships and the key person involved in care is important. In Japan, the do-not-resuscitate order is usually obtained from the family.³²

Psychosocial and spiritual concerns are also important. Anxiety and emotional issues contribute to the psychological distress that patients and families experience during end-of-life care. For the patient, loss of control related to preferences in daily living activities and bowel and bladder excretion are among the spiritual concerns for Japanese end-of-life cancer patients.³³

There are some limitations to this study. First, the feasibility of these QIs is not established by actual measurement. Second, the relationship between QIs and outcome measures is unclear. In future studies, the QIs should be measured, and feasibility, reliability, and validity should be confirmed using data that is extracted from actual medical charts. Furthermore, it would be desirable to verify appropriateness of QIs and correlate outcome measures such as in a study of family bereavement.³⁴

Conclusion

We identified Japanese QIs for end-of-life cancer care using a modified Delphi method and medical chart reviews. Thirty QIs with 4 domains were identified: symptom control, decision-making and preference of care, family care, and psychosocial and spiritual concerns. The confirmation of feasibility, reliability, and validity is a task for future studies.

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Effect of a population-based educational intervention focusing on end-of-life home care, life-prolonging treatment and knowledge about palliative care

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The effectiveness of population-based educational interventions in palliative care is unclear. We conducted an educational intervention study for the general public focusing on end-of-life home care, life-prolonging treatment and knowledge about palliative care and measured the change in perception about these issues. Participants were recruited from the 11 districts of Fukushima City, Japan. One-hour educational lectures were conducted in each district from April 2006 to March 2007. Meetings were held in a community centre or hall in each district. We asked participants to fill in a questionnaire before and after the educational lecture. Of 607 participants, 595 (98%) answered both pre- and post-intervention questionnaires. The feasibility of a home death changed from 9% before to 34% after the intervention ($P < 0.001$). In addition, preference for life-prolonging treatment and attitudes toward end-of-life care including symptom management at home, misconceptions about opioids, artificial hydration and communication issues between patient and medical practitioners were significantly improved after the intervention. Factors that were significantly associated with changing perceptions about the feasibility of a home death were male gender, change in beliefs regarding burden to family caregivers, anxiety regarding admission to the hospital with worsening physical condition and fear that pain would not be relieved at home. This population-based educational intervention was effective in changing beliefs regarding the feasibility of home care, preference for life-prolonging treatment and attitudes toward end-of-life care. *Palliative Medicine* (2008); 22: 376-382

Key words: barriers; education; home death; intervention studies; palliative care

Introduction

It is important for terminal cancer patients to be able to remain in their favourite place.¹ Over half of Japanese would like to be cared for at home.² However, in Japan, the growth of home-based palliative care programs has been slow.^{3,4} As a result, in 2004, only 6% of cancer deaths occurred in the home and over 90% occurred in hospitals.

There are many barriers to home care for end-of-life cancer patients.⁵⁻¹² For example, previous studies have suggested that sex,¹² age,^{8,12} burden to the family^{6,7,12} and the ability of the family to care for the patient^{11,13} were factors associated with home care of terminal patients.

There are also many barriers to receiving appropriate palliative care for end-of-life cancer patients.^{14,15} For

instance, misconceptions about analgesics,¹⁶⁻¹⁹ misperceptions about life-prolonging treatment²⁰⁻²² and lack of communication between patient and medical practitioner^{23,24} were reported to be potential barriers to palliative care.

In a large population-based survey of Japanese, we found many misconceptions about pain and opioids, communication with health care professionals, hydration and nutrition and legal issues about end-of-life options.²⁵ In addition, our previous study showed that misconceptions regarding opioid use and life-prolonging treatment prevented members of the general public from believing that they could live at home until death.²⁶

To overcome these barriers, it is important to provide appropriate education for the general public.¹⁵ Although education for cancer patients and their families has been conducted,²⁷⁻³³ educational interventions about palliative care for the general public have not been reported except for one regarding attitudes about cardiopulmonary resuscitation,³⁴ and a Canadian study using a trade show to educate the general public.³⁵ The effectiveness of population-based educational interventions is still

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unclear. Therefore, we conducted an educational intervention study for the general public focusing on end-of-life home care, life-prolonging treatment and knowledge about palliative care and measured the change in perception about these issues before and after the intervention.

Methods

Subjects

Potential participants were recruited from the 11 districts of Fukushima City, Fukushima Prefecture, Japan. Fukushima City has a population of 288,000 and is the most urban city in Fukushima Prefecture. However, Fukushima Prefecture is a relatively rural region. The lectures were held during a periodic regional community meeting. Before the meeting a simple pamphlet about the lecture was distributed. No special invitation was conducted. A total of 607 community-dwelling residents attended the lecture.

Intervention

One-hour educational lectures were held in each district from April 2006 to March 2007. Meetings were held in a community centre or hall in each district. The themes of the educational lectures were as follows: limitations of cancer treatment, life-prolonging treatment for end-of-life cancer patients, correct information about opioids, artificial hydration, communication between patient and physicians, feasibility of home care for end-of-life cancer patients and district health resources for terminally-ill cancer patients. The lecturer for all the sessions was one physician (M.S.).

Procedure

We asked participants to fill out the questionnaire before and after the lecture. We described the aim of the study, protection of privacy and voluntary nature of participation by written document and oral explanation.

Questionnaire

Feasibility of home death

We asked participants to consider the feasibility of home death by answering 'possible', 'impossible' or 'unsure' to the questions.

Barriers to home care at the end-of-life setting

We explored barriers to home care in the end-of-life setting by asking whether participants agreed that the following were attributes of home care: absence of visiting physician, absence of visiting nurse system, absence of 24-h consultation system, absence of family caring for me, burden of care on family, anxiety about worsening

physical condition, anxiety about admission to the hospital when physical condition worsens, concern that one's residence would be too small, economic burden and pain would not be relieved at home.

Preference for life-prolonging treatment

We asked about the preference for life-prolonging treatment using a 4-point Likert scale with the possible responses: 'want to receive', 'probably want to receive', 'probably do not want to receive' and 'do not want to receive'. Questions asked were regarding artificial hydration, artificial nutrition, vasopressors, mechanical ventilation and cardiopulmonary resuscitation.

Attitudes toward end-of-life care

We asked about the attitudes toward end-of-life care using a 5-point Likert scale: 'strongly agree', 'agree', 'unsure', 'disagree' and 'strongly disagree'. Questions were identical to our previous study, as follows:²⁵ 'absence of sufficient medical system for treatment or care at home', 'in my circumstance, it is difficult to be cared for at home', 'cancer pain is sufficiently relieved if treatment is adequate', 'opioids shorten life', 'opioids cause addiction', 'consciousness is clear if pain medication is not used', 'artificial hydration and nutrition should be continued as the minimum standard until death', 'artificial hydration and nutrition relieve symptoms', 'physicians are generally poor at communicating bad news', 'physicians are uncomfortable discussing death', 'it would be intolerable if I was told I had incurable cancer', 'cancer treatment has only limited effectiveness', 'I want to receive cancer treatment as long as possible', 'death at home indicates to relatives that the family cannot provide sufficient medical care for the patient', 'death at home indicates to neighbors that the family cannot provide sufficient medical care for the patient' and 'large hospitals provide better quality medical treatment than clinics'.

Satisfaction with lecture

We asked about satisfaction with the lecture using the following responses: 'lecture was interesting', 'lecture was easy to understand', 'lecture would be of help in the future' and 'lecture gave me the chance to consider end-of-life medical treatment'.

Participant characteristics

We asked participant's age, gender, education, health status, experience of hospital admission, number of family members living together, ability to talk about end-of-life concerns with family and experience of bereavement over the past 10 years.

Analyses

Regarding feasibility of home death, we compared the proportion of 'possible' responses between the pre- and

post-intervention questionnaires with the Wilcoxon's signed rank test. We used the same test for comparing pre- and post-intervention barriers to home care at the end-of-life setting, preference for life-prolonging treatment and attitudes toward end-of-life care. In addition, we explored factors associated with changing perceptions regarding the feasibility of home death by logistic regression analysis among participants answering 'impossible' or 'unsure' in the pre-intervention questionnaire. The dependent variable was the answer to the feasibility of home death in the post-intervention questionnaire. The explanatory variables were: participant characteristics and changing perceptions regarding barriers to home care in the end-of-life setting, reference to life-prolonging treatment and attitudes toward end-of-life care from pre-intervention to post-intervention. The backward variable selection method with $P > 0.05$ criterion was used. In all analyses, the significance level was set at $P < 0.05$, and a 2-sided test was used. All analyses were conducted using statistical package SAS (SAS Institute, Cary, North Carolina, USA).

Ethical consideration

This study was approved by the institutional review board of the Fukushima Medical University and was conducted in accordance with the Helsinki Declaration.

Results

Of 607 participants, 595 (98%) answered both the pre- and post-intervention questionnaires. Participant characteristics are shown in Table 1. Mean age \pm SD was 66 ± 11 years; 67% were female; 24% had a college or university education; 84% reported *excellent* or *good* health status; 58% had a hospital admission; 87% were living with someone; 81% talked about end-of-life concerns with family members and 66% experienced bereavement during the previous 10 years.

Table 2 shows responses regarding the feasibility of home death. In the pre-intervention questionnaire, only 9% of respondents answered 'possible' to this question, whereas in the post-intervention survey 34% answered 'possible' ($P < 0.001$). Barriers to home care at the end of life are shown in Table 3. The following responses showed significant improvement as a result of the intervention: 'absence of visiting physician', 'absence of visiting nurse system', 'burden of care on family', 'anxiety about worsening physical condition', 'anxiety about admission to the hospital when physical condition worsens', 'economic burden' and 'pain would not be relieved at home'.

Table 4 shows preferences for life-prolonging treatment. The proportion that preferred artificial hydration, artificial nutrition and vasopressors was significantly

Table 1 Participant characteristics ($n = 595$)

	<i>n</i>	%
Age, years (mean \pm SD)	66 \pm 11	
Gender		
Male	191	32
Female	396	67
Education		
Junior high school	141	24
High school	304	51
College	77	13
University	63	11
Health status		
Excellent	249	42
Good	253	43
Fair	78	13
Poor	4	1
Experience of hospital admission		
Yes	343	58
No	240	40
Number of family members living together		
None	74	12
1	179	30
2 or 3	176	30
4 or more	158	27
Discuss end-of-life concerns with family		
Frequently	81	14
Sometimes	400	67
Rarely	92	15
Never	7	1
Experience of bereavement over 10 years		
Yes	395	66
No	187	31

Percentages do not add up to 100% because of missing values.

decreased after the intervention. Attitudes toward end-of-life care are presented in Table 5. There was a significant change in agreement with the following items: 'absence of sufficient medical system for treatment or care at home', 'in my circumstance, it is difficult to be cared for at home', 'opioids shorten life', 'opioids cause addiction', 'consciousness is clear if pain medication is not used', 'artificial hydration and nutrition should be continued as the minimum standard until death', 'artificial hydration and nutrition relieve symptoms', 'physicians are generally poor at communicating bad news', 'physicians are uncomfortable discussing death', 'it would be intolerable if I was told I had incurable cancer', 'death at home indicates to relatives that the family cannot provide sufficient medical care for the patient', 'death at home indicates to neighbors that the family cannot pro-

Table 2 Feasibility of home death pre- and post-intervention

	Pre		Post		<i>P</i> value
	<i>n</i>	%	<i>n</i>	%	
Possible	54	9	203	34	0.001
Impossible	314	53	163	27	
Unsure	199	33	191	32	

Table 3 Barriers to home care in the end-of-life setting pre- and post-intervention

	Pre (%)	Post (%)	P value
Absence of visiting physician	34	28	0.001
Absence of visiting nurse system	24	19	0.004
Absence of 24-h consultation system	21	23	0.464
Absence of family caring for me	19	21	0.402
Burden on family of care	78	66	0.001
Anxiety about worsening physical condition	62	52	0.001
Anxiety about admission to hospital if worsening physical condition	43	34	0.001
Insufficient resources at home	18	17	0.320
Economic burden	43	24	0.001
Pain would not be relieved at home	42	20	0.001

vide sufficient medical care for the patient' and 'large hospitals provide better quality medical treatment than clinics before death'. However, there was no significant change in agreement with 'cancer pain is sufficiently relieved if treatment is adequate'.

We show factors associated with the change of feasibility of home death by logistic regression in Table 6. The significant independently-associated factors with change in the feasibility of home death were: male gender, burden of care on family (changed from yes to no), anxiety about admission to the hospital with worsening physical condition (changed from yes to no) and concern that pain would not be relieved at home (changed from yes to no).

As for satisfaction with the lecture, participants answered that the lecture was interesting (95%), easy to understand (96%), would be of help for the future (95%) and provided the opportunity to consider end-of-life medical treatment (94%).

Discussion

We showed that a 1-h educational intervention regarding palliative care could change beliefs regarding the feasibility of home care, preference for life-prolonging treatment and attitudes toward end-of-life care, including symptom management at home, misconceptions about opioids and

Table 4 Preference for life-prolonging treatment pre- and post-intervention

	Pre (%)	Post (%)	P value
Artificial hydration	62	52	0.001
Artificial nutrition	49	38	0.001
Vasopressor	38	32	0.004
Mechanical ventilation	23	21	0.428
Cardiopulmonary resuscitation	25	22	0.098

Figures are total percentage of 'desired' and 'probably desired'.

artificial hydration and communication between patients and medical practitioners. Regarding the feasibility of home care, the percentage answering 'possible' was increased nearly 4 times compared with pre-intervention. Most Japanese believe that it is difficult to be cared for at home at the end of life. However, the provision of appropriate information would make it more likely that people will choose this option.

This intervention study was conducted during regular regional community meetings. Participants did not have a special interest in this topic. However, the educational intervention had a significant effect on the participants. The results of this study might be applied to the other regions in Japan.

In the multivariate analysis exploring factors associated with the change of feasibility of home death, we found that four independent factors contributed to a change in such beliefs. In the bivariate analyses, many factors including preference for life-prolonging treatment and attitudes toward end-of-life care were associated with change regarding the feasibility of home death. However, multivariate analysis showed four determinant factors. Men generally less concern about home care. Therefore, they might view the lecture more positively. However, we might consider a different strategy for addressing concerns of women. The change of opinion regarding the burden to the family was significantly associated with the change in feasibility of home care. The burden of caregiving on the family is the most relevant barrier in the pre-intervention survey, as seen in Table 3. The alleviation of the burden on the family and the ability of family members to provide care are important issues concerning home death.^{6,7,11-13} Change in degree of anxiety about admission to the hospital for worsening physical condition is another independent factor. We believe that this has two important implications. One is that it is important for hospitals to hold beds open for these patients. Patients and families would feel easier about staying at home knowing that hospital beds would be available when needed. Another implication is that Japanese home hospice services would develop. Sufficient home hospice care and information provision would relieve the patient's and family's anxiety about home care. This should be confirmed because the change in attitude about inadequate pain relief at home was the most influential factor associated with the feasibility of home care.

As for life-prolonging treatment, although the desire for artificial hydration and artificial nutrition decreased after the intervention, 38-52% of participants still expressed a preference for receiving such treatment. Because many Japanese patients and families hope to receive artificial hydration,³ it is important to discuss this in the clinical setting. However, the preference for mechanical ventilation and cardiopulmonary

Table 5 Attitudes toward end-of-life care pre- and post-intervention

	Pre (%)	Post (%)	P value
Home care system			
Absence of sufficient medical system for treatment or care at home	61	32	0.001
In my circumstance, it is difficult to be cared for at home	61	32	0.001
Pain and opioid use			
Cancer pain is sufficiently relieved, if treatment adequate	68	81	0.001
Opioids shorten life	31	7	0.001
Opioids cause addiction	23	5	0.001
Consciousness is clear if pain medication is not used	31	29	0.004
Artificial hydration			
Artificial hydration and nutrition should be continued as the minimum standard until death	50	31	0.001
Artificial hydration and nutrition relieve symptoms	35	24	0.001
Communication			
Physicians are generally poor at communicating bad news	31	23	0.001
Physicians are uncomfortable discussing death	18	12	0.001
It would be intolerable if told I had incurable cancer	42	27	0.001
Cancer treatment			
At present, there are limits to cancer treatment	65	63	0.062
I want to receive cancer treatment as long as possible	47	48	0.241
Attitude toward home care			
Death at home indicates to relatives that family cannot provide sufficient medical care for patient	16	10	0.001
Death at home indicates to neighbours that family cannot provide sufficient medical care for patient	17	13	0.001
Large hospital provides better quality medical treatment than clinic before death	51	15	0.001

Figures are total percentage of 'strongly agree' and 'agree'.

resuscitation did not change. If the effectiveness of mechanical ventilation and cardiopulmonary resuscitation were more widely known; however, the answer would probably be different.³⁴

The beliefs that opioids shorten life and cause addiction were significantly decreased from 31% to 7% and 23% to 5%, respectively. Although misconceptions about analgesics are a great barrier to palliative care,¹⁶⁻¹⁹ educational interventions could overcome these barriers. In addition, the beliefs that the absence of an adequate medical system for treatment or care at home and 'in my circumstance, it is difficult to be cared for at home' were both significantly decreased from 61% to 32%. Interventions such as this help educate the general public that pain can be relieved at home. The belief that 'large hospitals provide better quality medical treatment than clinics before death' decreased significantly from 51% to 15%. In Japan, the general public tends to think that large hospitals are necessary to adequately care for patients, espe-

cially at the end of life. Two reasons for this are that home hospice care has not been developed and the general public is not informed. Moreover, the educational intervention changed the belief that 'it would be intolerable if I was told I had incurable cancer'. This intervention could not only correct this misconception and increase the feasibility of home care but also bolster the sense of security for people who get incurable cancer.

Although many attitudes toward end-of-life care did change as a result of this intervention, two beliefs, 'at present, cancer treatment has limited effectiveness' and 'I want to receive cancer treatment until death' did not change. Although the limitations of cancer treatment were covered in the lecture, the general public still desires such treatment to prolong life. Fighting against cancer and receiving sufficient treatment are important issues in the Japanese concept of a good death.¹

This intervention survey has some limitations. First, the intervention was shown to have only a short-term

Table 6 Factors associated with the change in feasibility of home death

	Odds ratio	95% CI ^a	P value
Gender (male)	1.82	1.08-3.09	0.026
Burden on family to care (changed from yes to no)	1.72	1.03-2.87	0.039
Anxiety about admission to hospital when physical condition worsens (changed from yes to no)	2.03	1.25-3.30	0.004
Pain would not be relieved at home (changed from yes to no)	2.28	1.42-3.66	0.001

Logistic regression analysis with backward variable selection method ($P < 0.05$).

Among the participants who answered 'impossible' or 'unsure' before lecture, we explored the associated factors with the change of answer to 'possible'.

^a95% confidence interval.

effect. Therefore, the sustainability of change of beliefs is unknown. We plan to study the long-term effects of this intervention. The planned follow-up study will occur at least 6 months after the educational intervention. If possible, we want to follow-up over several years. Second, this study was conducted in Fukushima City, Fukushima Prefecture, in a rural area in Japan. It might be difficult to extrapolate to urban areas in Japan.

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Revisiting depression in palliative care settings: the need to focus on clinical utility over validity

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Objective: To review the literature on depression in palliative care patients to identify implications for development of clinical practice and individual patient care. **Method:** A qualitative review of depression prevalence studies in palliative care settings. We explore the utility of existing prevalence studies for clinical practice through testing two hypotheses: that high prevalence rates are associated with increased risk factors in study samples, and that poor methodological quality of the studies artefactually inflate prevalence estimates. Eighteen studies were identified in the search and included in this review. **Results:** Risk factors may contribute to depression prevalence but through a complex interaction of factors making individual risk levels hard to determine. Measurement artefact cannot, alone, account for elevated levels of depression in this population but may contribute to imprecision. The importance of organic decline as a potential confounding variable is highlighted. **Conclusion:** Future research into the causes and prevalence of depression should adopt longitudinal approaches using large samples, and consider the impact of organic disorder as an important confounding factor. Clinical practice and care of individual patients may be better supported by development of a prognostic index considering the predictive power of depressive symptoms and risk factors on well-being. *Palliative Medicine* (2008); 22: 383–391

Key words: depression; palliative care; prevalence; utility

Introduction

The palliative care literature highlights depression as an important condition, which affects the well-being and quality of life of many terminally ill patients.^{1–6} Depression, although a common problem, is not an inevitable part of dying,^{2,7,8} but a treatable condition, which may respond to pharmacological intervention.^{5,9–12} Current guidance, therefore, recommends proactive screening for, and treatment of, depression in this population group.⁵

A number of reviews, including that of Hotopf, *et al.*² writing in this journal, highlight the prevalence of this condition^{1–6} and its association with a range of risk factors including age, gender, tumour type, poorly controlled physical symptoms, reduced functional status, previous history of depression and inadequate social support.^{4,6} However, the reviews report substantial variability in depression estimates across different studies; between 1% and 69%.^{1–6,13} Heterogeneity of populations sampled and risk-factor prevalence are presumed to account for some of the variability (*ibid*), although the relative impact of each has not been quantified. Variability may also result from imprecision related to methodological concerns.

None of the published reviews include an assessment of individual study quality, although do comment on issues such as small sample sizes or the use of non-validated measurement tools.^{2,13} Meta-analysis of existing study data could offer further insights, but is contraindicated, given the heterogeneity of study designs and quality.

Quality concerns are compounded by uncertainty with regard to the nature and identification of a pathological state of depression. The validity, or legitimacy of a pathological state, that is, depression is contested.^{14–19} There are currently two diagnostic definitions of depression described within ICD-10²⁰ and DSM-IV²¹ but with only 83% concordance between the two.²² Problems of definition and diagnosis are compounded in palliative care settings, because many of the physical symptoms used within the diagnostic framework for depression are also symptoms of the underlying physical disease such as cancer (e.g., tiredness, weight loss, appetite change).^{2,4,6} Modified diagnostic criteria have been identified for use in terminally ill populations.^{23,24} The use of stricter criteria for defining depression is associated with lower prevalence estimates,^{2,4–6} but as yet, there is no consensus with regards to the optimal diagnostic approach.⁵ Despite acknowledged concerns with a pathological account of depression, its utility in predicting clinical course and outcomes supports its continued use.¹⁹

The absolute contribution of each element – risk factor distribution, diagnostic definition and study quality – to variability in estimates is uncertain. Previous authors have

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One-week Short-Term Life Review interview can improve spiritual well-being of terminally ill cancer patients

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Abstract

Purpose: The primary aim of this study was to assess the efficacy of the Short-Term Life Review on the spiritual well-being, as well as anxiety, depression, suffering, and happiness of terminally ill cancer patients.

Method: Thirty patients reviewed their lives in the first session and they confirmed the contents in the album based on the life review in the second session. Duration of the treatment was one week. Measurement instruments included Functional Assessment Chronic Illness Therapy-Spiritual (FACIT-Sp), Hospital Anxiety and Depression Scale (HADS), Numeric Rating Scales of Suffering (from 0 to 6) and Happiness (from 1 to 7).

Results: After the therapy, the mean FACIT-Sp scores increased from 16 ± 8.2 to 24 ± 7.1 , anxiety score significantly decreased from 6.8 ± 4.7 to 3.0 ± 2.2 , depression score significantly decreased from 10.2 ± 4.7 to 6.6 ± 4.1 , suffering score significantly decreased from 3.4 ± 1.9 to 1.8 ± 1.4 , and happiness score significantly increased from 4.6 ± 1.9 to 5.6 ± 1.6 . Total HADS scores significantly decreased from 17 ± 8.6 to 9.5 ± 5.4 .

Conclusion: The Short-Term Life Review is feasible and may be effective in improving the spiritual and psychosocial well-being of terminally ill cancer patients.

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Keywords: psychotherapy; Short-Term Life Review; terminally ill cancer patients; spiritual well-being

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Introduction

Terminally ill cancer patients often experience spiritual distress, such as that engendered by searching for a meaning or purpose in life, problems associated with relationships with familiar people, or religious problems, in addition to depression or anxiety. Until recently, there have been few interventions for these problems. This study describes an intervention to ameliorate spiritual distress in terminally ill cancer patients.

Butler [1] reported that the life review process is a mean of reintegration and can give new significance and meaning to an individual's life. It is defined as 'the progressive return to consciousness of prior experience, which can be re-evaluated with the intention of resolving and integrating past conflict, thereby giving new significance to one's life.' The elderly are often confronted with lone-

liness, anxiety, worry about near-future death, and low ability in performing activities of daily living (ADL), resulting in low self-esteem or depression. To cope with these psychological problems, life review interviews have been used. Previous studies have shown the effects of life review on depression [2,3], self-esteem [2], and life satisfaction [4].

For cancer patients, however, there are few empirical studies on the effects of life reviews. Ando *et al.* [5] reported the effects of structured life review intervention on spiritual well-beings in terminally ill cancer patients. This study involved four sessions once in a week and spiritual well-being was measured with a quality of life (QOL) questionnaire, SELT-M [6]. After the life review interview, the patients' mood, positive thinking, and spirituality significantly increased. However, this study encountered a feasibility problem: sample patients did not complete the four sessions. At the

Table 1. Patient backgrounds

Primary tumor site		Gender
Lung	n = 8	Male (n = 8)
Stomach	5	Female (n = 22)
Pancreas	2	Age
Gallbladder	2	Mean age: 74 (total SD = 9.1)
Uterine	2	Marital status
Breast	1	Married (n = 29); widow (n = 11), widower (n = 3)
Kidney	1	Non-married (1)
Leukemia	1	Religion
Rectal	1	Christian (n = 4)
Tongue	1	Buddhism (n = 3), None (n = 22)
Colon	1	ECOG-PS
Mesothelioma	1	1 (n = 1), 2 (n = 3)
Myeloma	1	3 (n = 13), 4 (n = 13)
Lymphoma	1	Duration from the interview to patients' death
		Mean: 67 days

end of the study, the physical conditions of 9 of the 21 patients (about 30%) extremely deteriorated and failed to complete the psychotherapy process. Although structured life review may be effective in improving the spiritual well-being of terminally ill cancer patients, the long sessions decrease the feasibility; thus, we need a shorter version of life review therapy.

Dignity psychotherapy is a therapy for terminally ill cancer patients with shorter session time [7]. This involves only two or three sessions. Dignity is defined as 'quality or state of being worth, honored, or esteemed' [8], and this therapy helps patients maintain their dignity. Patients review their lives with the aid of routine questions and the session is recorded, edited, and transcribed. In 2 or 3 days after, there is another session. The therapist reads the transcription to the patients, who give comments and make revisions. Patients reported a heightened sense of dignity, a sense of purpose, a sense of meaning, an increased will to live, and a decrease in distress. This study suggests the possibility that the life review interview is effective even for a short term.

We propose a new psychotherapy—the Short-Term Life Review—with short sessions for terminally ill cancer patients. Although there are at least four sessions in the structured life review to review a patient's life along developmental stages [9], Short-Term Life Review involves only two sessions. In the first session, patients review their lives, and the review is then recorded and edited. The therapist makes an album after the first session. In the second session, the patient and therapist view the album, and confirm the contents with appreciation.

The primary aim of this study was to assess the efficacy of the Short-Term Life Review on the spiritual well-being, as well as anxiety, depression, sufferings, and happiness, or terminally ill cancer patients.

Material and method

Participants

The subjects were cancer patients from the palliative care unit of two general hospitals and one home-care clinic. The inclusion criteria for this study were (1) patients with incurable cancer; (2) patients without cognitive impairment; (3) patients 20 years of age or older; and (4) patients for whom the primary physicians agreed would benefit from the psychological interventions. During the 11-month-study period, 35 patients were recruited through primary physicians. Table 1 shows the patients' background.

Interventions

Ethical aspect of this study was validated by both the board and the ethical committee of St. Mary's Hospital and St. Mary's College.

The Short-Term Life Review has two parts. In the first part, patients review their lives, and in the second, they re-evaluate, re-construct, and appreciate their life. The interviewer was a clinical psychologist (therapist). The interview procedure was based on a structured life review interview that was conducted individually, and the patient was asked to re-evaluate both good and bad memories. Question items were mainly based on the structured life review; however, they were not along developmental stages, and some items from Chochinov *et al.* [7] were added. The following questions were asked in the reviewing session: (1) What is the most important thing in your life and why? (2) What are the most impressive memories in your life? (3) In your life, what was the event that or the person who affected you the most? (4) What is the most important role in your life? (5) Which is the proudest moment of your life? (6) Is there anything about you that your family would need to

know, are there things you would want them to tell you, and, if possible, are there things you would want them to remember? (7) What advice or word of guidance would you wish to pass on to the important people in your life or to the younger generation?

The patient's narratives were recorded, and the therapist tried to listen to each word uttered by the patient. After the first session, the interview was first transcribed verbatim and the therapist made the album. To make the album, (1) key words in the answer to each question were selected. Words or phrases used by the patient were written in the album as often as possible; both good and bad things were included and feelings or re-framed thoughts—how he feels now—were written in the album. (2) The therapist pasted photos or drawings from various books or magazines that were related to the patients' words or phrases, to make the album more beautiful and more memory provoking. It took a week for the treatment.

Outcome measurements

To measure the effects of the Short-Term Life Review, we used the Japanese version of Functional Assessment Chronic Illness Therapy-Spiritual (FACIT-Sp) [10]. The validity and reliability of the FACIT-Sp Japanese version is well established [11]. Secondary end-points were anxiety, depression, suffering, and happiness. Anxiety and depression were measured by the Japanese version of the Hospital Anxiety and Depression Scale (HADS) [12,13]. Further, we used numeric rating scale about suffering (0–6) and happiness (1–7) [14] to compare the effects of the Short-Term Life Review with that of Dignity Psychotherapy by Chochinov *et al.* [7].

Statistical analysis

To evaluate the efficacy of the Short-Term Life Review in improving the patients' spiritual well-being, the Wilcoxon signed rank test was conducted on all scores of each scale before and after the Short-Term Life Review. Correlation analysis was used to examine the relationships between spiritual well-being and other variables. For intention-to-treat analyses, we additionally calculated the treatment effects using all patient data by the last observation carried forward methods.

Results

Five of the patients were excluded from this study because of unexpected deterioration in health. Thus, a total of 30 patients completed all sessions. Two patients' consciousness level decreased due to disease progression, one had severe and uncontrollable pain, one developed pneumonia, and one lost motivation to participate because of decreasing ADL.

Table 2 shows average and standard deviation scores. After the Short-Term Life Review, the mean FACIT-Sp scores increased from 16 ± 8.2 to 24 ± 7.1 ($Z = -4.2, P = 0.001$), the anxiety score significantly decreased from 6.8 ± 4.7 to 3.0 ± 2.2 ($Z = -3.8, P = 0.001$), the depression score significantly decreased from 10.2 ± 4.7 to 6.6 ± 4.1 ($Z = -3.7, P = 0.001$), the suffering score significantly decreased from 3.4 ± 1.9 to 1.8 ± 1.4 ($Z = -3.5, P = 0.001$), and the happiness score significantly increased from 4.6 ± 1.9 to 5.6 ± 1.6 ($Z = -3.2, P = 0.002$). Total HADS scores significantly decreased from 17 ± 8.6 to 9.5 ± 5.4 ($Z = -4.1, P < 0.001$).

Those changes remained statistically significant using the intention to treat analysis: The mean FACIT-Sp scores significantly increased from 16 ± 7.8 to 23 ± 7.1 ($Z = -4.2, P = 0.001$), the anxiety score significantly decreased from 7.0 ± 4.8 to 3.7 ± 3.4 ($Z = -3.8, P = 0.001$), the depression score significantly decreased from 10.4 ± 4.6 to 7.2 ± 4.4 ($Z = -3.7, P = 0.001$), the suffering score significantly decreased from 3.5 ± 1.8 to 2.1 ± 1.5 ($Z = -3.5, P = 0.001$), and the happiness score significantly increased from 4.5 ± 1.9 to 5.3 ± 1.7 ($Z = -3.2, P = 0.002$). Total HADS scores significantly decreased from 17 ± 8.6 to 11 ± 6.8 ($Z = -4.1, P < .001$).

As shown in Table 3, the FACIT-Sp significantly correlated with anxiety ($r = -0.37$), depression ($r = -0.76$), total HADS ($r = -0.73$), sufferings ($r = -0.70$), and happiness ($r = 0.57$).

Discussion

Effects of Short-Term Life Review

The first important finding is beneficial effect of the Short-Term Life Review on spiritual well-being in terminally ill cancer patients. The fact that the FACIT-Sp scores significantly increased after the Short-Term Life Review shows the effect of this

Table 2. Changes in outcome measures

	FACIT-SP	Anxiety	Depression	Total HADS	Sufferings	Happiness
Before	16 ± 8.2	6.8 ± 4.7	10.2 ± 4.7	17 ± 8.6	3.4 ± 1.9	4.6 ± 1.9
After	24 ± 7.1	3.0 ± 2.2	6.6 ± 4.1	9.5 ± 5.4	1.8 ± 1.4	5.6 ± 1.6
P value	$Z = -4.2,$ $P = 0.001$	$Z = -3.8,$ $P = 0.001$	$Z = -3.7,$ $P = 0.001$	$Z = -4.1,$ $P = 0.001$	$Z = -3.5,$ $P = 0.001$	$Z = -3.2,$ $P = 0.002$

Table 3. Correlation coefficients among variables at the post Short-Term Life Review

	FACIT-Sp	Anxiety	Depression	Total HADS	Sufferings	Happiness
FACIT-Sp	1.0					
Anxiety	-0.37*	1.0				
Depression	-0.76**	0.41*	1.0			
Total HADS	-0.73**			1.0		
Sufferings	-0.70**	0.47*	0.73**	0.75**	1.0	
Happiness	0.57**	-0.27	-0.57**	-0.55**	-0.47**	1.0

* $P < 0.05$. ** $P < 0.01$.

therapy on spiritual well-being of cancer patients. Regarding the secondary endpoint, there were significant differences between pre- and post-intervention scores for anxiety, depression, suffering, and happiness.

Why does the Short-Term Life Review affect these variables? The following considerations may be relevant: (1) a patient can express emotion or distress without being concerned about the feelings of family or others. Most Japanese prefer not to give burden to family or friends. Moreover, in the sessions, there is ample time for patients to discuss anything they wish to mention, sometimes in an informal manner. This is related to psychological purification. (2) Patients can confirm their acquisitions or roles in life, narrating their lives as they have lived them, and can re-evaluate both good and bad memories with emotional support from the therapist. (3) Patients can view, touch, and appreciate their own album. Through these processes, patients find meaning in life and re-evaluate it, and their spiritual well-being increases. This results in a decrease in anxiety, depression, and suffering and an increase in happiness.

Adapting these processes with the previous theoretical model [15,16], we can explain the effects of Short-Term Life Review. A patient has a purpose or a goal for his life when he is healthy. However, when he falls into serious illness, it is often difficult for him to attain his purpose or a goal because of unexpected serious illness, and he feels much distress. In this situation, when he receives the Short-Term Life Review, he can re-think and modifies his original purpose or goals into attainable ones, he feels a positive mood. Short-Term Life Review may contribute for a patient to reconstruct his life being congruent with cancer in his life.

Feasibility

It would be remarkable for Short-Term Life Review to have high feasibility. The percentage of patients deteriorating with this therapy was only 17%, although in the previous study [5] it was 30% for patients using the Structured Life Review. We describe some factors related to feasibility. (1) The Short-Term Life Review is completed in a week, and this short-term intervention enables terminally ill cancer patients to complete an intervention. (2)

Patients with very low functionality in ADL can participate because the patients review their lives while lying on bed. Both problem-solving therapy for cancer patients [17] and cognitive behavior therapy for cancer patients [18] have proved to be effective. However, patients need some level of ADL; they may plan their schedule and conduct and evaluate their behavior or cognition. It may be difficult to conduct interventions for terminally ill cancer patients with much lower ADL. Moreover, the effects of these psychotherapies on spiritual well-being have not been evaluated. To manage spiritual distress, there is meaning-centered group psychotherapy [19], in which groups of patients talk about the meaning or purpose of life over a period of 8 weeks. However, it may be very difficult for terminally ill cancer patients with performance status of 3 or 4 to reach the end of this therapy and to travel to the places where the group sessions are held. In comparison with these previous studies, the present findings suggest that the Short-Term Life Review can be more feasible. Moreover, the procedures used in this therapy are clearly defined and medical personnel other than psychotherapists may be able to conduct it in various situations.

The following is the one of the cases. When a therapist began the session at the patient's bedside, a patient became emotional and covered his eyes while narrating his story. The therapist tried to be a therapeutic listener. The patient had never expressed his emotions in front of his family; however, he could readily express his emotions and feelings in the sessions. He was able to describe his suffering and his regret that he would die in the near future. He had worked as a gardener for a long time. It was very hard to become a gardener. There had been some failures when he was running his own small company, and he had worked hard. He described his life with his family, particularly his children, who were under 20 years old. After the first session, the therapist made an album for the patient. In the second session, the therapist and patient talked about the album and looked at it together. The patient listened to the therapist and became emotional. The therapist prompted the patient to re-evaluate both his good and bad memories by asking him to reconstruct his life, with questions like 'How do you recognize that memory now?' and 'how do you feel now?' The

patient wanted to live much longer, but had to reconstruct and integrate his life in a short time. He seemed to be satisfied that he was able to leave the park gardens, which many people are presently enjoying. He also expressed gratitude to his family and friends. He said 'These sessions were very helpful for me to set my memories in place.'

Comparison of Short-Term Life Review with Dignity Psychotherapy

There are both similarities and differences in methods between Short-Term Life Review and Dignity Psychotherapy. In both studies, patients review their lives for one time and there are some common questions. However, there are some differences between them. (1) In Dignity Psychotherapy, patients are offered the opportunity to address issues that matter the most to them or to speak of things they wish to remember the most as death draws near. In the Short-Term Life Review, the therapist does not intentionally prompt the patient to speak about the aftermath. (2) In the Short-Term Life Review, the therapist prompts the patient to review both good and bad memories to re-evaluate the bad memories and integrate them for patients' themselves; in Dignity Psychotherapy, however, bad memories or bad things are sometimes omitted from the transcript, because the transcript is for both the patient and his family. (3) In Dignity Psychotherapy, the therapist and the patient image something like an album in the second session, whereas in the Short-Term Life Review the therapist makes a small album based on the transcript after first session and both the patient and the therapists view the album together and the therapist promotes the patients to appreciate and re-evaluate their lives during the second session.

To compare the effects of the two therapies, we asked some common questions such as 'Are there anything that you would want your family to know about you, and are there things you would want them to tell?' In Dignity Therapy, the transcript is intended for those left behind. However, few patients answered this question and mentioned inheritance in the present study. There may be some cultural differences among patients. In future studies, we will select questions tailor made for each patient based on cultural differences.

Limitation

Finally, we mention the limitations of this study. First, there was no control group to enable us to assess the effects of this therapy because the terminally ill patients in this study were in a very serious physical and mental state and we could not burden them by asking questions that did not

contribute directly to their QOL. Second, the statistical significance in the measurement outcomes does not directly mean clinical significance. We were unable to conclude the clinical significance of this intervention due to the lack of established cut-off points of the FACIT-Sp. Third, almost all patients in this study were in palliative care ward or hospice care clinic, and the generalization of the findings to other situations cannot be automatically supported. Randomized controlled trial is promising to confirm the treatment benefits of the Short-Term Life Review interview.

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