INTRODUCTION

Cancer is recognized as a disease that influences all the family members (Rait & Lederberg, 1990; Saeki et al., 2000), and psychological distress of cancer patients' family members is considered to be equal to that of cancer patients themselves in Western countries (Kissane et al., 1994; Plumb & Holland, 1977). Previous studies using self-report questionnaires have reported that probable cases of clinical psychological distress were 20%–30% (Pitceathly & Maguire, 2003). The few studies using psychiatric interviews have found that approximately 10%–50% of family members experience some form of psychiatric morbidity (Sharan et al., 1999; Pitceathly & Maguire, 2003).

Psychological distress of cancer patients' family members is treated by psychiatric consultation service for outpatients at National Cancer Center Hospitals in Japan. We recently reported on psychiatric disorders among cancer patients' family members of the National Cancer Center Hospital East in Japan and showed that very few family members were provided with psychiatric consultation service (3% of total psychiatric consultations; Akechi et al., 2006). This result raises the possibility that psychological distress among family members may be underestimated; thus, the development of an efficient consultation service for cancer patients' family members is an urgent issue in Japan. Therefore, we need to examine the psychiatric consultation data of two National Cancer Center Hospitals to improve the institutional bias regarding psychiatric disorders and background characteristics in family members noted in our previous study (Akechi et al., 2006).

The clinical characteristics of cancer patients are important factors that influence the psychological distress of family members. For example, physical characteristics such as pain (Miaskowski et al., 1997), vomiting or delirium (Prigerson et al., 2003), and advanced disease status (Kurtz et al., 1994; Weitzner et al., 1999) were associated with psychological distress in family members. Furthermore, psychological distress in cancer patients was positively associated with psychological distress in caregivers in a recent meta-analysis (Hodges et al., 2005). Thus, the clinical characteristics of cancerpatients can be regarded as important information concerning the psychological states of family members. In particular, clinical characteristics of cancer patients including those both medical and psychological provide useful information for health care professionals because they can be used to determine the timing of family members' psychiatric consultations. Therefore, we examined two clinical characteristics of cancer patients as the background characteristics of family members: "patient had received psychiatric consultation service" and "patient had delivered bad news" prior to their family members' referrals.

The purpose of this study was to identify psychiatric disorders and explore background characteristics of cancer patients' family members referred to a psychiatric consultation service, so that we could better understand current utilization of this psychiatric consultation service for cancer patients' family members.

METHODS

Psychiatric Consultation Service at National Cancer Center Hospitals

As of January 2004, the National Cancer Center Hospital had 600 beds and staff members of the Psychiatry Service were one staff psychiatrist as outpatient clinician, one part-time adjunct psychiatrist, one part-time clinical psychologist, and one psychiatric clinical nurse specialist. The National Cancer Center Hospital East has 425 beds and staff members of the Psychiatry Service were two staff psychiatrists and three part-time psychiatrists as outpatient clinicians, one part-time adjunct psychiatrist, and one clinical psychologist.

Both Psychiatry Services provide two main services, one for outpatients and one for inpatients who were referred from physicians belonging to other divisions who are responsible for cancer patients. Psychological distress of cancer patients' family members is treated by psychiatric consultation service for outpatients at National Cancer Center Hospitals in Japan, and health care professionals pay attention to psychological distress of cancer patients' family members and recommend the use of the psychiatric consultation service, if necessary.

Furthermore, both Psychiatry Services share the psychiatric consultation database records, and information was input into the database by psychiatrists after they had conducted patient examinations. This computerized database (Akechi et al., 2001a) included demographic variables such as age, gender, marital status, and employment status as well as psychiatric diagnosis. The psychiatric disorders were diagnosed at the time of the family member's initial visit according to the *Diagnostic and Statistical*

Manual of Mental Disorders, 4th edition (DSM-IV). Each psychiatry division is independent; however, a case conference is held weekly to have consistency in psychiatric diagnosis and treatment.

Subjects and Procedure

First, we reviewed the psychiatric consultation database records of the Psychiatry Services of the National Cancer Center Hospital and the National Cancer Center Hospital East for the period from January 2000 to December 2004 to obtain characteristics of outpatients and background characteristics of family members who were referred to the Psychiatry Service. Family members were defined as first-degree relatives (spouse, parents, children, siblings) of cancer patients. Background characteristics of family members such as age, gender, marital status, employment status, and psychiatric diagnosis were obtained from psychiatric consultation database records.

Then, we examined family members' medical charts to identify other background characteristics such as their relationship to the cancer patient and history of psychiatric disorder.

Finally, we examined the overall computerized patient database of National Cancer Center Hospital and National Cancer Center Hospital East and the patients' medical charts to identify cancer patients whose family members had been referred to the Psychiatry Service. Thereafter, we reviewed the patients' medical charts to obtain clinical characteristics such as patient cancer site, patient setting, patient had received psychiatric consultation service prior to their family referrals (presence or absence, date, psychiatric disorders), and patient had delivered bad news prior to their family referrals (presence or absence, date, the type of information). Four types of bad news were categorized according to the main type of information given to the cancer patient: initial cancer diagnosis, treatment failure or disease progression, transition to palliative care, and poor prognosis or limited life expectancy.

Informed consent and the approval of our institutional review board were not obtained because this was a retrospective study using clinical practice data.

RESULTS

Characteristics of Patients Who Were Referred to a Psychiatric Consultation Service

Of a total of 4992 psychiatric consultation services, 1436 (29%) were for outpatients. Among psychiatric consultation services for outpatients, 1273 (26%) were for cancer patients, 118 (2%) were for family members, and 45 (1%) were for medical staff members at two National Cancer Center Hospitals. The proportion of family members who were referred to psychiatry as outpatients were 2% ($n = 56$) of the total of 3064 consultations at the National Cancer Center Hospital and 3% ($n = 62$) of the total of 1928 consultations at the National Cancer Center Hospital East.

Background Characteristics of Family Members Who Were Referred to a Psychiatric Consultation Service

We identified the most frequent background characteristics of the family members who were referred to each Psychiatry Service at two National Cancer Center Hospitals as shown in Table 1: female ($n = 101$, 86%), spouse ($n = 87$, 74%), married ($n = 92$, 78%), and housewife ($n = 63$, 53%).

Among background characteristics of family members, the most common patient cancer site was the lung ($n = 18$, 15%), followed by the stomach ($n = 12$, 10%). Many of the cancer patients were hospitalized at the time of their family members' referral ($n = 75$, 64%), and a few of them had died ($n = 9$, 8%).

Thirty-four percent ($n = 40$) had received psychiatric consultation service for cancer patients prior to their family members' referrals. The most common psychiatric disorder among cancer patients was adjustment disorders ($n = 13$, 11%), the second was major depression and no diagnosis ($n = 7$, 6%), and the third was delirium ($n = 6$, 5%) The period from patients' psychiatric consultation to family members' referrals ranged from 0 to 896 days (mean ± SD: 75 ± 149, median: 16).

Fifty-five percent of cancer patients ($n = 65$) had delivered bad news for patients prior to their family members' referrals. The types of bad news were initial cancer diagnosis ($n = 19$, 16%), treatment failure or disease progression ($n = 13$, 11%), transition to palliative care ($n = 9$, 8%), and poor prognosis or limited life expectancy ($n = 24$, 20%). The period from patients' delivery of bad news to family members' referrals ranged from 0 to 427 days (mean ± SD: 31 ± 63, median: 12).

Psychiatric Disorders of Family Members Who Were Referred to a Psychiatric Consultation Service

The most common psychiatric disorders among cancer patients' family members were adjustment disorders ($n = 69$, 58%: with anxiety, $n = 21$; with depressed mood, $n = 12$; with mixed anxiety and depressed mood, $n = 35$; and with mixed disturbance of emotions and conduct, $n = 1$), followed by major depression ($n = 30$, 25%) as shown in Table 2. The

Table 1. *Background characteristics of family members who were referred to psychiatric consultation service*

	Total (n=118)		NCCH (n=56)		NCCHE (n=62)	
	n	(%)	n	(%)	n	(%)
Age (years)						
Mean ± SD	51 ± 13		49 ± 13		52 ± 13	
Range	20–79		26–74		20–79	
Gender						
Male	17	(14)	7	(13)	10	(16)
Female	101	(86)	49	(88)	52	(84)
Relationship to patient						
Spouse	87	(74)	34	(61)	53	(85)
Parent	16	(14)	12	(21)	4	(6)
Children	13	(11)	9	(16)	4	(6)
Sibling	2	(2)	1	(2)	1	(2)
Marital status						
Married	92	(78)	41	(73)	51	(82)
Unmarried	11	(9)	8	(14)	3	(5)
Divorced	1	(1)	1	(2)	0	0
Widowed	14	(12)	6	(11)	8	(13)
Employment status						
Full time	29	(25)	15	(27)	14	(23)
Part time	15	(13)	6	(11)	9	(15)
Housewife	63	(53)	29	(52)	34	(55)
Retired	5	(4)	1	(2)	4	(6)
History of any psychiatric disorder						
Presence	14	(12)	9	(16)	5	(8)
Absence	104	(88)	47	(84)	57	(92)
Patient cancer site						
Lung	18	(15)	6	(11)	12	(19)
Stomach	12	(10)	7	(13)	5	(8)
Colon	8	(7)	4	(7)	4	(6)
Esophagus	8	(7)	3	(5)	5	(8)
Breast	6	(5)	1	(2)	5	(8)
Head and neck	7	(6)	1	(2)	6	(10)
Leukemia	6	(5)	2	(4)	4	(6)
Others	41	(35)	28	(50)	13	(21)
Patient setting						
Inpatient	75	(64)	40	(71)	35	(56)
Outpatient	22	(19)	9	(16)	13	(21)
Deceased	9	(8)	3	(5)	6	(10)
Patient had received psychiatric consultation service						
Presence	40	(34)	25	(45)	15	(24)
Absence	66	(56)	27	(48)	39	(63)
Patient had delivered bad news						
Presence	65	(55)	44	(79)	21	(34)
Absence	41	(35)	8	(14)	33	(53)

Some percentages do not add up to 100% because of missing data. NCCH: National Cancer Center Hospital. NCCHE: National Cancer Center Hospital East.

National Cancer Center Hospital had a higher proportion of adjustment disorders (73% vs. 45%) and lower proportion of major depression (14% vs. 35%) than the National Cancer Center Hospital East.

Table 2. *Psychiatric disorders of family members who were referred to psychiatric consultation service*

	Total (n=118)		NCCH (n=56)		NCCHE (n=62)	
	n	(%)	n	(%)	n	(%)
Adjustment disorders	69	(58)	41	(73)	28	(45)
Major depression	30	(25)	8	(14)	22	(35)
No diagnosis	9	(8)	1	(2)	8	(13)
Others	10	(8)	6	(11)	4	(6)

NCCH: National Cancer Center Hospital. NCCHE: National Cancer Center Hospital East.

DISCUSSION

In this study, we found that very few family members were provided with psychiatric consultation service at two National Cancer Center Hospitals (2% of total psychiatric consultation services). Considering psychological distress of cancer patients' family members is equal to that of cancer patients, this result shows the possibility that psychological distress among family members may be underestimated or psychiatric consultation services for family members might not be working enough. A recent study using consecutive sampling in the United States showed only 15% of caregivers with psychiatric disorders accessed a mental health professional (Vanderwerker et al., 2005), though cancer patients' family members are considered as "second order patients" (Rait & Lederberg, 1990). In addition, Japanese cancer patients' family members often devote more time to their role as caregiver (Long & Long, 1982), so this feature of Japanese people may prohibit the utilization of psychiatric consultation services. Cancer center hospitals have the advantage of being able to provide psychiatric treatment for family members at the same hospital at which the cancer patient is being treated, so the dissemination of psychiatric consultation services for family members is desirable.

More than half of family members who were referred to psychiatric consultation services suffered from adjustment disorders in this study; adjustment disorders are suggested to be the most common psychiatric disorders among cancer patients' family members. Recent study in the United States indicated that a total of 13% of the caregivers of advanced cancer patient had met criteria for psychiatric disorder; however, this study did not assess adjustment disorders (Vanderwerker et al., 2005). A future study using consecutive sampling of cancer patients' family members is needed to identify the prevalence of psychiatric disorders, including adjustment disorders.

Women, spouses, and housewives were the relatively common background characteristics of the

family members who were referred to psychiatric consultation services at both National Cancer Center Hospitals. A previous review study demonstrated that female primary caregivers had high levels of psychiatric morbidity attributable to caregiving: women spend more time on caregiving, report higher levels of caregiver burden and role strain, and are less likely to obtain informal support for caregiving (Yee & Schulz, 2000). Female spouses of cancer patients' may experience high level of psychological distress. However, the clinical setting for our psychiatric consultation service (during the daytime on weekdays) may have prevented male full-time workers from using this service.

Lung and stomach were the most common cancer sites among the patients; this result is consistent with the most common causes of death among men (Ministry of Health, Labour and Welfare, 2004), reflecting the high proportion of female spouses referred for psychiatric consultation in this study. Many of the patients whose family members were referred were hospitalized. Recent studies report that spousal hospitalization for cancer was associated with an increased risk of death among elderly people (Christakis & Allison, 2006), so careful attention to psychological distress and the appropriate recommendation for psychiatric consultation services for spousal caregivers of inpatients by health care professionals may be a strategy for early treatment of psychological distress among family members.

Among clinical characteristics of cancer patients whose family members were referred, 34% of the cancer patients had already received psychiatric consultation services because of psychological distress prior to their family members' referrals. The likelihood of a family member being recommended for outpatient consultation may increase if the cancer patient has already been referred for inpatient consultation, because such a situation increases the accessibility of the members of our psychiatric service to the family members. In addition, family members may be more likely to consult the psychiatric service on their own behalf if the cancer patient has already received consultation. Most family members did not know that psychiatric consultation service is available for cancer patients' family members as well as cancer patients when members of the Psychiatry Service recommend family members to consult, so dissemination of this information is also necessary. The proportions of psychiatric disorders among cancer patients whose family members were referred to psychiatric consultations were nearly equal to those for overall patient consultations (Akechi et al., 2001a), suggesting that no particular psychiatric disorder experienced by cancer patients leads to the need for psychiatric consultation service for family members.

In addition, 55% of the cancer patients had delivered bad news prior to their family member's referral and the types of bad news ranged from diagnosis to prognosis. Regardless of the content, having delivered bad news regarding cancer is a stressful life event for cancer patients, so this event might lead family members to psychological distress. Moreover, Japanese cultural background of delivering bad news and decision making after delivering bad news might be associated with family psychological distress: Information about cancer prognosis and treatment plans are usually given to the families before being given to the patient in Japan (Hattori et al., 1991; Ministry of Health and Welfare, 1994) and family opinions are accorded a larger role by a Japanese patient in decision making (Saeki et al., 2000). So further studies are needed to clarify the association between psychological distress of family members and these events: "patient had received psychiatric consultation service" and "patient had delivered bad news."

This study has several limitations. First, we were only able to examine families who used the psychiatric consultation service. So we could not discuss the association between family members' background characteristics and psychological distress because accessibility to this psychiatric consultation service may influence the results. Second, this study has some methodological limitations because of its retrospective study design: We could not identify all the cancer patients whose families were referred to psychiatric consultation service nor could we identify other characteristics such as actual triggers for family members' psychiatric consultations.

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Absence status associated with focal activity and polydipsia-induced hyponatremia

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Abstract: We report a case of de novo absence status associated with focal discharge and polydipsia-induced hyponatremia. Nonconvulsive status epilepticus (NCSE) is classified as absence status or complex partial status. Absence status is characterized by bilateral synchronized spike and wave complex bursts and a variety of conscious disturbances. Possible precipitating factors for NCSE include benzodiazepine withdrawal, excessive use of psychotropic drugs, and electrolyte imbalances. Hyponatremia is a rare precipitating factor. In this case, the patient was 59 years old and had suffered from primary insomnia but had no history of epilepsy. NCSE improved by means of saline infusion. However after recovery from NCSE EEG revealed some spikes in the left frontal area. Absence seizures can also show generalized spike and slow waves, and cases of focal lesion-associated absence seizures have been reported. Although absence seizures and absence status are two distinct conditions, they should not be considered together. We assumed that hyponatremia induced by polydipsia precipitated epileptogenicity in the left frontal area, and then focal activity secondarily generalized and resulted in absence status.

Keywords: nonconvulsive status epilepticus, absence status, focal activity, hyponatremia

Introduction

Nonconvulsive status epilepticus (NCSE) can be classified as absence status or complex partial status. Absence status is characterized by bilateral synchronized spike and wave complex bursts and a variety of conscious disturbances (Niedermeyer and Ribeiro 2000). Possible precipitating factors for NCSE include benzodiazepine withdrawal, excessive use of the psychotropic drugs, and electrolyte imbalances. Hyponatremia is a rare precipitating factor (Lee 1985; Thomas et al 1992; Tomson et al 1992). The standard treatment for polydipsia-induced hyponatremia is intravenous saline solution. Primavera et al reported that a case of NCSE resulting from hyponatremia, was improved with saline solution treatment (Primavera et al 1995).

Absence seizures are also characterized by generalized spike and slow wave complexes, and cases with focal lesion-associated absences have been reported (Millan et al 2001). However, absence seizure and absence status are distinct conditions that should be considered separately. Interestingly, we observed a case of de novo absence status associated with a region of focal brain activity, suspected of being an epileptogenic zone and hyponatremia caused by polydipsia.

Case report

Since X-2 year, a 57-year-old man had been treated for primary insomnia at a psychiatric clinic, and psychotropics were administered. He had developed the habit of drinking large amounts of water, about 2–3 liters per day at that time. His psychiatric and physical history was of no particular significance. He had no family history of seizure disorder, and no history of hypertension, diabetes, perinatal difficulty, stroke, or trauma.

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In April of X year, the patient began vomiting and could not say his own name, address, or the date. The next day he and his family presented at our psychiatric clinic. At first examination he showed poor orientation, memory disturbances, a decrease in spontaneous speech, bradykinesia, confusion, and was suspected to have a subacute consciousness disturbance. He was admitted to our psychiatric ward for further examination on that day. On admission he had taken etizolam 2 mg, sulpiride 150 mg, promethazine 12.5 mg, chlorpromazine 12.5 mg, and phenobarbital 15 mg. Head computed tomography showed only lacunars at the left basal ganglia. Electrolyte analysis revealed hyponatremia (118 mEq/L)(138–146), urine osmolarity 369 mOsm/kg (50–1300), urine sodium 0.85 g/day (4–6), serum osmolarity 268 mOsm/kg (275–290), and antidiuretic hormone (ADH) was 8.4 pg/mL (0.3–3.5), and we suspected the syndrome of inappropriate secretion of antidiuretic hormone (SIADH). No potential cardiac, hepatic, renal causes or paraneoplastic syndrome were detected. Electroencephalogram (EEG) was recorded by the usual routine settings for about one hour. EEG revealed bilateral spike and slow wave complexes during the recording on admission (Figure 1A). We treated the patient with 1000–1500 mL/day saline infusion and intravenous 5 mg of diazepam, slowly injected without EEG recording; his consciousness improved temporarily, but became disturbed again. The next day his serum sodium improved to 133 mEq/L. We confirmed irregular spike and

slow wave complexes, and during drowsy and light sleep some focal spikes in the left anterior area (Figure 1B). On the third day, the spike and slow wave complexes disappeared. His conscious disturbance improved, as shown in EEG changes. After he recovered from disturbed consciousness, he had amnesia and could not remember anything from one to two days before his admission. Magnetic resonance imaging (MRI) showed small lacunars in the left basal ganglia and slight atrophy in the left temporal area. Single photon emission tomography (SPECT) during the interictal period showed an area of hypoperfusion in the left frontal and anterior-temporal area. Neuropsychological examination showed that Mini-Mental Status Examination and Raven Colored Progressive Matrices were 27/30 and 24/36, respectively, when the patient was alert. After admission we suspected drug-induced polydipsia, and stopped other medications apart from benzodiazepine, brotizolam 0.25 mg, and flunitrazepam 1 mg for his insomnia. Thereafter, however, the patient often suffered from insomnia and had further difficulty controlling the polydipsia. Two weeks after admission, serum sodium, ADH, and serum osmolarity were at normal levels. Therefore we diagnosed the patient as NCSE, as a result of polydipsia-induced hyponatremia. He was discharged in June X year.

The second episode occurred in August in X year. The patient vomited and had consciousness disturbance during the previous night. He came to our hospital by ambulance and was admitted in the early morning. On admission, serum
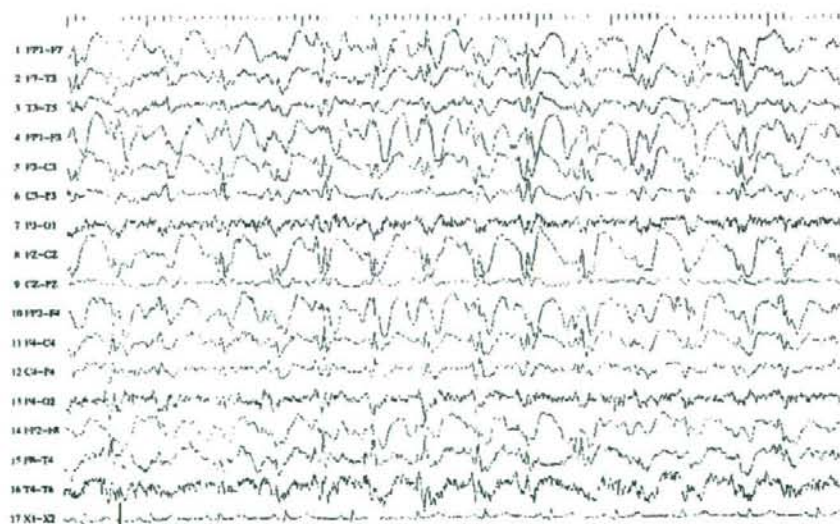

Figure 1A On the first day of the first episode, continuously spike and slow wave complexes were seen in frontal area. The patient consciousness was disturbed.

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sodium was 126 mEq/mL. We administered saline infusion 1500 mL/day. The next morning, the patient's serum sodium and consciousness had recovered. EEG revealed irregularly spike and slow wave complexes on the first day. But on the seventh day EEG revealed some spikes in the left anterior area. We did not use diazepam during this episode.

We considered that hyponatremia indirectly induced the onset of NCSE through the epiletpogenic zone in the left front-temporal area, and assumed that an anticonvulsant would be needed for NCSE. Thus we used phenytoin 200 mg after the second episode, and the patient has had no recurrence of seizures and episodes of hyponatremia for five years.

Discussion

We diagnosed this case as NSCE, specifically, classical de novo absence status (Niedermeyer and Ribeiro 2000). Our patient had two absence status episodes and improved with the administration of sodium. EEG revealed continuously bilateral spike and slow wave complexes in the frontal area in both episodes, and showed some spikes in the left frontal area after recovery from absence status. Researchers have reported that benzodiazepines are effective for treating the clinical manifestations and EEG paroxysmal activity associated with absence status (Niedermeyer and Ribeiro 2000). We used benzodiazepine in the first episode, but we

felt that correcting sodium levels was more clearly effective, because his consciousness disturbance was not clearly improved by diazepam in the first episode. Primavera and colleagues (1995) reported a case of de novo absence status with no focal signs in repeated episodes, which was treated effectively by correcting sodium levels.

Our case was de novo absence status showing continuously symmetrical frontal spike and slow wave complexes. After recovery from absence status, EEG showed some spikes in the left front-temporal area, MRI showed lacunar infarctions in the left basal ganglia, and SPECT showed hypoperfusion in the left anterior-frontal area. However, we clearly could not affirm the etiology of this region, for example, congenital or cryptogenic. We could not confirm that the onset of absence status started from this focal region, but suspected the left front-temporal region to be an epileptogenic zone. Kudo and colleagues (1995) reported that complex partial status mimicking absence status originates from the frontal area in unclassified NCSE. And Millan and colleagues (2001) reported cases of frontal localization of absence seizure. As a matter of course, absence seizure and absence status are distinct conditions that should not be considered together. However we considered that hyponatremia induced by polydipsia precipitated epileptogenicity in the left frontal area, and then focal activity secondarily generalized and resulted in absence status.
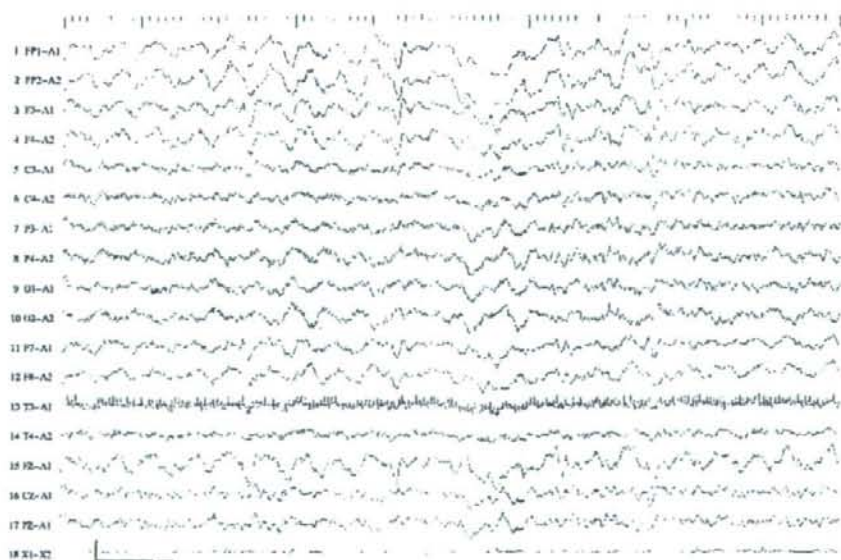

Figure1B On the second day of the first episode, some spikes were seen in left front-temporal area during drowsy state. The patient consciousness was almost normal.

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In conclusion, we reported a case of de novo absence status associated with two rare factors: a region of focal activity suspected of being an epileptogenic zone, and hyponatremia caused by polydipsia. In this case, the metabolic imbalance of hyponatremia, and the suspected left front-temporal epileptogenic zone, appeared to be involved in the onset of absence status. The answer to the controversy over the onset of NCSE awaits the elucidation of the origin of generalized spike and slow wave complexes.

Disclosure

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Original Articles

Patient-Perceived Barriers to the Psychological Care of Japanese Patients with Lung Cancer†

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Objective: Although cancer patients frequently experience psychological distress, few cancer patients with psychological distress receive appropriate psychological care. The purpose of this study was to investigate the type and frequency of barriers to receive psychological care in patients with lung cancer.

Methods: Randomly selected ambulatory patients with lung cancer participated in the study. A self-administered questionnaire developed for this study was used to assess patient-perceived barriers toward psychological care provided in a medical context. Factor analysis indicated that this scale mapped four domains; emotional communication with their physicians, psychiatric consultation, psychotropic medication and counseling. The patients' demographic factors and levels of past and current psychological distress were also assessed to reveal potential factors associated with patient-perceived barriers to psychological care.

Results: Complete data were available from 100 patients. The mean (SD) age of the patients was 65.4 (9.8) years; more than 80% were male, and 77% suffered from advanced stage lung cancer. Lack of correct information and/or misunderstanding of treatments was found to be a major barrier for all four treatment options in common. Negative opinions toward the use of psychotropics were more frequent than those toward counseling. Patients with severe psychological distress were significantly more likely to report a reluctance to undergo psychiatric consultation than those without psychological distress.

Conclusions: Lung cancer patients commonly experienced concerns to utilize psychological care. Encouragement from physicians to discuss emotional aspects and the provision of sufficient information regarding psychological care may be useful to alleviate such concerns. Medical staff should also be aware that severe psychological distress may itself be related to a reluctance to undergo psychiatric consultation.

Key words: cancer – barrier – psychosocial treatment – communication – quality-of-life

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INTRODUCTION

As a result of the life-threatening nature of cancer, cancer patients frequently experience psychological distress. Previous studies have indicated that ~10–40% of cancer patients suffer from psychological distress, including anxiety and depression. Moreover, psychological distress not only produces serious suffering, but also worsens quality-of-life,

reduces adherence with anti-cancer treatment, can lead to suicide, is a psychological burden on the family and prolongs hospitalization (1).

Since effective management strategies for lessening a patient's psychological distress, including psychotherapy and pharmacotherapy (2), are widely available, cancer patients should be provided adequate psychological treatment. Nevertheless, many cancer patients with psychological distress do not receive appropriate psychosocial care (3).

Health-care barriers, the stigmatization of mentally ill people and the social context of psychiatric treatment have been enumerated as possible reasons, why cancer patients do not seek appropriate mental treatment (4–7). We previously found that cancer patients had more difficulty than the lay public in recognizing depression in a vignette, and that tendency to favor non-standard depression treatments such as physical activity than standard treatment was common in both cancer patients and the lay public (8).

Despite the dire need for further systematic research to facilitate effective strategies for delivering appropriate psychological care to cancer patients, few studies have been performed to clarify barriers to receiving psychosocial care in a medical context. Here, we investigated the type and frequency of barriers to receiving psychological care in patients with lung cancer.

PATIENTS AND METHODS

Subjects

Patients with lung cancer were randomly recruited at the outpatient clinic of the Respiratory Medicine Division of the Tokai University Hospital, Japan, between May 2004 and March 2005. The eligibility criteria were (i) an age of 18 years or older, (ii) patient knowledge of the cancer diagnosis, (iii) sufficient physical condition to complete the questionnaires and participate in the study and (iv) no severe mental or cognitive disorders that would prevent the completion of the questionnaires.

Procedure

The study protocol was reviewed and approved by the Institutional Review Board and the Ethics Committee of the Tokai University Hospital, Japan. This study was conducted in accordance with the Helsinki Declaration. Written informed consent was obtained from each subject before enrollment into this study.

After the consent was obtained, the participants were asked to complete several self-reported questionnaires to evaluate patient-perceived barriers to psychological care and associated clinical factors described below.

Instruments

Patient-Perceived Barriers to Psychological Care Questionnaire

We developed a 28-item *ad hoc* questionnaire to assess patient-perceived barriers to receiving psychological care in a medical context for the use in the current study because no appropriate instrument was available to evaluate the barriers of cancer patients to receiving psychosocial treatment. First, we developed a tentative 25-item questionnaire by conducting systematical review of existing studies that investigated psychiatric disorders, especially depression, and the associated barriers to patient care. Then, we conducted in-depth interviews with 10 cancer patients to evaluate and discuss the appropriateness of the questionnaire. As a result, 11 items were added to the questionnaire, and 36-item Patient-perceived Barriers to Psychological Care Questionnaire (BPCQ) was developed. Each item was rated using a five-point Likert scale [1 (do not agree at all) to 5 (agree very much)]. Higher scores indicated stronger patient-perceived barriers. Subsequently, we conducted a factor analysis to investigate the factor validity of the questionnaire. The number of factors was determined to be four using a scree plot. The results of a principal component factor analysis are shown in Table 1. Items that did not have a factor loading above 0.4 for any of the factors were deleted from the model. The four domains of patient-perceived barriers were as follows: (i) emotional communication with physicians (eight items; possible score ranging from 8 to 40), (ii) psychiatric consultation (nine items; possible score ranging from 9 to 45), (iii) use of psychotropic medicine (six items; possible score ranging from 6 to 35) and (iv) counseling (five items; possible score ranging from 5 to 25). The stress and RSQ values obtained in a multi-dimensional scaling analysis were 0.18 and 0.83, respectively. The Pearson's correlation coefficients among the subscales of the BPCQ were calculated to examine the construct validity of the BPCQ. The correlation coefficients between the counseling subscale and the psychiatric consultation subscale and between the counseling subscale and the psychotropic medicine subscale were greater than 0.40. The Cronbach's Alpha coefficients for each of the four domains indicated a good reliability (0.77 for emotional communication with physicians, 0.85 for psychiatric consultation, 0.86 for use of psychotropic medicine and 0.83 for counseling). These results confirmed the validity of this scale.

We previously conceptualized concerns about emotional disclosure to their physicians among cancer patients focusing on items regarding emotional communication with physicians in the current BPCQ dataset, and reported elsewhere (9). In the current study, we attempted to re-examine this issue in the context of whole psychological care provided in a medical setting. Since the purpose and the concepts were quite different, we took different statistical approach, and therefore, dealt with independent study from the previous published study.

Table 1. Factor loading matrix using principal component analysis with promax rotation ($N = 100$)

Item	Factors and item factor loadings			
	1	2	3	4
I feel concerned about what others would think of me if I visited the psychiatric clinic.	0.835	0.154	−0.026	−0.128
I am afraid that people will treat me unfairly if I visit the psychiatric clinic.	0.787	−0.014	−0.057	−0.003
My family is discouraging me from visiting the psychiatric clinic.	0.751	−0.032	0.050	−0.163
I feel hesitant about visiting the psychiatric clinic because I am not sure what the clinic can actually do for me.	0.629	0.344	−0.210	0.014
I wonder if I really need to visit the psychiatric clinic.	0.491	0.265	−0.224	0.109
I hesitate to visit the psychiatric clinic because I have a bad image of the clinic.	0.472	0.241	0.137	−0.035
My pride will be wounded if I have to visit the psychiatric clinic.	0.468	−0.205	0.287	0.079
I would feel that I am mentally weak if have to visit the psychiatric clinic.	0.458	−0.313	0.307	0.169
If I describe my emotional distress to the attending physicians, they will conclude that I cannot tolerate my cancer treatment.	0.427	−0.221	0.359	0.084
I have no intention of notifying the attending physicians about my emotional distress.	0.386	−0.043	0.168	0.181
I feel guilty using medicines that act on the mind	0.353	0.231	0.257	0.219
My relation with the attending physicians will deteriorate if I discuss my emotional distress with them.	0.334	−0.151	0.320	0.180
I feel concerned about the side effects of medicines that act on the mind.	0.126	0.792	0.034	−0.135
I don't want to take any medicines that supposedly affect the mind (narcoleptics, tranquilizers, antidepressant, etc.).	−0.071	0.729	0.109	0.073
I feel concerned about the possibility of dependence and addiction if I have to take medicine that acts on the mind.	0.126	0.705	0.096	−0.084
I don't want to use any medicines that act on the mind because they are not a component of my primary treatment.	−0.292	0.621	0.323	0.250
I wonder if I really need to use medicines that act on the mind.	0.245	0.544	−0.190	0.123
I don't think that emotional distress can be resolved by taking medicines that act on the mind.	−0.187	0.527	0.291	0.286
I wonder if I really need to undergo mental therapy (counseling).	0.176	0.398	0.099	−0.103
In general, I dislike taking any medicines.	−0.166	0.376	0.083	0.155
I don't think mental therapy (counseling) is effective for relieving emotional distress.	−0.060	0.139	0.771	−0.110
I feel concerned about the side effects of mental therapy (counseling).	0.148	0.197	0.756	−0.403
In general, I do not like to speak about my emotions.	−0.082	0.072	0.691	0.003
Talking about my emotions to physicians will not alter any radical treatment.	−0.064	0.184	0.609	−0.044
I am shy of speaking about my emotions during mental therapy (counseling).	0.229	0.099	0.564	−0.017
I will not consult with my attending physicians regarding my emotional distress, because I would then burden them with dealing with my emotional distress as well.	0.043	0.035	0.339	0.128
I would prefer that my attending physicians spend their time treating my cancer, rather than reducing my emotional distress.	−0.039	−0.191	0.338	0.295
My family is discouraging me from taking medicines that act on the mind.	0.131	0.281	0.317	−0.028
None of the attending physicians have the time to discuss emotional distress.	0.128	0.132	−0.211	0.703
No attending physician has asked me about my emotional distress.	0.047	0.087	−0.250	0.700
I don't want to be indebted to the attending physicians for counseling me about my emotional distress.	0.114	−0.067	0.064	0.585
It is not the role of the attending physician to reduce a patient's emotional distress level.	−0.106	−0.092	0.153	0.508
Emotional distress cannot be relieved by counseling.	−0.167	0.011	0.067	0.453
I don't talk about my emotional distress with the attending physicians.	−0.037	0.053	0.270	0.446
Emotional burden cannot be relieved by medication.	−0.007	0.194	−0.209	0.418
The attending physicians are not interested in their patients' emotional distress.	0.201	0.005	0.217	0.405

The English version was made by simply translating the Japanese version directly to English, and a backward–forward translation was not performed. Factors 1, patient-perceived barriers to psychiatric consultation; 2, patient-perceived barriers to the use of psychotropic medicine; 3, patient-perceived barriers to counseling; 4, patient-perceived barriers to emotional communication with physicians.

To investigate factors associated with patient-perceived barriers to receiving care for psychological distress, the following factors were also evaluated.

HOSPITAL ANXIETY AND DEPRESSION SCALE

The Hospital Anxiety and Depression Scale (HADS) has been developed for the evaluation of anxiety and depression in medically ill patients and does not contain any questions regarding physical symptoms (10). The self-reported questionnaire consists of 14 items, and subjects are asked to rate how they felt during the previous week using a 4-point Likert scale. The HADS consists of an anxiety and depression subscale (0–21 points each), and the total score can range from 0 to 42. Higher scores indicate more severe depression and anxiety. The Japanese version of the HADS has been validated in a cancer population (11).

MAJOR AND MINOR DEPRESSIVE EPISODES AFTER CANCER DIAGNOSIS

Whether a patient had experienced major or minor depressive episodes since receiving his or her cancer diagnosis was evaluated using the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID) section (12). A diagnosis of major depression was made when a patient had exhibited five (or more) of the following symptoms during the same 2-week period and when the symptoms represented a change from previous functioning; at least one of the symptoms was required to be either a depressed mood or a loss of interest or pleasure in nearly all activities: (i) depressed mood, (ii) loss of interest or pleasure, (iii) significant weight loss or a decrease or increase in appetite, (iv) insomnia or hypersomnia, (v) psychomotor agitation or retardation, (vi) fatigue or loss of energy, (vii) feelings of worthlessness or excessive or inappropriate guilt, (viii) diminished ability to think or concentrate or indecisiveness, (ix) recurrent thoughts of death, recurrent suicidal ideation or attempted suicide. A diagnosis of minor depression was made when a patient had (i) or (ii) and a total of four or less of the aforementioned symptoms.

The SCID was conducted by the primary researcher (C.E.). The agreement between the primary researcher and a trained psychiatrist (T.O.) was sufficient. The kappa coefficients were 0.91 for major depression and 0.78 for minor depression.

DEMOGRAPHIC AND MEDICAL INFORMATION

Demographic factors such as the patients' age, sex, education level, employment status, marital status and household size were obtained in a structured interview. The patients' medical charts were accessed to obtain medical information, including the date of cancer diagnosis, clinical stage, performance status (as defined by the Eastern Cooperative Oncology Group criteria) and past and current cancer treatments (operation for cancer, chemotherapy, radiotherapy and others).

STATISTICAL ANALYSIS

An unpaired *t*-test and Pearson's correlation analyses were conducted to investigate the association between bio-medical and psychosocial factors and patient-perceived barriers in the four domains, as appropriate. To identify the final associated factors, variables having a *P* value of less than 0.05 in the univariate analyses were entered into a multiple regression model. A *P* value of less than 0.05 was adopted as the significance level for all of the statistical analyses, and all the reported *P* values were two-tailed. All statistical procedures were performed using the SPSS statistical software program for Windows (version 12.0, SPSS Inc., Chicago, IL, USA).

RESULTS

PATIENT CHARACTERISTICS

Among 119 lung cancer patients recruited, 15 were ineligible (physically too ill, 5; cognitive disturbance, 5; other reasons, 5), and four patients refused to participate. Finally, 100 patients participated in the study (Table 2). The mean (SD) age of these patients was 65.4 (9.8) years; >80% were male, 79% were married and 70% had received more than 9 years of education. Seventy-seven percent of the patients suffered from advanced lung cancer, and >90% had ECOG (the Eastern Cooperative Oncology Group's Scale) performance status of 0 or 1. Twenty-four percent of the patients had experienced major and/or minor depression after receiving their cancer diagnoses.

FREQUENCY OF PATIENT-PERCEIVED BARRIERS TO PSYCHOLOGICAL CARE

The percentages of the patients, who endorsed each item on the BPCQ, are shown in Table 3. Each barrier was considered to be present when each item was rated as three or more on each Likert scale.

Among the items included in patient-perceived barriers to emotional communication with physicians subscale, 'Emotional burden cannot be relieved by medication.' was the most frequent (71%). The second most common barrier was 'No attending physician has asked me about my emotional distress' (55%). On the other hand, only 18% of the cancer patients agreed that 'The attending physicians are not interested in their patients' emotional distress'.

Regarding the patient-perceived barriers to psychiatric consultation items, 'I wonder if I really need to visit the psychiatric clinic' was the most common (47%). Forty-four percent of the cancer patients agreed with 'I feel hesitant about visiting the psychiatric clinic because I am not sure what the clinic can actually do for me'. Only 11% of the cancer patients indicated that 'My pride will be wounded if I have to visit the psychiatric clinic' and 'My family is discouraging me from visiting the psychiatric clinic'.

Table 2. Demographic and disease-related patient characteristics ($N = 100$)

	%
Age	
Mean ± SD	65.4 ± 9.8 years
Range	43–84 years
Sex	
Male	81
Female	19
Educational level	
Primary	5
Junior high school	25
High school	47
Junior college	4
Postgraduate	19
Family status	
Married	79
Widowed	11
Single	5
Divorced	4
Separated	1
Living status	
Not alone	87
Alone	13
Employment status	
Full-time	26
Part-time	1
Housewife	8
Retired	36
Retired (because of cancer)	16
Unemployed	11
Other	2
Disease stage	
I	6
II	8
IIIa	9
IIIb	27
IV	48
Recurrence	2
Histology	
Small cell	22
Non-small cell	78
PS (ECOG score)	
0	21
1	73
2	5
3	1

Continued

Table 2. *Continued*

	%
History of depression since cancer diagnosis	
Major depression	9
Minor depression	15

SD, standard deviation; PS, performance status; ECOG, the Eastern Cooperative Oncology Group's Scale.

Four of the six items in patient-perceived barriers to the use of psychotropic medicine subscale were endorsed by >50% of the subjects. These items were as follows: 'I wonder if I really need to use medicines that act on the mind' (56%); 'I feel concerned about the possibility of dependence and addiction if I have to take medicine that acts on the mind' (54%); 'I don't want to use any medicines that act on the mind because they are not a component of my primary treatment' (50%) and 'I feel concerned about the side effects of medicines that act on the mind' (50%).

With regard to the 'Patient-perceived barriers to counseling', the item 'In general, I do not like to speak about my emotions' was the most common (32%). Only 18% of the patients indicated that 'I am shy of speaking about my emotions during mental therapy (counseling)' and 17% of them agreed with 'I feel concerned about the side effects of mental therapy (counseling)'.

UNIVARIATE ANALYSIS

The results of the Pearson's correlations between the HADS total score and the four factors of the BPCQ are shown in Table 4. No significant associations were found between the four domains of the barriers and the possible factors, except for a significant negative correlation between the HADS total score and barriers to psychiatric consultation.

Correlations between the four factors of the BPCQ and the patient characteristics data are also shown in Table 4. Among these, only one significant association and the patient-perceived barriers to emotional communication with physicians were significantly more likely among male cancer patients.

Thus, a multiple regression analysis was not conducted.

DISCUSSION

To the best of our knowledge, this is the first study to clarify the actual types and frequencies of patient-perceived barriers to psychological care provided in a medical context among cancer patients.

Cancer patients often feel various constraints to emotional communication with their physicians, although emotional disclosure by the patients themselves is a primary source of information for assessing the degree of psychological distress in the patients. These results were

Table 3. Frequency of patient-perceived barriers to psychological care ($N = 100$)

	%[a]	Mean	SD
Barriers to emotional communication with physicians			
Emotional burden cannot be relieved by medication.	71	3.2	1.3
No attending physician has asked me about my emotional distress.	55	2.7	1.4
None of the attending physicians have the time to discuss emotional distress.	52	2.8	1.4
Emotional distress cannot be relieved by counseling.	49	2.5	1.2
I don't want to be indebted to the attending physicians for counseling me about my emotional distress.	41	2.3	1.2
It is not the role of the attending physician to reduce a patient's emotional distress level.	37	2.2	1.3
I don't talk about my emotional distress with the attending physicians.	35	2.1	1.2
The attending physicians are not interested in their patients' emotional distress.	18	1.6	0.9
Barriers to psychiatric consultation			
I wonder if I really need to visit the psychiatric clinic.	47	2.6	1.3
I feel hesitant about visiting the psychiatric clinic because I am not sure what the clinic can actually do for me.	44	2.4	1.3
I hesitate to visit the psychiatric clinic because I have a bad image of the clinic.	23	1.8	1.0
I feel concerned about what others would think of me if I visited the psychiatric clinic.	21	1.8	1.0
I am afraid that people will treat me unfairly if I visit the psychiatric clinic.	17	1.6	1.0
I would feel that I am mentally weak if have to visit the psychiatric clinic.	14	1.6	1.0
If I describe my emotional distress to the attending physicians, they will conclude that I cannot tolerate my cancer treatment.	13	1.4	0.8
My pride will be wounded if I have to visit the psychiatric clinic.	11	1.4	0.8
My family is discouraging me from visiting the psychiatric clinic.	11	1.5	0.9
Barriers to the use of psychotropic medicine			
I wonder if I really need to use medicines that act on the mind.	56	2.8	1.4
I feel concerned about the possibility of dependence and addiction if I have to take medicine that acts on the mind.	54	2.9	1.3
I don't want to use any medicines that act on the mind because they are not a component of my primary treatment.	50	2.7	1.4
I feel concerned about the side effects of medicines that act on the mind.	50	2.8	1.2
I don't want to take any medicines that supposedly affect the mind (narcoleptics, tranquilizers, antidepressant, etc.).	48	2.6	1.4
I don't think that emotional distress can be resolved by taking medicines that act on the mind.	47	2.7	1.4
Barriers to counseling			
In general, I do not like to speak about my emotions.	32	2.1	1.1
Talking about my emotions to physicians will not alter any radical treatment.	30	2.0	1.1
I don't think psychotherapy (counseling) is effective for relieving emotional distress.	27	2.0	1.2
I am shy of speaking about my emotions during psychotherapy (counseling).	18	1.8	1.0
I feel concerned about the side effects of psychotherapy (counseling).	17	1.7	1.0

[a]A cutoff of ≥ 3 on a 5-point Likert scale was defined as indicating the presence of the barrier.

consistent with previous findings that patients are unlikely to bother their physicians (13). A previous study reported that educating patients with regard to the importance of using a simple pain assessment instrument to report the pain to their physician was useful for enhancing communication regarding pain between patients and physicians (14). Similarly, interventions using simple materials to express emotional distress may be useful to overcome this type of barrier. The inability of patients to communicate their psychological distress with physicians may be one of the other important barriers. One possible strategy to overcome this barrier may be for oncologists to ask simple routine questions regarding the patient's emotional status. At any rate, physicians should offer their patients opportunities to talk about their patients' psychological distress as part of their regular clinical practice.

A stigma against psychiatry has been repeatedly recognized in primary care, oncology and other medical settings (15,16). However, our results indicated that a lack of information regarding psychiatric services was a more frequent concern than stigma-related barriers. The provision of appropriate information regarding psychological distress or other psychiatric disorders commonly experienced by cancer patients and the available psychiatric treatments

Table 4. Factors associated with barriers to receiving psychosocial care ($N = 100$)

Barrier	Emotional communication		Psychiatric consultation		Psychotropic medicine		Counseling	
	Coefficient	P value	Coefficient	P value	Coefficient	P value	Coefficient	P value
HADS-T[a,b]	0.10	0.34	0.22*	0.03	−0.08	0.44	0.06	0.54

Barrier	Mean	SD	t value	P value	Mean	SD	t value	P value	Mean	SD	t value	P value	Mean	SD	t value	P value
Age																
≥65 (n = 51)	2.5	0.7	−1.19	0.24	1.8	0.7	−0.19	0.85	2.8	1.0	−0.89	0.37	2.1	0.8	−1.58	0.12
65< (n = 49)	2.3	0.8			1.8	0.7			2.6	1.0			1.8	0.8		
Sex																
Male (n = 81)[b]	2.5	0.8	2.34*	0.02	1.8	0.7	−0.71	0.48	2.7	1.0	−0.26	0.80	1.9	0.8	−0.51	0.62
Female (n = 19)	2.1	0.7			1.9	0.8			2.8	1.1			2.0	0.8		
Education level																
≥High school (n = 77)	2.4	0.7	−1.28	0.20	1.8	0.7	0.48	0.64	2.8	1.0	0.43	0.67	1.9	0.9	0.60	0.55
High school <(n = 23)	2.6	0.8			1.7	0.6			2.7	1.2			1.8	0.7		
Family status																
Married (n = 79)	2.4	0.8	−0.07	0.94	1.8	0.7	−0.68	0.50	2.7	1.0	0.02	0.99	1.9	0.8	−0.20	0.85
Other (n = 21)	2.4	0.7			1.9	0.8			2.7	1.2			1.9	1.1		
Living status																
Together (n = 87)	2.4	0.8	0.55	0.58	1.8	0.7	−0.30	0.77	2.8	1.1	0.56	0.58	1.9	0.9	−0.00	1.00
Alone (n = 13)	2.3	0.6			1.8	0.8			2.6	1.0			1.9	0.7		
Employment status																
Full/part-time (n = 27)	2.5	0.8	0.69	0.50	1.8	0.8	0.63	0.53	2.8	1.1	0.17	0.86	1.7	0.7	−1.05	0.29
Other (n = 73)	2.4	0.8			1.7	0.7			2.7	1.0			1.9	0.9		
Disease stage																
I–IIIa (n = 23)	2.4	0.8	0.05	0.96	1.9	0.8	0.90	0.38	3.0	1.1	1.44	0.16	2.2	1.1	1.76	0.08
IIIb–Rec (n = 77)	2.4	0.8			1.7	0.7			2.7	1.0			1.8	0.7		
Type of lung cancer																
Small cell (n = 22)	2.4	0.6	0.18	0.86	1.7	0.8	−0.37	0.71	2.9	1.1	0.62	0.52	1.7	0.7	−1.29	0.20
Other (n = 78)	2.4	0.8			1.8	0.7			2.7	1.0			1.9	0.9		
PS (ECOG score)																
0 (n = 21)	2.5	0.9	0.59	0.56	2.0	1.0	1.00	0.33	2.7	1.2	−0.10	0.92	1.8	1.0	−0.27	0.78
1–3 (n = 79)	2.4	0.7			1.7	0.6			2.7	1.0			1.9	0.8		
History of depression since cancer diagnosis																
Major depression																
Present (n = 9)	2.4	0.7	0.17	0.86	1.6	0.5	0.83	0.41	2.1	1.0	1.98	0.05	1.4	0.6	1.80	0.08
Absent (n = 91)	2.4	0.8			1.8	0.7			2.8	1.0			1.9	0.8		
Major and minor depression																
Present (n = 24)	2.5	0.8	−0.71	0.48	1.9	0.7	−0.77	0.45	2.6	1.1	1.00	0.32	2.0	1.0	−0.79	0.43
Absent (n = 76)	2.4	0.8			1.7	0.7			2.8	1.0			1.9	0.8		

*Total score of the Hospital Anxiety and Depression Scale. [b]$P < 0.05$.

may be useful to mitigate patient-perceived barriers to psychosocial treatment.

Patient-perceived barriers to taking psychotropics included a lack of recognition regarding drug efficacy and concerns about dependence/addiction or adverse events. And barriers to pharmacotherapy were more prominent than those observed for other domains. As several papers have indicated that the provision of correct information on drugs can

improve stigmas arising from a misunderstanding of pharma-cotherapy (17–19), such interventions may be useful to resolve these barriers.

Patients reported barriers to counseling less frequently than those to pharmacotherapy, as consistent with the results of previous (4,20). The most frequently reported concern was a lack of knowledge regarding the indications for coun-seling. Recently, the importance of providing individualized care that meets the specific preferences or needs of each patient has been recognized (21,22). Provision and access to counseling services must be important when taking cancer patients' preference in the psychological care into account.

We found that the cancer patients with severe psychologi-cal distress were more reluctant to undergo psychiatric refer-ral. In fact, Shimizu et al. (3) reported that only 28% of cancer inpatients with depression, as identified by nurses using screening instruments, actually accepted psychiatric referral. This hesitation might arise from pessimistic thinking influenced by the depressive mood.

We identified a gender difference in reporting hesitation to emotional communication with physicians. According to previous studies, men are less likely to seek out emotional support from the medical staff than women (23), and women are more comfortable discussing their emotions than men (24). Since gender differences can influence communication between patients and physicians, physicians should pay attention to these differences.

The present study has several limitations. First, as we did not confirm the reproducibility of the BPCQ, the reliability of the BPCQ may be limited. Second, this was a single-institution study that only included Japanese patients with lung cancer. Thus, appropriate attention to these limitations must be given before generalizing the present findings to other populations.

Despite the limitations of this study, the current findings suggested that patient-perceived barriers to psychosocial treatment among cancer patients may be associated with a lack of correct information and/or misunderstanding. Better communication between patients and physicians may be one possible solution to overcoming these barriers. Further inves-tigation of patient-perceived barriers to psychological care among patients with cancers other than lung cancer is expected to yield additional valuable information.

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Conflict of interest statement

None declared.

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Adequacy of continuation and maintenance treatments for major depression in Japan

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Abstract

Guidelines for treating depression often recommend continuing antidepressants at least for 6 months after remission. Whether this recommendation is implemented in daily practices represents a serious concern. We aimed to examine adequacy of continuation and maintenance treatment in Japan. A naturalistic prospective follow-up study with mood disorders was undertaken in 23 psychiatric departments from all over Japan. A total of 95 patients diagnosed with major depression were followed up every month until treatment termination and every 6 months thereafter. In this study, the cohort received 45.1 (SD = 64.7) mg of imipramine or equivalent per day during continuation phase, and about 74% were prescribed inadequate doses, i.e. less than 75 mg/day. At maintenance phase immediately before relapse, average dosage was 42.0 (SD = 74.7) mg/day and 83% were prescribed inadequate doses. There is gross undertreatment of depression during continuation and maintenance phases in Japan.

Keywords

major depressive disorder, continuation treatment, maintenance treatment

Introduction

The treatment of a depressive episode can be conceptualized into acute phase, continuation and maintenance treatment (Kupfer, 1991). Following this scheme, Frank et al. (1991) defined recovery from a major depressive episode as consecutive 2–6 months with no more than one or two mild depressive symptoms, and called these consecutive 2–6 months as continuation phase, and the months following this continuation phase until the recurrence as maintenance phase.

Various guidelines have aimed at improving treatment in practice, because the risk of depressive relapse is significantly associated with discontinuing antidepressants soon after remission. Depression Guideline Panel (1993) recommended that continuation therapy should be given at full therapeutic dosage, i.e. 75–300 mg of Imipramine equivalent/day for 4–9 months. British Association for Psychopharmacology guideline (Anderson et al., 2000) insists that after acute phase pharmacological treatment, patients should be prescribed the same dosage during continuation therapy for at least 6 months. A recent systematic review and meta-analysis (Geddes et al., 2003) has conclusively demonstrated the importance of continuation and maintenance treatments finding that antidepressants continuation can halve the rates of relapse and recurrences after remission.

Although the model of longer-term treatment of depression has changed considerably in recent years with wider use of maintenance medication and greater use of psychological treatments (Fava et al., 2004; Paykel et al., 1999), there are few naturalistic studies

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Adequacy of continuation and maintenance treatments for major depression in Japan

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on the treatment actually received by depressed patients during continuation and maintenance phases.

The Group for Longitudinal Affective Disorders Study (GLADS) has undertaken a detailed study of treatment received over 10 years, of a representative sample of depressed patients originally recruited in 1992–1995. The present report aims to assess adequacy of continuation and maintenance treatments in patients with major depression.

Materials and method

The study methods are described in detail elsewhere (Furukawa *et al.*, 2000a; Kanai *et al.*, 2003) and are summarized here. We conducted detailed prospective serial assessments of a cohort of patients with broadly defined affective disorders under naturalistic conditions. The 23 collaborating centers included psychiatric departments of 13 university hospitals and six general hospitals, three mental hospitals and one community mental health center from all over Japan. Participating psychiatrists at each center administered a semi-structured interview called the Psychiatric Initial Screening for Affective Disorders (PISA) (Kitamura, 1992) to its first-visit patients in order to ascertain the patients' eligibility. The eligibility criteria were:

1. depressive state, defined as presenting with depressed mood or anhedonia lasting longer than 4 days, or manic state, defined as presenting with elated, expansive or irritable mood lasting longer than 4 days;
2. having received no antidepressant or antipsychotic medication in the preceding 3 months;
3. aged 18 years or over;
4. absence of condition such as mental retardation, dementia or hearing disability, which would render detailed psychopathological assessment difficult.

Each participating centre was expected to enter one patient who satisfied the inclusion criteria either every month or every two months, depending on the availability of human and logistic resources at each centre, in order to avoid seasonable imbalance.

Written informed consent was obtained from all participants after full disclosure of the purposes and procedures of the study. The patients eligible for and consenting to the study were then interviewed within 1 week of entry by a psychiatrist using the entry version of the Comprehensive Assessment List for Affective Disorders (COALA) (Furukawa, 1992). The COALA consists of a series of semi-structured interviews that enable serial assessment of the cohort; these include the entry version, monthly follow-up version, and 6-monthly follow-up version. The reliability of the PISA and COALA has been reported to be good to excellent (Furukawa *et al.*, 1995). Quantitative assessments of drug treatment doses were made monthly while treatment lasted and 6-monthly thereafter up to 10 years. Monthly global ratings of depression severity were recorded.

In this study, we defined recovery from a major depressive episode as consecutive 6 months with no more than one or two mild depressive symptoms, because the CDS definition of recovery by 2 months of remission has been criticized for being too short (Tharyan and Raghuthaman, 1999). We defined these consecutive 6 months as continuation phase, and the months following this continuation phase until the recurrence as maintenance phase, and we investigated the actual daily dosage prescribed to the patients during this continuation phase and that at the end of the maintenance phase before the relapse. In order to determine adequacy of antidepressant dosage, we followed the Depression Guideline Panel (1993) and Furukawa *et al.* (2002) and considered imipramine equivalent more than 75 mg/day as adequate dosage. The equivalence of antidepressants was calculated in accordance with WHO Defined Daily Dosage (Tansella and Micciolo, 1992) by equating the average daily dosage of the preparation recommended for its main indication in adults. In Japan the first SSRI was not marketed until 1999 and all the antidepressants used for continuation or maintenance treatments during the period of this study were heterocyclics. We therefore chose to express dosage equivalence in terms of imipramine. The GLADS Project is a naturalistic follow-up study and there was no control over the treatment in its protocol. We used the statistical package SPSS for Windows 12.0 (SPSS Inc.).

Results

During the period between December 1992 and December 1995, 1968 patients were screened at the 23 participating centres. Out of those, 126 patients, who had been selected according to prespecified rules to avoid seasonal imbalance and who had gave their written informed consent, were formally entered into the study and have now been followed up to 10 years. The 126 patients were not different from the rest of the larger pool of patients ($n = 916$) who satisfied the eligibility criteria but were not entered into the study in terms of age ($t = -0.59$, df $= 1014$, $p = 0.56$), sex ($x^2 = 0.58$, df $= 1$, $p = 0.81$) or season of entry ($x^2 = 1.90$, df $= 3$, $p = 0.59$).

The diagnoses of these 126 subjects according to DSM-IV were major depressive disorder ($n = 95$), depressive disorder NOS (15), bipolar I disorder (7), bipolar II disorder (3) and others (6). In the following analysis, we will concentrate on the 95 subjects who were diagnosed with major depressive disorder according to DSM-IV (single episode, 67; recurrent, 28). Nine had other axis I comorbid disorders: panic disorder (3), generalized anxiety disorder (2), social phobia (1), anorexia nervosa (1), alcohol intoxication (1) and vascular dementia (1). Fourteen of them (15%) were in-patients at the time of the administration of the COALA Entry version.

Among these 95 patients, 84 reached recovery, defined as 6 months of remission, 10 were lost to follow-up before recovery was ascertained, and one patient never recovered through the 10-year follow-up. Among 84 patients who once recovered, 10 never presented with a full relapse, 29 experienced a full relapse, 11 experienced a subthreshold relapse, and 33 were lost to follow-up without ever recording full relapse.

In this naturalistic study, the cohort received, on average, 60 (SD $= 44$) mg of imipramine or equivalent per day on entry and 85 (SD $= 73$) mg at 1 month (Furukawa *et al.*, 2000b). During continuation phase, 62% (52/84) were prescribed no drugs at all. Among