

Half of the Japanese bereaved families of patients admitted to palliative care units regarded the timing of referrals as late or too late, and the rates identified in the survey were similar to those recorded before the Cancer Control Act. Involvement of the palliative care team, however, significantly correlated with lower family- and patient-perceived late referrals, and palliative care team activity was generally perceived as useful by the bereaved family members. Further dissemination of palliative care teams could contribute to better access to palliative care units and quality palliative care throughout the country. J Pain Symptom Manage 2009;38:191–196. © 2009 U.S. Cancer Pain Relief Committee. Published by Elsevier Inc. All rights reserved.

Key Words

Referral, family, palliative care team, palliative care, cancer

Introduction

The World Health Organization defines palliative care as “an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness,” and states that this is achieved “through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment.”¹ Although palliative care is rooted in compassionate care for dying patients, the primary aim of palliative care is to minimize patient and family suffering at all stages of life-threatening illness.¹ Early referrals to specialized palliative care services, that is, immediate referrals to palliative care specialists when patient and family require specialized care for adequate symptom relief, could be useful in achieving symptom control and in promoting systematic detection of unmet needs, prevention of symptoms, and strengthening emotional connections between patients and families.²

Several empirical studies, however, have revealed that physicians usually refer patients to specialized palliative care programs at very late stages of cancer.^{3–9} In the United States, Italy, and Japan, the median survival from the initial referral to patient death ranges from three to six weeks, and about 15% of the patients die within a week after initial referrals.^{4–9} From the bereaved family perspective, multiple surveys have identified family-perceived late referrals to palliative care units or hospice-care programs.^{6–9} A Japanese survey in 2002 revealed that more than half of the family members and patients reported that the timing of referral to a palliative care unit was late or too late.⁹

From 2003 to 2006, in Japan, the Cancer Control Act was established to improve the quality of life of all cancer patients throughout the country, and disseminating palliative care was identified as one of the most important areas to be improved. To disseminate quality palliative care, The Ministry of Health, Welfare, and Labor obliged more than 200 regional cancer centers to establish a palliative care team, and approved palliative care team activity was targeted for national insurance coverage. In 2008, there were 351 cancer centers with palliative care teams in Japan, and 48 of them had palliative care units. In addition, 135 palliative care units are certified. Although the change that followed the Cancer Control Act could diminish late referral to palliative care units—the most common specialized palliative care service in Japan—no nationwide follow-up survey has been performed since 2003, and palliative care team activity has not been evaluated, except for a single institution study.¹⁰

The primary aims of this study were, thus, to 1) clarify the family-perceived appropriateness of the timing of referral to palliative care units after the encouragement of palliative care team activity by the Cancer Control Act, and 2) to determine the effects of the involvement of the palliative care team on the family-perceived referral timing. An additional aim of this study was to clarify the family-perceived usefulness of the palliative care team for symptom control, emotional support, support for the family, and care coordination.

Methods

This study was part of a large cross-sectional anonymous nationwide survey of the bereaved

families of cancer patients in Japan. The detailed methodology of this survey was described in a previous article.¹¹

All 153 palliative care units of Hospice Palliative Care Japan approved before September 2005 were recruited for this study, and 100 palliative care units participated in the study. We asked each institution to identify the bereaved family members of patients who died from November 2004 to October 2006 consecutively, up to 80 subjects in each institution. A total of about 8000 subjects were randomly allocated to 10 different questionnaire surveys. We mailed questionnaires to bereaved families in June 2007, and again in August 2007 to non-responding families.

Subjects

Primary physicians identified potential participants following the inclusion criteria: 1) bereaved family members of an adult cancer patient (one family member was selected for each patient); 2) aged 20 years or older; 3) capable of replying to a self-reported questionnaire; 4) aware of the diagnosis of malignancy; and 5) no serious psychological distress recognized by the primary physicians. The last criterion was based on our previous experience, and adopted on the assumption that primary physicians could identify families who would suffer a serious psychological impact from this survey; no formal criteria or psychiatric screening was applied.

Completion and return of the questionnaire was regarded as consent to participate in this study. The ethical and scientific validity were confirmed by the institutional review board of each hospital.

Questionnaire

The questionnaire was developed by the authors following the previous study.⁹ The primary endpoint was family-perceived appropriateness of the timing when physicians first referred patients to palliative care units. The level of family-perceived appropriateness was rated on a 5-point scale as "should have been referred much later (very early)," "should have been referred a little later (early)," "referred at the appropriate time," "should have been referred a little earlier (late)," and "should have been referred much earlier (too late)." In addition, we requested that

families report what the patients had said about the appropriateness of the referral timing on the same scale.

The families were further requested to report whether a palliative care team was involved in patient care, and to rate their overall evaluation of the usefulness of the palliative care team in terms of the following: 1) to palliate the patient's physical symptoms; 2) to palliate the patient's psychological distress; 3) to support family members; and 4) to provide care coordination of palliative care units and home care. The choices were "not useful," "somewhat useful," "useful," and "very useful."

Analyses

For comparisons, the family-perceived appropriateness of the referral timing was classified into three groups: 1) early or too early, 2) appropriate, and 3) late or too late. Statistical comparisons were performed with the *t*-test or Chi-squared test, where appropriate. All analyses were performed using the Statistical Package for the Social Sciences (ver. 11.0, SPSS, Inc., Tokyo, Japan).

Results

Six hundred and sixty-one families were sent questionnaires, and 451 responses were analyzed (response rate: 68%). Table 1 summarizes the backgrounds of the patients and family members. Families reported that a palliative care team was involved in patient care in

Table 1
Participants' Backgrounds

<i>Patients</i>	
Age	70 ± 12
Sex (male, %)	57% (n = 256)
<i>Family members</i>	
Age	59 ± 13
Sex (male, %)	35% (n = 159)
<i>Relationship with patient</i>	
Spouse	49% (n = 219)
Child	35% (n = 158)
Sibling	6.0% (n = 27)
Parents	5.3% (n = 24)
Other	3.8% (n = 17)
<i>Time with patients in the final week</i>	
Everyday	69% (n = 311)
4–6 Days	16% (n = 70)
1–3 Days	12% (n = 52)
None	2.9% (n = 13)

42% ($n = 191$) of the cases. The waiting period from application to admission was less than one week (47%, $n = 212$), one to two weeks (23%, $n = 102$), two to four weeks (16%, $n = 73$) and more than 4 weeks (12%, $n = 54$). There were no statistically significant correlations between the backgrounds of the patients and family members with primary endpoints (data not shown).

Family-Reported Appropriateness of the Timing of Referrals

Half of the bereaved family members regarded the timing of referrals to palliative care units as late or too late: too late (25%, $n = 114$), late (22%, $n = 97$), appropriate (47%, $n = 212$), early (2.4%, $n = 11$), and very early (1.8%, $n = 8$) (Table 2).

Among the 228 families that reported what patients had said about the timing of referrals (51% of all family members), about half reported that the patients said that the timing of referral was late or too late: too late (23%, $n = 52$), late (21%, $n = 49$), appropriate (48%, $n = 110$), early (4.4%, $n = 10$), and very early (3.1%, $n = 7$).

The concordance between families' and patients' evaluations was moderate (Cohen's $\kappa = 0.64$), and the absolute differences between families' and patients' ratings were less than 1 in 95% ($n = 214$).

Involvement of the Palliative Care Team and Family-Perceived Referral Timing

The families of patients with a palliative care team tended to report less frequently that they believed that the referral timing was late or too late with marginal statistical significance (43% vs. 51%) (Table 3). Furthermore, they reported significantly less frequently that the

Table 2
Referral Timing to Palliative Care Units

	Too Early	Early	Appropriate	Late	Too Late
	(%)	(%)	(%)	(%)	(%)
<i>Family-perceived</i>					
In 2003	2.2	1.6	48	30	19
In 2007	1.8	2.4	47	22	25
<i>Patient-reported</i>					
In 2003	2.9	2.2	36	35	24
In 2007	3.1	4.4	48	21	23

Table 3
Involvement of Palliative Care Team and Referral Timing

	Early or Too Early	Appropriate	Late or Too Late	P-value
	% (n)	% (n)	% (n)	
<i>Family-perceived</i>				
PCT involved ($n = 188$)	6.4 (12)	51 (95)	43 (81)	0.073
Not involved ($n = 254$)	2.8 (7)	46 (117)	51 (130)	
<i>Patient-reported</i>				
PCT involved ($n = 111$)	7.2 (8)	57 (63)	36 (40)	0.037
Not involved ($n = 117$)	7.7 (9)	40 (47)	52 (61)	

PCT = palliative care team.

patients had said that the referral timing was late or too late (36% vs. 52%).

Overall Evaluation of the Palliative Care Team

The percentages of families that evaluated the palliative care team as "somewhat useful," "useful," or "very useful" were 93% (to palliate the patient's physical symptoms), 90% (to palliate the patient's psychological distress), 92% (to support family members), and 87% (to provide care coordination of palliative care units and home care) (Table 4).

Discussion

This is, to our knowledge, the first study to 1) investigate the longitudinal changes in family-perceived appropriateness of the timing of referrals to palliative care units; and 2) examine the family-reported usefulness of palliative care teams as a nationwide sample. One of the important findings of this study was the

Table 4
Family-Perceived Usefulness of Palliative Care Team ($n = 188$)

	Not Useful	Somewhat Useful	Useful	Very Useful
	% (n)	% (n)	% (n)	% (n)
Symptom control	6.4 (12)	15 (28)	44 (82)	34 (64)
Emotional support for patients	10 (19)	16 (30)	46 (86)	28 (53)
Support for family	8.0 (15)	24 (46)	37 (70)	31 (59)
Care coordination	9.0 (17)	20 (38)	44 (82)	23 (44)

clarification of the proportion of families that considered that the timing of referrals was late, appropriate, or early at two points, before and after national efforts to disseminate palliative care teams by the Cancer Control Act. Both in 2003 and 2007, half of the bereaved families surveyed regarded the timing of referrals as late or too late, and there were no clear changes in the rates of late referrals. Involvement of a palliative care team, however, had moderate effects on the better timing of referrals to palliative care units, especially patient-perceived appropriateness. This finding suggests that the timing of referrals to palliative care units is still delayed in Japan, but palliative care activity did and will contribute to better access to palliative care units.

The second important finding of this study was the explanation of the family-perceived usefulness of a palliative care team using a nationwide sample. Evaluation of palliative care team activity is a difficult area for research because of the complex interaction of the palliative care team with patients, families, and health care providers.^{12,13} This study provided unique evidence of the usefulness of palliative care teams. Consistent with a previous study,¹⁴ family members were generally satisfied with palliative care team activity regarding symptom control, psychological support, family support, and care coordination.

This survey has several limitations. First, as 6.4% of the families that had serious psychological distress, as determined by primary physicians, were excluded and the response rate was not very high (68%), the population might not be representative of the study subjects. Second, the study subjects were limited to the families of patients who had been admitted to palliative care units, and the findings might not be applicable to families in other settings. Third, as the involvement of palliative care teams was determined by the family, some families under- or overreported the palliative care team activities. Fourth, as the study participants were bereaved family members, the findings could not be applied directly to patients. Finally, as the study population included patients who died before the establishment of the Cancer Control Act, the timing of the evaluation might be too early.

In conclusion, half of the Japanese bereaved families receiving inpatient specialized palliative

care services regarded the timing of referrals as late or too late, and the rates of late referrals apparently did not change in 2003 and in 2007 after the Cancer Control Act. The involvement of a palliative care team, however, significantly correlated with lower late referrals, and palliative care team activity was generally perceived as useful by the bereaved family members. Further dissemination of palliative care teams could contribute to better access to palliative care units and quality palliative care throughout the country.

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Original Article

Artificial Hydration Therapy for Terminally Ill Cancer Patients: A Nurse-Education Intervention

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Abstract

The Japanese Society of Palliative Medicine has developed a clinical guideline to minimize the large variation in clinical practice of artificial hydration therapy for terminally ill cancer patients. The primary aim of this preliminary study was to explore the effects of a five-hour interactive workshop based on the guideline of nurses' knowledge, confidence, self-reported practice, and nurse-perceived usefulness. The study was designed as a pre-post anonymous questionnaire survey. The nurses attended a five-hour interactive workshop based on the guideline and were asked to complete a questionnaire before and after the workshop. The outcome measures were: nurses' knowledge (13 items; the total number of correct answers was defined as the Knowledge score), confidence in caring for terminally ill cancer patients with reduced oral intake (a single Likert-type scale from 1 = "not confident at all" to 7 = "very confident"), and self-reported practice (nine items assessing the degree to which nurses think they would perform more frequently recommended practices described in the guideline after the workshop). Of the 81 nurses who participated in this workshop, we obtained consent from 76 to complete the questionnaire. The Knowledge score significantly increased after the intervention from 7.7 ± 2.3 to 11 ± 1.4 ($P < 0.001$), and the Confidence score significantly increased from 3.1 ± 1.2 to 3.8 ± 1.1 ($P < 0.001$). More than 80% of the nurses reported they would perform six of nine recommended practices after the workshop. The percentages of nurses who evaluated this workshop as "useful" or "very useful" were: 84% (to know the medical indications of artificial hydration therapy), 89% (to know the effects of artificial hydration therapy on patient quality of life and survival), 71% (to know the physiology of appetite loss and cancer cachexia), 83% (to know how to provide nursing care), and 91% (to know ethical principles). Based on these results, it is possible that a five-hour interactive workshop on artificial hydration therapy, based on the clinical guideline of the Japanese Society of Palliative Medicine, improves nurses' knowledge, confidence, and self-reported practices. The workshop was generally perceived as useful for nurses. Nationwide dissemination of the guideline with interactive workshop education for nurses, in combination with physicians, is a promising method for

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Accepted for publication: October 15, 2008.

improving the clinical practice of artificial hydration therapy for terminally ill cancer patients. J Pain Symptom Manage 2009;38:358–364. © 2009 U.S. Cancer Pain Relief Committee. Published by Elsevier Inc. All rights reserved.

Key Words

Artificial hydration therapy, nutrition, hydration, education, interactive workshop, neoplasms, guideline

Introduction

Recent literature reveals a large variation in physician practice pertaining to artificial hydration therapy for terminally ill cancer patients.¹ This means that patients may suffer unnecessarily because of over- or underhydration. The establishment of a clinical guideline can contribute to patient well-being by clarifying the best practice from empirical evidence and available expert experience. In addition to several general clinical practice guidelines,^{2–7} the Japanese Society of Palliative Medicine recently published a clinical guideline for artificial hydration therapy for terminally ill cancer patients using evidence-based and formal consensus-building methods.⁸ The primary aim of the guideline is to help clinicians make a clinical decision about artificial hydration therapy to ensure a better quality of care for terminally ill cancer patients. The target population is adult cancer patients with incurable cancer who have inadequate oral intake refractory to appropriate palliative treatments and who are likely to die within one to two months. The targeted users are all health care professionals who treat the target population.

The guideline assumes that the determinants of quality of life and the processes of dying and death vary among individuals, and that individual assessment is essential to define what is important for each patient. Palliation of physical distress, peace of mind, having a good family relationship, not being a burden to others, completion of life, fighting against cancer, maintaining hope, and not being aware of death are good death elements that could be related to the decision-making process for artificial hydration therapy for Japanese patients.⁸ The guideline strongly recommends that clinicians respect patient and family values; individualize the treatment for each patient; and assess the situation comprehensively from a medical, practical,

psychosocial, ethical, and legal point of view. On the basis of this conceptual framework, clinicians should first clarify the general treatment goal consistent with patient and family values. Second, clinicians should comprehensively assess the situation, especially the potential effects of artificial hydration therapy on patient physical symptoms, survival, daily activities, psycho-existential well-being, and ethical and legal issues. Third, clinicians should decide on a treatment plan after discussion with patients and families. Finally, clinicians should periodically reevaluate the treatment efficacy at planned intervals, and adjust the treatment suitable for each patient.

During this whole process, nurses play an important role in supporting the decision-making process of patients and families, providing emotional support and planning nursing assistance for artificial hydration therapy. Thus, we believe that educating nurses about artificial hydration therapy is of great importance, and a useful education program can assist in the successful implement of the guideline.

Although simple dissemination of printed guidelines has minimum effect on the actual behaviors of clinicians, an interactive workshop could contribute toward improving clinical practice.^{9–12} As the first step of dissemination efforts to promote the guideline, the primary aim of this preliminary study was to explore the effects of a five-hour interactive workshop on nurses' knowledge, confidence, self-reported practice, and nurse-perceived usefulness of this workshop.

Methods

This study was designed as a pre-post anonymous questionnaire survey. The nurses voluntarily applied to the workshop across the country by means of announcements in

palliative care specialty journals and the Internet. No inclusion criteria for participation were required. The participants were asked to complete the questionnaire before and just after the workshop. Written consent regarding voluntary participation and confidentiality was obtained, and the questionnaire was collected at the workshop.

Intervention

The workshop was based on the guideline published by the Japanese Society of Palliative Medicine. A task force prepared all materials, including the visual presentation of this workshop, and one member of the task force (T.M.) conducted the workshop. The task force consisted of 32 experts: six palliative care physicians, six surgeons, four anesthesiologists, three medical oncologists, two home care physicians, five nurses, a social worker, two bioethicists, a lawyer, and two epidemiologists. The workshop was designed to be interactive and consisted of a pretest (10 minutes), a lecture about the development process of the guideline (10 minutes), an interactive seminar about recommendations for physical symptoms (60 minutes), recommendations for psychosocial support (60 minutes), recommendations for ethical decisions (60 minutes), an interactive discussion using vignette presentations (60 minutes), free discussion as a group and individual (30 minutes), and a post-test (10 minutes). The number of participants was about 20 per workshop, and four workshops were held. The guideline and materials (in Japanese) are available from the homepage of the Japanese Society of Palliative Medicine (<http://www.jspm.ne.jp/>).

Measurement Instruments

Following the descriptions in the guideline,⁸ we developed instruments to specifically quantify nurses' knowledge, confidence, and self-reported practice about artificial hydration therapy for terminally ill cancer patients. We decided to develop a new questionnaire for this study because of a lack of existing validated measurements. To examine content validity, a multidisciplinary expert panel (two nurses and two palliative care physicians) rated the appropriateness of each item using the Delphi method, and items that achieved 8 or more on a 1–9 scale were selected. We had decided not to

perform formal validity and reliability testing for each measurement instrument, because all items about knowledge and self-reported practice were driven by descriptions from the clinical guideline.

Knowledge. We evaluated nurses' knowledge about artificial hydration therapy using 13 questions (Table 1). We defined a "Knowledge" score as the total number of correct answers ("unsure" responses were regarded as incorrect answers); thus, the "Knowledge" score ranged from 0 to 13 and a higher score indicated a higher level of knowledge.

Confidence. Confidence in caring for terminally ill cancer patients with reduced oral intake was evaluated on a single Likert-type scale from 1 = "not confident at all" to 7 = "very confident." The question was "How confident are you in caring for terminally ill cancer patients with reduced oral intake?"

Self-Reported Practice Scale. We conceptualized self-reported practice as the level of self-reported adherence to recommended clinical practice guidelines about artificial hydration therapy for terminally ill patients. Self-reported practice was evaluated by the degree to which the nurses thought they would perform recommended practices in about nine areas more or much more frequently after the workshop (Table 2). The scale, consisting of nine items, was Likert-type, ranging from 1 = "would perform much less frequently" to 5 = "would perform much more frequently."

Overall Evaluation. We asked the respondents to rate their overall evaluation of the usefulness of this workshop in terms of: 1) understanding the medical indications for artificial hydration therapy, 2) understanding the effects of artificial hydration therapy on patient quality of life and survival, 3) understanding the physiology of appetite loss and cancer cachexia, 4) knowing how to provide nursing care for patients, and 5) understanding ethical principles. The choices were "not useful," "slightly not useful," "slightly useful," "useful," and "very useful."

Table 1
Knowledge About Artificial Hydration Therapy

Questions	Before the Workshop	After the Workshop
	% (n)	% (n)
Water supplied by artificial hydration therapy is not retained efficiently in the veins when the albumin level is low or inflammation is severe. (T)	80 (61)	93 (71)
Terminally ill cancer patients require more calories than patients with early cancer, because more calories are consumed by the tumor. (F)	68 (52)	87 (66)
Ascites or pleural effusion is not aggravated in patients with a negative calculated water balance. (F)	75 (57)	79 (60)
Fluid infusion is rarely performed in certified palliative care units in Japan. (F)	50 (38)	89 (68)
Fluid infusion is the only treatment for patients with reduced oral intake because of cancer. (F)	68 (52)	95 (72)
Total parenteral nutrition often contributes to improve the quality of life of patients with a good performance status and (who are) incapable of oral nutritional intake because of gastrointestinal obstruction. (T)	58 (44)	80 (61)
Fluid infusion palliates the sensation of thirst in patients expected to die within a few weeks. (F)	55 (42)	95 (72)
If it becomes impossible to establish an IV route in a peripheral vessel, the central vein is the only available route of fluid infusion. (F)	70 (53)	97 (74)
In patients expected to die within several days, no improvement in the general well-being or survival can be obtained by fluid infusion. (T)	64 (49)	88 (67)
Ascites or pleural effusion can be aggravated in patients receiving fluid infusion of 1000 mL/day or more. (T)	71 (54)	86 (65)
Total parenteral nutrition improves the survival and quality of life in lung cancer patients with adequate water intake. (F)	38 (29)	59 (45)
More than 90% of Japanese consider that "Fluid infusion is the minimum standard of care." (F)	16 (12)	64 (49)
If hyperglycemia occurs during total parenteral nutrition for terminally ill cancer patients, the addition of insulin improves the nutritional state and controls the blood glucose level. (F)	37 (28)	63 (48)

T = true; F = false; IV = intravenous.

The percentages of nurses who gave correct answers are shown. The number of nurses who gave the correct answers are shown within brackets.

Results

Of the 81 nurses who participated in this program, we obtained consent from 76 (94%). Their mean age was 33 ± 7.5 years, and 71 were females. Their institutions included general hospitals ($n = 41$), cancer centers or academic hospitals ($n = 13$), specialized palliative care services ($n = 11$), and outpatient clinics or home care settings ($n = 4$). They had a mean clinical experience of 10 ± 5.7 years, and the median number of patients who died of cancer was 20 per year. Five nurses were certified nurses (palliative care, cancer pain, or chemotherapy), and 10 nurses had graduated from a nursing university.

Knowledge

The Knowledge score significantly increased after the intervention from 7.7 ± 2.3 to 11 ± 1.4 ($P < 0.001$). The items for which 80% or more nurses gave correct answers increased from one item before the workshop

(7.7% of 13 items) to nine items (69%) after the workshop (Table 1).

Confidence

The Confidence score significantly increased after the intervention from 3.1 ± 1.2 to 3.8 ± 1.1 ($P < 0.001$). The percentage of nurses who rated their confidence as "not confident at all" or "not confident" decreased from 34% ($n = 25$) to 15% ($n = 11$).

Self-Reported Practice

After the workshop, more than 80% of the nurses reported that they would more or much more frequently perform six of nine recommended practices (Table 2). The percentage of nurses who reported that they would perform three medically-related practices more or much more frequently ranged from 53% to 68%.

Overall Evaluation

The percentages of nurses who evaluated this program as "useful" or "very useful"

Table 2
Self-Reported Practice About Artificial Hydration Therapy

Questions	More Frequently or Much More Frequently Perform	Unchanged
	% (n)	% (n)
I will try to explore what worries the patients may have about not being able to eat.	89 (68)	3.9 (3)
I will try to understand the patients' wishes and values concerning fluid infusion therapy.	91 (69)	3.9 (3)
I will try to explore what worries the patients' families may have about the patients not being able to eat.	91 (69)	3.9 (3)
I will observe the oral area and provide mouth care for thirst.	93 (71)	1.3 (1)
I will ask the patients themselves about pain or how comfortable they are.	89 (68)	3.9 (3)
I will modify the infusion according to the patient's lifestyle (intermittent infusion, etc.).	82 (62)	12 (9)
I will advise physicians to perform subcutaneous administration if the peripheral IV route cannot be established.	53 (40)	29 (22)
I will advise physicians to perform drug therapy that increases oral intake other than fluid infusion.	68 (52)	22 (17)
I will advise physicians to reduce the volume of fluid infusion if ascites or pleural effusion is increased.	67 (51)	24 (18)

were: 84% ($n = 64$, to understand the medical indications for artificial hydration therapy), 89% ($n = 68$, to understand the effects of artificial hydration therapy on patient quality of life and survival), 71% ($n = 54$, to understand physiology of appetite loss and cancer cachexia), 83% ($n = 63$, to understand how to provide nursing care for patients), and 91% ($n = 69$, to understand ethical principles about hydration).

Discussion

This was a preliminary study to systematically investigate nurses' knowledge, confidence, and self-reported practice about artificial hydration therapy, and to examine the effects of educational intervention on these outcomes. The most important finding was the positive effects of this workshop on nurses' knowledge, confidence, and self-reported practice, and the generally high levels of the nurse-perceived usefulness of this workshop. In fact, after the workshop, nurses' knowledge and confidence significantly increased, and many nurses reported that they would more frequently perform the recommended practices described in the guideline. Moreover, more than 80% of the nurses evaluated the workshop useful or very useful.

As to nurses' knowledge, this study identified six areas in which nurses had generally inappropriate knowledge: availability of artificial

hydration therapy in certified palliative care units, medical indication of hyperalimentation, no beneficial effect of artificial hydration therapy on alleviating the sensation of thirst, the percentage of public belief that artificial hydration therapy is the minimum standard of care, and the role of insulin for hyperglycemia in terminally ill cancer patients. This finding suggests that future educational intervention should particularly focus on these areas.

Of special note was that, despite clinical evidence that artificial hydration has no or minimum beneficial effects in alleviating the sensation of thirst and that nursing oral care is essential for symptom control in dying patients,¹³⁻¹⁵ only half of the nurses had the correct knowledge. After the workshop, however, 95% of the nurses had the correct knowledge and 93% reported that they would perform mouth care more or much more frequently. This result indicates that this educational intervention could contribute to better alleviation of thirst through improving nurses' knowledge and attention to mouth care for terminally ill cancer patients.

In addition, we believe that improvement of knowledge about the availability of artificial hydration therapy in certified palliative care units is of value. Multiple surveys have identified misconceptions about palliative care units in their availability to provide medical treatments as a significant barrier for appropriate referral.^{16,17} Although many palliative care

units actually provide artificial hydration therapy, a considerable number of the general public believe that patients admitted to palliative care units cannot receive artificial hydration therapy. Because the Japanese public and patients generally believe that artificial hydration therapy is the minimum standard of care,¹⁸⁻²⁰ whether or not patients can receive artificial hydration therapy appears to be important in Japanese treatment settings. An educational intervention about the reality of the availability of artificial hydration therapy in certified palliative care units could thus contribute to better understanding and the introduction of palliative care units for patients in general hospitals.

As to nurses' self-reported practice, after the workshop, more than 80% of the nurses reported that they would more frequently ask about patient and family concerns and values specifically related to artificial hydration therapy, and modify administration methods according to the patient's lifestyle. This finding is, we believe, of importance and is clinically relevant because, in our previous study, major determinants of satisfaction with artificial hydration therapy include an adequate decision-making process and practical assistance to reduce disruption in daily activities.²¹ The clinical guideline also stresses the nurses' role in eliciting patient and family wishes and in modifying infusion methods suitable for each patient.⁸ This finding suggests that this workshop has a positive influence on psychosocial and nursing-practical areas of artificial hydration therapy, not only medical aspects, and could contribute to better patient outcomes.²¹

On the other hand, in the remaining three areas, the percentage of nurses who reported that they would perform them more frequently was relatively low, that is, 53%–68%. The interpretation of this finding is that these areas are mainly related to medical decisions, and traditional nurses are unwilling to "override" physician decisions. Nonetheless, the fact that more than half of the nurses reported that they would more frequently recommend that physicians use hypodermoclysis, pharmacological treatment for decreased oral intake and volume reduction for imminently dying patients seems to be encouraging. This finding, however, strongly indicates that to disseminate this guideline, an educational intervention will be

required for both nurses and physicians. Another project, the PEACE program, is now underway to provide adequate education about palliative care to physicians throughout Japan.

This study is a preliminary study, and thus, has considerable limitations. First, as this study investigated nurse-reported and short-term outcomes, actual changes in nursing practice and/or patient-oriented long-term effects should be explored in a future study. Because of the complexity of clinical practice, improved outcomes in this study should not be directly interpreted as confirmed improvement in patient outcome. Second, cultural differences, especially about the role of artificial hydration therapy in end-of-life care, might limit the generalizability of the findings to other populations. Third, potential selection bias of participants engaged in this program, no formal testing of the reliability and validity of outcome measurements, and the relatively small sample size weaken the study design. Finally, the intervention targeted nurses, not physicians, and thus, the impact on patient quality of life might be relatively small. We believe, however, that educating nurses is at least as important as for physicians, because psychological support for patients with no oral intake ability, quality mouth care to improve dry mouth, and planning a hydration method suitable for the patient's lifestyle are the nurses' chief roles and would contribute to better patient outcome.

In conclusion, this five-hour interactive workshop based on the clinical guideline of the Japanese Society of Palliative Medicine seems to improve nurses' knowledge, confidence, and self-reported practice, and was perceived as useful for nurses. Nationwide dissemination of the guideline with interactive workshop education for nurses, in combination with physicians, is promising to improve clinical practice of artificial hydration therapy for terminally ill cancer patients. A confirmatory study using a larger number of unselected samples and objective outcome measures is needed.

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International comparison study on the primary concerns of terminally ill cancer patients in short-term life review interviews among Japanese, Koreans, and Americans

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(RECEIVED May 12, 2008; ACCEPTED July 19, 2008)

ABSTRACT

Objective: The aim of this study was to investigate the primary concerns of terminally ill cancer patients in a Short-Term Life Review among Japanese, Koreans, and Americans to develop intervention programs to be tailored to patients in other countries.

Method: Twenty Japanese, 16 Korean, and 7 American terminally ill cancer patients who were in the hospice wards of general Christian hospitals in each country participated in this study. Medical staff members (nurses, social workers, clinical psychologists) performed Short-Term Life Review Interviews with each patient. Patients reviewed their lives in the first session, the interviewers made simple albums for each patient in the week following the first session, and patients and interviewers then confirmed the contents of the album. The treatment period was 1 week. Measurement instruments included the Functional Assessment Chronic Illness Therapy–Spiritual (FACIT-Sp) and the Hospital Anxiety and Depression Scale (HADS). The contents of each interview session were transcribed, and correspondence analysis and a significance test were conducted on these data to select characteristic words or phrases.

Results: Using the FACIT-Sp scores, the following concerns were chosen, in descending order of frequency. In Japan, primary concerns consisted of such ideas as “good human relationships and transcendence,” “achievements and satisfaction,” “good memories and important things,” and “bitter memories.” In Korea, “religious life,” “right behavior for living,” “strong consideration for children and will,” and “life for living” were primary concerns. In the United States, “love, pride, will to children,” “good, sweet memories,” and “regret and a feeling of loss” were primary concerns.

Significance of results: We clarify the differences among the primary concerns from the Short-Term Life Reviews, arguing that we can improve the spiritual well-being of terminally ill cancer patients by focusing on the primary concerns within each country.

KEYWORDS: International comparison, Psychotherapy, Short-Term Life Review, Terminally ill patients, Spiritual well-being

INTRODUCTION

Palliating psycho-existential suffering in terminally ill cancer patients is of great importance because such suffering is not uncommon and is related to

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the quality of life, good death, and depression (Nelson et al., 2002), as well as a desire for hastened death, hopelessness, and suicidal ideation (McClain et al., 2003). Many recent studies have explored effective strategies for alleviating psycho-existential suffering in patients, with particular attention to dignity, meaning, and demoralization (Kissane et al., 2003; Breitbart et al., 2004; Chochinov et al., 2005). Dignity therapy (Chochinov et al., 2005) is a feasible and promising technique for alleviating psycho-existential suffering among terminally ill cancer patients, but it is not clear whether this therapy is feasible for patients of different cultures.

One promising therapy for alleviating psycho-existential suffering is reminiscence therapy. We refer to reminiscence therapy that is performed individually, includes evaluative discussion, and focuses on both positive and negative memories as a "life review." In our previous study, we performed standard life review interviews consisting of at least four sessions each. We demonstrated that these sessions had a positive effect on the patients' spiritual well-being, as measured by the Modified Skalen zur Erfassung von Lebensqualität bei Tumorkranken (SELT-M; Wegberg et al., 1998), but about 30% of the enrolled patients did not complete the sessions due to rapid physical deterioration (Ando et al., 2007b). We have thus developed a novel psychotherapy, the Short-Term Life Review (Ando et al., 2008), composed of two sessions over a single week, and have explored the feasibility and efficacy of this technique using the "pre-post" study design. Over the course of this study, sense of meaning, as measured by the Functional Assessment of Chronic Illness Therapy-Spiritual (FACIT-Sp), improved significantly. In this program, we chose question items by referring to the contents of the standard structured life reviews or the study of autobiographies. However, because the primary concerns of the patients in other countries were unknown, the interviewers were unable to focus on the patients' primary concerns in order to enhance the review of their memories. We thus need to know the primary concerns of terminally ill cancer patients in order to conduct effective life review interviews.

Dignity Therapy, proposed in Canada, is feasible and promising with regard to the alleviation of psycho-existential suffering among terminally ill cancer patients. The purpose of Dignity Therapy is to maintain or improve the dignity of terminally ill cancer patients by preserving a will or words for important people, thereby establishing a legacy for each patient. However, it is not clear that this concept of legacy is well suited to Japanese patients.

To improve the Short-Term Life Review Interview, improving its ability to enhance the spiritual well-being

of patients in other cultures, we intend to clarify the primary concerns in Japan, Korea, and the United States through comparison of the results of life reviews conducted in these three countries. We selected Korea because, although it is a close neighbor of Japan, its people seem to have many differences in their religious beliefs and ways of thinking. We chose the United States as a representative of Western cultures.

METHOD

Patients

In Japan, 20 terminally ill cancer patients in two hospice wards participated in the present study. In Korea, 16 terminally ill cancer patients in three hospice wards participated, and in America, 7 terminally ill cancer patients in two hospice wards participated. The inclusion criteria for this study were (1) the patient had cancer, (2) the patient had no cognitive impairment, and (3) the patient was 20 years of age or older. Table 1 shows the basic demographic data.

Outcome Measurements

We refer to the sense of meaning as measured by the FACIT-Sp (Peterman et al., 2002; Noguchi et al., 2004) in this study. The FACIT-Sp consists of two domains, meaning of life and religious matters, and we used only the former, which contains about eight items each measured on a five-points scale (range 0-4). Total FACIT-Sp scores ranged from 0 to 32. High scores indicate an elevated sense of life meaning or a peaceful state of mind. To measure levels of anxiety and depression, we used the Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983; Kugaya et al., 1998). HADS scores ranged from 0 to 42.

Table 1. *The background of the participants*

	Japanese	Korean	American
Age	71.1 ± 9.8	58.7 ± 12.6	70.6 ± 12.4
Sex			
Male	5	10	4
Female	15	6	3
Total	20	16	7
Religion			
Christian	4	14	1
Buddhism	3	1	—
Other	13	1	—
Unknown	—	—	5
None	—	—	1

Procedure

The ethical aspect of this study was validated by both the ethical committee of St. Mary's Hospital and St. Mary's College. The Short-Term Life Review Interview consisted of two sessions. The duration of each interview session ranged from about 30 to 60 min., and 1 week elapsed between the first and second sessions. The following questions were asked in the first interview 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 or person who affected you the most?" (4) "What is your most important role in your life?" (5) "What is the proudest moment of your life?" (6) "Is there anything about you that your family needs to know? Are there things you want to tell them, and, if possible, are there things you want them to remember?" and (7) "What advice or word of guidance do you wish to pass on to the important people in your life or to the younger generation?" Question Items 6 and 7 were included in order to enable a comparison of Chochinov et al.'s concept of legacy (2005).

The patients' narratives were recorded. After the first session, the interviews were transcribed verbatim and the interviewer then made a simple album. The album included key words from the answers to each question, and the interviewers pasted photos or drawings from various books or magazines related to the patients' words or phrases into the albums in order to make them more beautiful and memory provoking. In the second session, held a week after the first session, the patient and the interviewer viewed the albums together and confirmed their contents. The interviewer tried to get the patient to feel a continuity of self from past to present and a sense of satisfaction with his life. The therapy took a total of 1 week.

Medical staff members (clinical psychologists, medical social workers, and nurses) performed the Short-Term Life Reviews. Each session lasted about 60 min. Both pre- and postintervention, the patients completed oral questionnaires.

Analysis

We conducted a qualitative analysis in the present study and will report a quantitative analysis including HADS score on another occasion. For a qualitative analysis, text mining is used to extract specific information from a large amount of textural data. We used Word Miner (Japan Information Processing Service, 2003). For example, when a company requires information on their customers' opinions, questions such as "What are the major concerns?" or "Who wants what?" are asked in a questionnaire.

The responses are collected in the form of sentences, which are used as the raw data for text mining. In the first process of text mining, characteristic extraction was performed, that is, the words in each sentence were separated. Words that had the same meaning were counted as the same word, for example, both "mom" and "mother" were counted as "mother." Moreover, articles or punctuation marks were deleted, leaving only meaningful words. These words are called "fragments." Text mining elicited fragments that were then subjected to correspondence analysis for chosen effective characteristics. In the present study, we conducted correspondence analysis on fragments pertaining to FACIT-Sp scores. Significance tests to select significant (effective) fragments were conducted after correspondence analysis (Oosumi, 2006); the highest- and lowest-ranking fragments were subsequently chosen for each category. The selected fragments were shown in Tables 2-4.

RESULTS

In Japan, because the first concern included such fragments as "My family had good human relationships" and "I had good memories of my family," we have chosen to refer to it as "*Good human relationships and transcendence*." Because the second concern included "My proudest achievement is my work" and "I worked with faith," we refer to it as "*Achievements and satisfaction*." The third concern included such fragments as "My most impressive memory was a trip" and "The most important thing is friendship," so we refer to it as "*Good memories and important things*." Because the fourth concern included "We were isolated after World War II" and "I was disinfected using DDT medicine," we refer to it as "*Bitter memories*."

In Korea, we selected four concerns. The first concern included "The most important thing is religion" and "I want my family to have religion," so we refer to it as "*Religious life*." The second concern included "I want my family to live in harmony" and "I wanted to do good for others," so we refer to it as "*Right behavior for living*." Because the third concern included fragments such as "I can't live without my child" and "I wanted to have a baby for my child," we refer to it as "*Strong consideration for children and will*." The fourth concern included "I have lived independently" and "I had lived"; we thus refer to it as "*Life for living*."

In the United States, we selected three concerns. Because the first concern included "I loved everyone," "My proudest achievement is what I have done," "I want my children to be friendly," we refer to it as "*Love, pride, will*." The second concern included "I lived good life" and "I had a girlfriend in Korea,"

Table 2. Categories related to level of FACIT-Sp score and the significant word in the life review in Japan

Rank	Bitter memories (5–20)	Value	Good memory and important things (20–25)	Value	Achievement and satisfaction (25–30)	Value	Good human relationships and transcendence (30–32)	Value
1	I started a new business.	2.4	I worked abroad	2.1	My proudest achievement is my work.	2.6	My mother helped me with raising my children.	2.8
2	We were isolated after World War 2.	1.8	We were limited in our behaviors.	2.1	I worked enough.	2.2	My family had good human relationships	2.2
3	I was disinfected using DDT medicine.	1.8	The important thing is friendship.	2.1	A lecture in drawings taught me well.	1.7	I can not express my will.	2.2
4	Humans age rapidly.	1.8	I was not influenced by others.	1.6	I taught drawing with pleasure.	1.7	I am loved by someone.	2.2
5	I repatriated from Korea after World War 2.	1.8	A tour in Hokkaido	1.6	I worked with faith.	1.7	My role is to write poetry.	2.2
6	A person helped me after the war.	1.8	My most impressive memory is a trip.	1.3	I supported my grandchildren.	1.7	I spent pleasant times with everyone.	1.6
7	I changed my occupation after the war.	1.8	My most important role was to do my job.	1.1	The important thing is raising children.	1.7	I had good memories of my family.	1.6
8	My most impressive memory was encountering others.	1.8	I talked about what I tell to important persons.	1.1	Education is important for children.	1.7	I had memories of my mother in law.	1.6
9	I should have tried to start my own business.	1.8	The important thing is my family.	0.7	30 years	1.2	I want my family to go to church.	1.6
10	The ship came to a standstill in the sea.	1.8	My family comes to see me in the hospital.	0.7	I helped my family economically in my youth.	1.2	I evaluate memories in a positive way.	1.6

so we refer to it as “*Good, sweet memories.*” The third concern included “I can’t do anything” and “I regret,” and we refer to it as “*Regret and feelings of loss.*”

DISCUSSION

The first item of note emerging from this study is that the primary concerns elicited in the Short-Term Life Reviews differed by country, despite the fact that the patients all received the same questions. In Japan, “*Good human relationships and transcendence*” was the primary patient concern, with high FACIT-Sp scores. Because maintaining good human relationships with families or others is an important factor in the spiritual well-being of terminally ill Japanese cancer patients (Murata & Morita, 2006), facilitating a review of good family memories may improve their spiritual well-being. Additionally, Japanese patients

who believe in the existence of transcendent matter or things and who believe that transcendent matter controls their own destinies did not try to control their lives and had peace of mind. Moreover, when patients could recall some achievements in their lives, they expressed satisfaction with their lives. However, when they had bitter memories with effects lingering into the present, their levels of spiritual well-being were low.

“*Religious life*” was a primary concern among Korean patients. Most of the participants in the present study were Christians, and their relationships with God may be important to their lives. A related concept, “*Right behavior for living,*” was also an important factor. Patients who recalled kind gestures toward other people or doing good for others were satisfied with their lives. This concern may have a Confucian influence. Conversely, patients who

Table 3. Categories related to level of FACIT-Sp score and the significant word in the life review in Korea

Rank	Life for living (10–15)		Strong consideration for children and will (15–20)		Right behavior for living (20–25)		Religious life (25–30)	
		Value		Value		Value		Value
1	I have lived independently.	2.8	I can't live without my child.	2.4	I want my family to live in harmony.	2.2	The important thing is religion.	2.9
2	I have lived with my family.	2.3	I talked about how to manage money after my death.	1.7	The important thing is peace in the family.	2.2	There are no words to describe how I feel.	2.4
3	I want to volunteer, even now.	2.3	Why did I get cancer?	1.7	I fought in the Vietnam war and I had a good experience.	1.8	I had to live and do my best.	2.3
4	I bought clothes for my son, even though I had no money.	2.3	I want my family to be healthy.	1.7	I wanted to do well for others.	1.8	I want my family to have religion.	2.3
5	I had lived.	2.3	I want a baby for my child to have as a brother.	1.7	I did not envy others.	1.8	My brother and I have a good relationship.	2.3
6	I only thought about living.	2.3	My brother helped me.	1.7	The important thing is to behave correctly.	1.8	This was my first marriage.	2.3
7	I was alone in my youth.	1.8	I help anyone who is in trouble.	1.7	My role was to manage both my job and the housework.	1.8	I recommend religion to everyone.	2.3
8	I did not have enough money.	1.6	I want my family to live at the end of stage.	1.7	I did not express my desires.	1.8	I was shocked a long time ago, but I recovered.	1.7
9	I have lived like this.	1.6	My children are pretty.	1.7	The important things are my children.	1.4	I suffered, but I recovered.	1.7
10	I have lived in my way.	1.6	I will help a person who needs it.	1.7	The important thing is my health.	1.3	I was restructured, but I obtained a good job.	1.7

reviewed only severe past memories about living or meals that they could not evaluate positively or even in a balanced way showed low FACIT-Sp scores.

In America, "Love, pride, will to children" was the primary concern. Patients wanted to express their love and make their families understand that love. Moreover, patients who were proud of their achievements wanted to tell them to important persons. As for "Good, sweet memories," patients seemed to evaluate both positive and negative memories with acceptance. However, when they had strong feeling of regret or loss, their FACIT-Sp scores were low.

When we compare the primary concerns in the Short-Term Life Review related with spiritual well-being, "Love for the family" or "Good memories"

were common concerns for patients with high spiritual well-being in all three countries. Moreover, "Bitter memories," "Severe memories," or "Regret" were common concerns among patients with low spiritual well-being in all three countries. However, some characteristics were unique to specific countries. The concern for "humane family relationships" was important for Japanese people, which is supported by a previous study (Ando et al., 2007a). For Koreans, the "religious factor" was important. This is because it was associated with their mental health (George et al., 2002), and religious resources provide a sense of meaning and purpose (Jenkins & Pargament, 1995). "Pride or will" was particularly important for the American patients, which suggests that dignity

Table 4. Categories related to FACIT-Sp score levels and significant terminology from the life review in the United States

Rank	Regret and loss feeling (from 5 to less than 10)	Value	Good sweet memories (from 25 to less than 30)	Value	Love, pride, will to children (from 30 to less than 35)	Value
1	I pray to God.	3.1	I lived a good life.	2.3	I remembered good memories.	0.4
2	I can't do anything.	2.5	I loved sports.	1.7	I loved everyone.	0.4
3	I have regrets.	1.8	I had a girlfriend in Korea.	1.7	My proudest achievement is what I have done.	0.4
4	I lead a chaste life for my wife.	1.8	I married later in my life.	1.7	My most impressive memory is what I am experiencing now.	0.4
5	My role of raising children was over.	1.8	I have nothing to regret.	1.7	My most impressive memory is marriage.	0.4
6	My children became adults.	1.8	My children became adults.	1.7	I played sports when I was young.	0.4
7	I want my family to understand me.	1.8	I could not become what I wanted to be.	1.7	I want my children to be faithful to their hearts.	0.4
8	I want my family to be friendly.	1.8	The turning point for me was to enter college.	1.7	I want my children to be friendly.	0.4
9	Someday	0.9	I could walk a month ago.	0.8	The important thing is to love a person.	0.4
10	I have stopped smoking for 20 years.	0.9	I have stopped smoking for 20 years.	0.8	The important thing is the spirit of God.	0.4

or legacy may be important in Western cultures and that Dignity Therapy may be effective among these populations (Chochinov et al., 2005). Few Japanese patients mentioned their legacies for their children in the present study. Thus, we can now present a new variation on the Short-Term Life Review, one that is tailored to cultural differences (Table 5).

Although it is very difficult for different kinds of professional researchers to implement the same research protocols within the same limited time

periods, the first limitation of this research was the small number of participants from the United States. As a result of this fact, the range of FACIT-Sp scores among American participants was quite narrow, and we wonder if there are other concerns with ranking of FACIT-Sp scores. The second limitation of this study was the lack of a control group. However, despite these limitations, the present study seems very important in clarifying differences in the primary concerns through international comparison.

Table 5. A sample of program (question items) of the Short-Term Life Review that is tailored to each country

	For Japanese	For Korean	For American
Common	1. The most important thing 2. The most impressive memory 3. The turning point and influential event 4. The most important role 5. The most proudest achievement 6. What you want to make others know 7. What you want to tell to the important persons 8. The most representative word in your life	1. The most important thing 2. The most impressive memory 3. The turning point and influential event 4. The most important role 5. The most proudest achievement 6. What you want to make others know 7. What patients want to tell to the important persons 8. The most representative word in your life	1. The most important thing 2. The most impressive memory 3. The turning point and influential event 4. The most important role 5. The most proudest achievement 6. What you want to make others know 7. What patients want to tell to the important persons 8. The most representative word in your life
Characteristic	9. Human relationships with family 10. Achievements and satisfaction 11. Good memories with important persons	9. Religious life 10. Right behavior for living 11. Strong consideration for children and will	9. Love, pride, will to children 10. Good sweet memories

ACKNOWLEDGMENT

A grant was provided by the Phyzer Health Research Foundation.

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Other modalities of care

Adjuvant analgesics: A wide range of adjuvant analgesics is available. Expensive agents such as pregabalin are available only after trials of less expensive options.

Radiotherapy: There is a great appreciation of the role of radiotherapy in cancer pain treatment. Patients generally have rapid access to high-quality services.

Invasive techniques: Israel has a very well-developed network of clinicians with expertise in invasive techniques. Radiofrequency with guided imaging is widely available. The application of approaches involving spinal infusions is limited by the availability of home care services skilled in the ongoing management of patients with spinal infusion devices.

Psychological services: In some centres, excellent psychological services are developed to assist in the care of patients with pain.

Patients with difficult pain problems

Reference centres with a high level of expertise exist in all regions of the country. Patients may be referred for expert evaluation and, if need be, inpatient stabilization.

In cases of truly refractory pain in patients at the end of life, there are no regulatory barriers to the use of palliative sedation. Hospitals and home care services are encouraged to develop procedural guidelines and some have already done so.

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Cancer pain – progress and ongoing issues in Japan

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Cancer has been a leading cause of death in Japan since 1981, accounting for 30.4% of total deaths in 2006 (1). A systematic approach for treatment of cancer pain and development of a health care system for specialized palliative care services has been progressing rapidly since 1990. The Cancer Control Act was established in 2006 to promote cancer prevention and early detection, disseminate quality palliative care, and promote cancer research (2).

Palliative care units (PCUs) provide care for 6% of all cancer deaths, whereas palliative care teams (PCTs) have been providing inpatient consultation services since 2002 in general wards, in which 91% of cancer deaths occur (3). Formerly, only patients in the terminal stage of cancer were approved for admission to PCUs; however, the criteria were revised in 2007 to include all patients with a cancer diagnosis with a considerable level of suffering. This was based on a nationwide survey, in which one-half of patients and families reported that referral to a PCU occurred too late. Eighty-five per cent of patients experienced distressing symptoms before admission to a PCU (4,5). Currently, all 353 regional cancer centres are obliged to establish PCTs, and

further administrative data will be reported within the next several years (6). PCTs typically consist of physicians, nurses certified in oncology, palliative care or pain, psychiatrists, medical or radiation oncologists, anesthesiologists and pharmacists; social workers are not mandatory. The first-year audit of PCTs in one of the acute care hospitals revealed marked effectiveness in management of severe pain within one week of intervention. The most common interventions implemented were nonsteroidal anti-inflammatory drugs, opioid agonists, corticosteroids and antiemetics. A small number of patients underwent nerve blocks performed by anesthesiologists (7).

There have been a number of specialized certificate courses for comprehensive nursing care, including oncology, palliative care and pain management; however, no established and accredited residency or fellowship training programs in palliative care are available yet. Undergraduate educational programs vary throughout the 80 medical schools.

CHARACTERISTIC FEATURES IN CANCER PAIN MANAGEMENT IN JAPAN

Strategic approach in cancer pain management – clinical practice guidelines

The approach for cancer pain control has been one of the priorities throughout the development of palliative care. A survey conducted in major cancer centres in 1986 revealed that only 38% of pain was controlled, which marginally improved to 57% in 1998 (8,9). Evidence-based guidelines for cancer pain management were established as a part of the Japanese Palliative Medicine project in 1999, which were further tested on 314 consecutive cancer patients admitted to 37 national hospitals. The postguidelines implementation group showed significantly more achievement of freedom from pain in two weeks compared with the preguidelines treatment group (14.7% versus 8.8%). Significantly fewer adverse reactions, especially constipation and drowsiness, were found in the post-guidelines group (10). The guidelines are currently under revision to include new evidence and new pharmacological options, and will appear at the end of 2010.

Availability of opioids

As of March 2009, Japan limits the availability of types of opioid agonists in cancer pain control to morphine, fentanyl, codeine, dihydrocodone and oxycodone (which only became available in 2005). Hydromorphone and methadone (which may be advantageous due to its higher analgesic potency, especially in patients requiring higher doses of opioid agonists) are not available. Although opioid consumption per capita has been increasing dramatically since the 1990s, the average consumption per capita has not reached the world average. In 2006, compared with Canada, mean morphine consumption per capita was 3.5 mg versus 65 mg; mean oxycodone consumption per capita was 1.9 mg versus 115 mg. Canadian figures include opioid agonists prescribed for noncancer pain (11).

The role of neural blocks and adjuvant analgesics in difficult pain syndromes

A multicentre audit survey was performed and a total of 162 interventions in 136 consecutive patients (3.8% of all patients) were examined to clarify the frequency of neural blockade in certified PCUs and PCTs, determine the efficacy of