

図 5 作業療法プログラムの様子

a: スティック手織り, b: 自宅での調理評価, c: 自宅の畑

理は、病棟看護師と協働して服薬自己管理練習を行い、退院後は精神科訪問看護を導入することにした。④独居の寂しさについては、本人の好きだった編み物を導入し、デイサービスでも継続できるように調整することで、対人交流の機会を維持することとした。

急性期：Z+3日から病棟内の運動プログラムに参加を開始した。プログラム中も独語は続いていたが、体操や風船バレー等すべて参加可能であった。Z+5日から作業療法室での編み物（図5）を追加した。単純な課題であれば問題なく遂行できることを確認した。

亜急性期：薬物療法の効果もあり、独語は減少してデイルームで他患者と交流することが可能となった。しかし、自室に1人でいると「自分と呼ぶ声」や「太鼓の音」が聞こえていた。静かな環境で孤独感や寂しさを感じた際に聞こえてくることを本人に説明し、なるべく他者とおしゃべりをする、惑わす声が聞こえてきたら無視することとなった。Z+4週と5週に調理評価を実施した。1回目は味噌汁と煮物をつくったが、煮物が沸騰したまま洗い物をするため、鍋を焦がした。本人にフィードバックを行い、火の管理を忘れないように1工程ずつ行うこととした。その結果、2回目は問題なくできたものの、1回目の約1.5倍の時間を要したため、「これじゃあ、だっちゃかんね（ダメだね）」と話し、栄養面も含めて検討したところ、昼食のおかずのみ宅配弁当とすることとなった。

退院準備期：本人と退院後の日課について検討

を開始した。本人は、「退院したら今まで通り畑と家のことを続けたい」と希望したが、火事や病状悪化のリスクも想定されたため、自宅環境の評価とケア会議を目的に本人・親戚・介護支援専門員・訪問看護師と一緒に退院前訪問を行った。自宅内はきれいに整理されていたが、風呂場が壊れていてお湯が出ない状況であった。訪問の際に病院から食材を持参し、自宅の台所で調理評価を行い、鍋が沸騰していても気づかずにトイレに行く場面を支援スタッフ間で確認した。退院後は、ご飯と味噌汁程度の料理とし、おかずの宅配弁当をとること、夕食をつくる時間に訪問介護と親戚が訪問し、火の管理の見守りを行うこと、入浴と編み物の継続を目的にデイサービスを利用することとなった。Y+3月で自宅に退院となり、Y+10月現在も支援を受けながら独居生活を継続している。

#### おわりに

精神科病院に入院する認知症高齢者は増加傾向にあり、入院治療によりBPSDは改善したものの退院できないという「社会的入院」が問題視されている。過去の報告においては、認知症治療病棟への入院により、ADLの低下と医療処置の増加が指摘されている<sup>17)</sup>。

当院では、自宅から入院した患者の約6割が3カ月以内に退院しており、作業療法プログラムに参加している患者は認知機能・ADLともに維持されることが確認されている。

今後も臨床知見を積み重ねていき、認知症高齢

者の QOL 維持や家族の介護負担感を軽減するための支援内容を検討し、認知症高齢者の退院支援・地域移行支援だけでなく、入院前の外来作業療法や訪問支援を充実させる必要がある。

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# Outcomes of Inpatient Treatment for Behavioral and Psychological Symptoms of Dementia in Alzheimer's Disease Versus Dementia With Lewy Bodies

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## ABSTRACT

**Objective:** Most community-based studies have shown a more malignant clinical course for patients with dementia with Lewy bodies (DLB) than Alzheimer's disease (AD). We examined differences in outcomes between patients with DLB and AD hospitalized for the treatment of behavioral and psychological symptoms of dementia.

**Method:** A chart review was conducted of patients with either AD or DLB hospitalized in the acute psychogeriatric ward between January 2008 and December 2011 in Kahoku-City, Ishikawa, Japan. Outcome measures were discharge destinations and time to death. A diagnosis of AD was made according to *DSM-5* criteria, whereas a diagnosis of DLB was made according to the Consortium on DLB International Workshop criteria for probable DLB. Pharmacologic treatment was optimized under constant monitoring of patients. Cholinesterase inhibitors and yi-gan san were tried prior to antipsychotics in DLB patients.

**Results:** The study cohort consisted of 224 patients with AD and 106 with DLB. After matching for sociodemographic factors and cognitive and physical function, it was found that antipsychotics were less frequently used during hospitalization in patients with DLB than AD (63% vs 82%, respectively,  $P < .01$ ), whereas cholinesterase inhibitors (88% vs 43%,  $P < .001$ ) and yi-gan san (35% vs 20%,  $P < .05$ ) were more frequently used in patients with DLB. There were no significant differences in discharge destinations between the 2 groups. The 5-year cumulative survival rates were similar in the AD and DLB groups (46.4% vs 45.7%, respectively,  $P = .6225$ ).

**Conclusions:** Optimization of pharmacologic treatment during hospitalization could reduce the use of antipsychotics and improve the subsequent clinical course in DLB.

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Alzheimer's disease (AD) and dementia with Lewy bodies (DLB) are 2 of the most common types of dementia.<sup>1-3</sup> Previous studies have compared disease progression and treatment outcomes between AD and DLB<sup>4-13</sup>; most studies<sup>4-10,13</sup> have reported unfavorable clinical outcomes among patients with DLB, including a greater risk of admission to the medical hospital and shorter survival. One possible explanation for these observations could be vulnerability to neuroleptic sensitivity reactions,<sup>14</sup> which are characterized by a sudden onset of sedation and increased confusion and immobility, often leading to fatal consequences.<sup>15</sup>

It has been demonstrated that some psychiatric symptoms in DLB may respond to cholinesterase inhibitors.<sup>16-18</sup> Yi-gan san, a traditional Asian herbal medicine, has also emerged as a safer alternative to antipsychotics for the treatment of psychiatric symptoms and sleep disturbances in DLB.<sup>19-21</sup> Nevertheless, a study showed that antipsychotics are still prescribed more frequently to DLB patients despite the risk of neuroleptic sensitivity reactions.<sup>22</sup>

Most of the studies comparing the clinical course of DLB and AD have been conducted in community-based or outpatient settings, and these sorts of comparisons in hospitalized patients are rare. In Japan, the number of patients admitted to psychiatric hospitals because of behavioral and psychological symptoms of dementia has increased.<sup>23</sup> One advantage of inpatient treatment is that pharmacologic treatment can be optimized based on detailed observations of changes in symptoms, as well as signs of adverse reactions, while patients are being closely monitored under specialist care. In the present study, we retrospectively examined differences in outcomes between patients with DLB and AD who had been hospitalized for treatment of behavioral and psychological symptoms of dementia. We hypothesized that inpatient treatment could have a positive impact on the subsequent clinical course of patients with DLB.

## METHOD

The medical records of patients who had been hospitalized in the acute psychogeriatric ward of Ishikawa Prefectural Takamatsu Hospital, Kahoku-City, Ishikawa, Japan, were reviewed. The institutional review board approved this retrospective analysis and waived the requirement for written informed consent.

## Patients

Consecutive patients with AD and DLB who had been admitted to the acute psychogeriatric ward for treatment of behavioral and psychological symptoms of dementia between January 2008 and December 2011 were enrolled in the study. All patients had severe behavioral and psychological symptoms of dementia such that they could not be cared for in their own home or care facility, nor could they be treated in an outpatient setting. Patients with significant comorbid physical disease were judged to be

- Clinical outcomes in patients with dementia with Lewy bodies after inpatient treatment for behavioral and psychological symptoms of dementia were comparable to those of patients with Alzheimer's disease.
- In optimizing pharmacotherapy, preferential use of cholinesterase inhibitors and *yi-gan san* in patients with dementia with Lewy bodies, and constant monitoring of neuroleptic sensitivity reactions under specialist care, could reduce the use of antipsychotics.

ineligible for hospitalization to the acute psychogeriatric ward in order to prioritize medical treatment for their physical problems. Patients who had primary neurologic or psychiatric disease other than AD and DLB, and those who had behavioral symptoms prior to cognitive decline, were excluded from the study. Patients with a history of hospitalization in the acute psychogeriatric ward of Ishikawa Prefectural Takamatsu Hospital were also excluded from the study.

### Measures

In all patients, the following items were evaluated and recorded within 1 week of admission according to institutional protocol.

### Demographics

Data regarding the patient's gender, age, living situation (including residency and family style before hospitalization), and relationship with his/her caregiver were obtained from an interview or a questionnaire administered by a psychiatric social worker to the family members or staff of the care facility or hospital. Residency before hospitalization was classified as the patient's own home, group home, care facility, or medical hospital. A group home is a care facility wherein a group of people live their daily lives essentially independently, with staff support only when needed. Family style refers to the people with whom the patient had lived. In the case of patients who had lived with family members other than their partner or with staff of a care facility, group home, or medical hospital, family style was classified as "other." The relationship with the caregiver was classified as partner, other family member, or staff.

### Type of Dementia

A diagnosis of dementia was made by either of 2 experienced geriatric psychiatrists (T.K. and M.K.) based on an interview with the patients and family members or staff, physical and neurologic findings, laboratory data, and brain imaging. A diagnosis of AD was made according to the *DSM-5*, whereas diagnoses of DLB were made according to the Consortium on DLB International Workshop criteria for probable DLB.<sup>1,24</sup>

### Primary Reason for Hospitalization

The behavioral problems causing distress to the caregiver and that were the primary reasons for hospitalization were

recorded following interviews with the caregiver. Primary reasons for hospitalization were classified as combative behavior, overactivity, or apathy/depression. Combative behavior comprised physically or verbally aggressive behavior during or between care provision, such as hitting, kicking, biting, throwing things, cursing, and screaming. Overactivity included nonaggressive behavior that required monitoring, such as aimless wandering, trying to reach a different place, restlessness, or repetitive actions and mannerisms. Apathy/depression included serious apathetic or depressive behavior, such as severe loss of appetite, refusal to eat, refusal to take medication, or suicidal tendencies.<sup>25</sup>

### Behavioral and Psychiatric Symptoms

Behavioral and psychiatric symptoms were evaluated by 2 geriatric psychiatrists (T.K. and M.K.) using the Behavioral Pathology in Alzheimer's Disease (BEHAVE-AD) rating scale.<sup>26</sup> The presence or absence of symptoms in each of 7 clusters comprising a subscale of BEHAVE-AD were recorded, including paranoid and delusional ideation, hallucinations, aggressiveness, activity disturbances, diurnal rhythm disturbances, affective disturbances, and anxieties or phobias.

### Cognitive Function

Cognitive function was assessed by the geriatric psychiatrists in the acute psychogeriatric ward using the Mini-Mental State Examination (MMSE).<sup>27</sup>

### Functional State of Daily Living

Activities of daily living (ADL) were scored by well-trained nursing staff according to the Nishimura Activities of Daily Living (N-ADL) scale,<sup>28</sup> which is one of the most used scales for the evaluation of ADL in Japan. In the N-ADL, 5 items are evaluated: walking/sitting, range of activities, dressing/bathing, eating, and excretion. Each item is scored from 0 to 10 points, with the total (maximum score 50) taken as the N-ADL score. A higher score indicates better functioning in ADL. Nursing staff rated the reliability of the scale when completed as good.<sup>28</sup>

### Intervention and Monitoring

**Nonpharmacologic approaches.** Nonpharmacologic approaches were implemented for all patients following admission. In addition to the aforementioned evaluation, medical, psychological, and environmental assessments were conducted to identify modifiable factors that could potentially exacerbate behavioral and psychological symptoms of dementia. We evaluated the presence of pain, inadequate nutrition, infection, and other medical problems. The medication profile for each patient was also reviewed. Interviews were conducted with each patient and key informants to elucidate changes in daily activities and roles at home, previous interests, personality traits, inappropriate coping and communication by caregivers (eg, yelling, harsh tone, criticizing), and the use of care resources. Based on the outcomes of these assessments, we tried to eliminate

any conditions identified as contributing to behavioral and psychological symptoms of dementia. Occupational therapy was provided to patients to help them engage in meaningful or pleasurable activities, tapping into preserved capabilities or previous interests. We also provided education to the caregivers to improve their understanding of the disease and their communication with the patient.

**Pharmacologic interventions.** The principles of our pharmacologic approach were as follows. After comprehensive assessment and symptom observation in the first week, patients received pharmacologic intervention based on clinical indications. For DLB patients, cholinesterase inhibitors were tried first. If the cholinesterase inhibitor was not sufficiently effective, *yi-gan san* was added. Quetiapine was initiated at a low dose (eg, 12.5 or 25 mg/d) and slowly titrated if the combination of the cholinesterase inhibitor and *yi-gan san* was ineffective or if more acute symptom control of behavior was required. When sensitivity reactions were observed, quetiapine was tapered to a lower dose or discontinued. Switching to other antipsychotics was minimized. For patients with AD, the use of cholinesterase inhibitors and *yi-gan san* was left to the discretion of individual psychiatrists. The use of quetiapine in patients with AD followed the strategy used in the case of DLB. The use of antidepressants, mood stabilizers, and hypnotics was allowed in both AD and DLB patients.

**Monitoring.** The nursing staff provided 24-hour care and monitored the patients' condition under a 3-shift system. Careful attention was paid particularly to the patients' ability to walk and eat, as well as their ability to concentrate on daily living activities and to detect signs of neuroleptic sensitivity reactions, including extrapyramidal symptoms and cognitive fluctuation. A psychiatrist was present throughout the day shift at the acute psychogeriatric ward, and each patient was examined by a psychiatrist multiple times a day in a regular and timely manner. Daily meetings were held to share information between professionals.

### Mortality Surveillance

As part of routine practice, we inspect daily the death notices in the local newspaper *Hokkoku Shimbun* to monitor the incidence of death among patients treated at the Ishikawa Prefectural Takamatsu Hospital. The death notices in *Hokkoku Shimbun* provide a person's name and address, date of death, and information on funeral or memorial services. A death notice is submitted by the municipal office to *Hokkoku Shimbun* every time a municipal resident dies. The newspaper offers to publish death notices for free to the bereaved family. We have confirmed with the *Hokkoku Shimbun* office that only rarely do families refuse the offer of publication of a death notice.

### Statistical Analysis

The main clinical endpoints in the present study were (1) discharge destinations and (2) time to death. Other endpoints included psychotropic medications prescribed during hospitalization and time to discharge.

Data management and statistical calculations were performed using Stata version 11.0 (Statacorp, College Station, Texas). In the case of descriptive statistics, differences between AD and DLB were tested using a *t* test for age, MMSE score, N-ADL score, and dose of antipsychotics. The  $\chi^2$  test was used to analyze frequency data.

To enable proper comparisons, the 2 groups (AD vs DLB) were matched for demographic and environmental factors, as well as cognitive and physical state. We used propensity score matching methods<sup>29</sup> to produce matched pairs for the AD and DLB groups. To estimate the propensity scores, age, sex, residency before hospitalization, family style, caregiver's relationship to the patient, MMSE score, and N-ADL score were used as covariates of exposure (DLB) in a logistic regression model. Propensity score estimation and matching were performed using the Stata PSMATCH2 program. Patients with DLB were matched with AD patients on the basis of estimated propensity scores using the nearest neighbor approach within a caliper of 0.02. After matching on propensity scores, the Wilcoxon signed rank test was used to test the significance of differences in age, MMSE score, N-ADL score, and dose of antipsychotics, whereas the McNemar test or multinomial logistic regression analysis was used to analyze differences in frequencies.

Estimates of hospital stay probability were calculated according to Kaplan-Meier methods with the time from admission to discharge. Death during hospitalization or transfer to a medical hospital due to deterioration of a patient's physical condition was treated as a censor. A log rank test was used to evaluate the differences in time to discharge. In survival analysis, Kaplan-Meier estimation was used with time from admission to death, and the log rank test was used to test the significance of differences. No observed death until the study end was treated as a censor. We also performed multivariate analysis to determine covariates with an effect on time to death. In addition to the type of dementia (AD or DLB), the variables used to construct propensity scores were included in the multivariate Cox proportional hazards model. In this model, backward elimination was used to establish a cutoff *P* value of .10.

Statistical significance was defined as 2-tailed *P* < .05. Bonferroni correction was used to adjust *P* values for multiple comparisons.

## RESULTS

### Before Matching

In all, 330 patients were identified as eligible for the study: 224 with AD and 106 with DLB. The demographic characteristics and clinical manifestations before matching are listed in Table 1. The 2 groups were similar in age, gender, residency before hospitalization, family style, and caregiver relationship. Regarding cognitive and physical function, although DLB patients had a higher MMSE score, they did not differ from AD patients in terms of the N-ADL score. Combative behavior was more frequently the primary reason for hospitalization of AD patients, whereas overactivity was

**Table 1. Demographic Characteristics and Clinical Manifestations of Patients With Alzheimer's Disease (AD) and Dementia With Lewy Bodies (DLB) Hospitalized for Treatment of Behavioral and Psychological Symptoms of Dementia Before and After Matching**

Variable	Before Matching <sup>a</sup>		After Matching <sup>b</sup>	
	AD (n=224)	DLB (n=106)	AD (n=102)	DLB (n=102)
Age, mean ± SD, y	82.7 ± 6.5	83.0 ± 5.9	84.7 ± 5.7	83 ± 6.0
Men, n (%)	71 (32)	34 (32)	32 (31)	32 (31)
Residency before hospitalization, n (%)				
Own home	148 (66)	69 (65)	67 (66)	66 (65)
Group home	14 (6)	8 (8)	12 (11)	7 (7)
Care facility	41 (18)	19 (18)	16 (16)	19 (19)
Medical hospital	21 (9)	10 (9)	7 (7)	10 (10)
Family style, n (%)				
Alone	13 (15)	12 (12)	14 (14)	13 (13)
With partner only	12 (12)	16 (15)	14 (14)	14 (14)
Other	76 (73)	76 (73)	74 (73)	75 (74)
Caregiver's relationship to patient, n (%)				
Partner	33 (14)	23 (22)	14 (14)	21 (21)
Other family member	121 (54)	45 (42)	51 (50)	44 (43)
Staff	70 (31)	38 (36)	37 (36)	37 (36)
MMSE score, mean ± SD	10.8 ± 7.0	13.5 ± 7.5*	12.9 ± 6.9	13.0 ± 7.3
N-ADL score, mean ± SD	27.5 ± 11.6	26.2 ± 10.1	25.6 ± 10.9	26.2 ± 10.3
Primary reason for hospitalization, n (%)				
Combative behavior	121 (54)	33 (31)**	58 (57)	32 (31)***
Overactivity	73 (33)	50 (47)*	31 (30)	48 (47)
Apathy or depression	30 (13)	23 (22)	13 (13)	22 (22)
Behavioral and psychological symptoms, n (%)				
Delusions	62 (28)	29 (27)	25 (25)	28 (27)
Hallucinations	19 (8)	56 (53)**	7 (7)	55 (55)**
Aggressiveness	151 (67)	55 (52)***	69 (68)	53 (52)*
Activity disturbance	136 (60)	61 (58)	54 (53)	59 (58)
Diurnal rhythm disturbance	137 (61)	66 (62)	62 (61)	63 (62)
Affective disturbance	62 (28)	33 (31)	36 (35)	32 (31)
Anxiety and phobias	55 (25)	28 (26)	23 (23)	27 (26)

<sup>a</sup>Dichotomous characteristics were compared using the  $\chi^2$  test; continuous characteristics were compared using *t* tests.

<sup>b</sup>Dichotomous characteristics were compared using the McNemar test or multinomial logistic regression analysis; continuous characteristics were compared using the Wilcoxon signed rank test.

\**P* < .05.

\*\**P* < .001.

\*\*\**P* < .01.

Abbreviations: MMSE=Mini-Mental State Examination, N-ADL=Nishimura Activities of Daily Living.

**Table 2. Psychotropic Medications Used in Patients With Alzheimer's Disease (AD) and Dementia With Lewy Bodies (DLB) Hospitalized for Treatment of Behavioral and Psychological Symptoms of Dementia Before and After Matching**

Variable	Before Matching <sup>a</sup>		After Matching <sup>b</sup>	
	AD (n=224)	DLB (n=106)	AD (n=102)	DLB (n=102)
Prescribed antipsychotics, n (%)	169 (75)	66 (62)*	84 (82)	64 (63)**
Dose of antipsychotics, mean ± SD, mg/kg <sup>c</sup>	3.1 ± 2.8	3.2 ± 3.6	2.7 ± 2.4	3.2 ± 3.7
Prescribed cholinesterase inhibitors, n (%)	121 (54)	92 (87)***	44 (43)	90 (88)***
Prescribed yi-gan san, n (%)	24 (11)	38 (36)***	20 (20)	36 (35)*

<sup>a</sup>Dichotomous and continuous characteristics were compared using  $\chi^2$  and *t* tests, respectively.

<sup>b</sup>Dichotomous and continuous characteristics were compared using the McNemar test and Wilcoxon signed rank test, respectively.

<sup>c</sup>Daily dose of antipsychotics in chlorpromazine equivalents employed at the maximum in individuals using antipsychotics.

\**P* < .05.

\*\**P* < .01.

\*\*\**P* < .001.

more frequently the reason for DLB patients. Regarding behavioral and psychological symptoms of dementia, DLB patients were more likely to present with hallucinations, whereas AD patients were more likely to present with aggressiveness.

With regard to psychotropic medications prescribed during hospitalization (Table 2), the data before matching

showed a less frequent use of antipsychotics, but a more frequent use of cholinesterase inhibitors and yi-gan san in DLB patients. There was no difference in the daily dose of antipsychotics. In AD patients, the types of antipsychotics most frequently used during hospitalization were quetiapine (in 139 patients, 82%), followed by risperidone (22, 13%), olanzapine (10, 6%), and haloperidol (8, 5%).

**Table 3. Discharge Destination of Patients With Alzheimer’s Disease (AD) and Dementia With Lewy Bodies (DLB) Hospitalized for Treatment of Behavioral and Psychological Symptoms of Dementia Before and After Matching<sup>a</sup>**

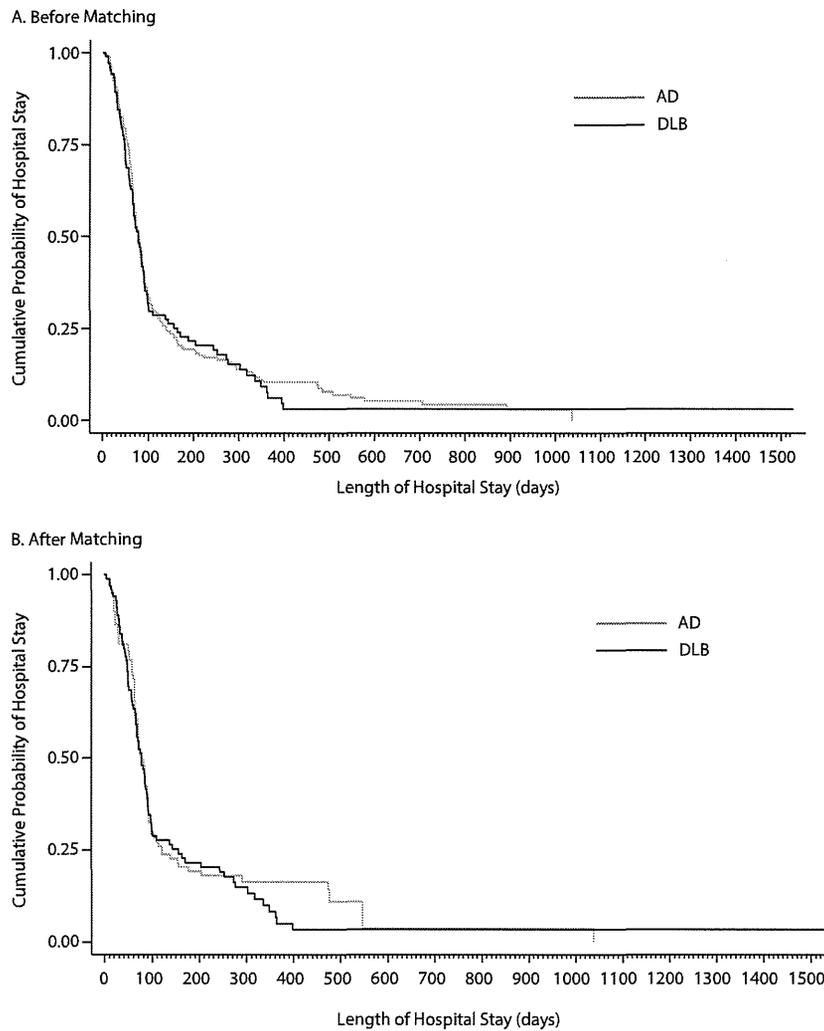
Discharge Destination	Before Matching <sup>b</sup>		After Matching <sup>c</sup>	
	AD (n=224)	DLB (n=106)	AD (n=102)	DLB (n=102)
Own home	74 (33)	37 (35)	30 (29)	35 (34)
Group home	36 (16)	20 (19)	23 (23)	20 (20)
Care facility	76 (34)	32 (30)	32 (31)	30 (29)
Medical hospital	31 (14)	16 (15)	13 (13)	16 (16)
Death during hospitalization	7 (3)	1 (1)	4 (4)	1 (1)

<sup>a</sup>Data are presented as n (%).

<sup>b</sup>Dichotomous characteristics were compared using the  $\chi^2$  test.

<sup>c</sup>Dichotomous characteristics were compared using a multinomial logistic regression analysis.

**Figure 1. Cumulative Probability of Hospital Stay Between Patients With Alzheimer’s Disease (AD) and Dementia With Lewy Bodies (DLB)**

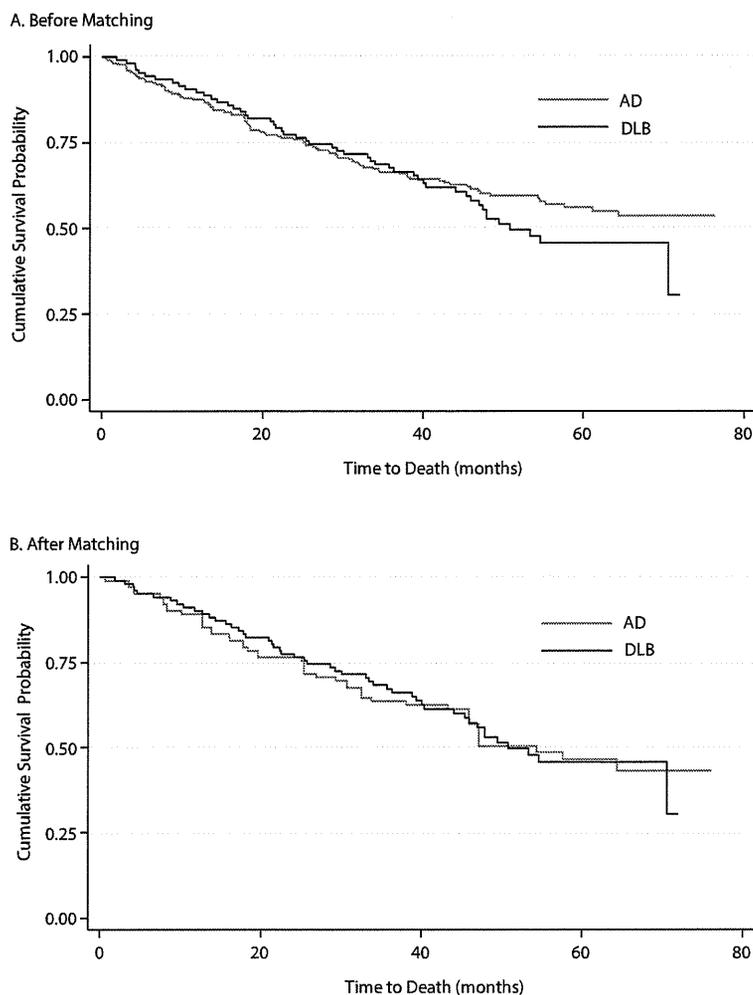


In DLB patients, quetiapine was the most frequently used antipsychotic (in 63 patients, 95%), followed by risperidone (2, 4%) and haloperidol (2, 4%) and olanzapine (1, 1%) and aripiprazole (1, 1%).

Table 3 lists the discharge destinations of the 2 groups. There were no significant differences in the incidence of discharge to a patient’s own home, group home, care facility,

or medical hospital or death during hospitalization between the 2 groups. Kaplan-Meier analysis (Figure 1A) revealed that the length of hospital stay (LOS) was equivalent between AD and DLB patients (median [95% CI] LOS: 77 days [70–84 days] vs 77 days [66–89 days], respectively,  $P=.7579$ ). Kaplan-Meier analysis on cumulative survival probability is shown in Figure 2A. There was no significant

**Figure 2. Cumulative Survival Probability Between Patients With Alzheimer's Disease (AD) and Dementia With Lewy Bodies (DLB)**



difference in time to death between AD and DLB patients (5-year cumulative survival probability [95% CI] from admission: 56.1% [48.7%–62.8%] vs 45.7% [34.5%–56.2%], respectively,  $P = .3261$ ).

**After Matching**

Matching on propensity score resulted in 102 matched pairs. Demographic characteristics and clinical manifestations after matching are listed in Table 1 and indicate that the 2 groups were balanced in terms of age, gender, residency before hospitalization, family style, caregiver's relationship to the patient, N-ADL score, and MMSE score. Even after matching, combative behavior was more frequently the reason for hospitalization of AD patients, whereas the difference in the prevalence of overactivity disappeared between the 2 groups. Among behavioral and psychological symptoms of dementia, the predominance of hallucinations in DLB patients and aggressiveness in AD patients persisted. As seen before

matching, antipsychotics were less frequently used in DLB patients, whereas cholinesterase inhibitors and yi-gan san were more frequently used (Table 2).

The incidence of discharge to each destination was similar between the 2 groups (Table 3). The LOS was equivalent between AD and DLB patients (median [95% CI] LOS: 77 days [65–90 days] vs 77 days [66–89 days], respectively,  $P = .9136$ , Figure 1B). There was no significant difference in time to death between AD and DLB patients (5-year cumulative survival probability [95% CI]: 46.4% [34.9%–57.2%] vs 45.7% [34.2%–56.5%], respectively,  $P = .6225$ , Figure 2B).

**Effects of DLB on Time to Death**

Multivariate analysis using Cox proportional hazards model identified age, male gender, and N-ADL score as variables independently associated with time to death (for age, hazard ratio [HR] [95% CI] = 1.08 per year increase [1.05–1.11],  $P = .000$ ; for male gender,  $HR = 2.97$

[2.10–4.19],  $P = .000$ ; for N-ADL score, HR = 0.98 per unit increase [0.97–1.00],  $P = .014$ ). DLB was not independently associated with time to death.

## DISCUSSION

The results of the present study demonstrate that the outcomes of DLB patients after admission for the treatment of behavioral and psychological symptoms of dementia do not differ from those of AD patients. This finding is inconsistent with the results reported by most community-based studies,<sup>1,5–10,13</sup> which found a more malignant clinical course for DLB patients.

In contrast with the results of the population-based studies, we were able to prescribe antipsychotics less frequently to DLB patients, which potentially lowered the risk of neuroleptic sensitivity reactions. As part of our treatment policy to reduce the use of antipsychotics, cholinesterase inhibitors and yi-gan san were used preferentially in DLB patients. Furthermore, the inpatient setting allowed constant monitoring of patients under specialist care, so that signs of neuroleptic sensitivity reactions could be detected and antipsychotics tapered or discontinued accordingly. In the community, levels of knowledge and clinical experience with DLB vary considerably among care practitioners. Signs of neuroleptic sensitivity reactions are often unrecognized or even interpreted wrongly as a deterioration of primary symptoms. These signs may not be observed even by experienced clinicians during brief consultations with patients.<sup>30</sup>

Regarding behavioral and psychological symptoms of dementia, the present study showed a higher prevalence of aggressiveness in AD than DLB patients, which could be associated with more frequent use of antipsychotics in AD. This finding is attributed to the fact that most AD patients who do not exhibit aggressiveness can be managed within community care systems, which, in Japan, were originally established with the intent of caring for those with AD.

In the present study, survival time was estimated from the time of hospital admission, whereas the majority of previous studies estimated survival from disease onset or from the time of diagnosis. The apparent discrepancy between the

present and previous studies may be due to methodological differences. However, the validity of estimating survival from disease onset or diagnosis has been questioned because demented patients and their caregivers often have difficulties pinpointing precisely when the symptoms appeared<sup>13,31</sup>; difficulties typically emerge gradually and can be subtle for months or even years before the initial hospital visit.<sup>13</sup> Stubendorff et al<sup>13</sup> proposed the validity of using a certain cognitive level as the benchmark in a survival study. In view of these considerations, we matched AD and DLB patients in terms of their MMSE scores in addition to environmental factors or physical state.

The present study has several limitations that should be acknowledged. Because of the retrospective nature of the study, the information available was limited. In particular, we did not use detailed measures, such as the Dementia Cognitive Fluctuation Scale<sup>32</sup> or the Unified Parkinson's Disease Rating Scale,<sup>33</sup> to evaluate the incidence and severity of neuroleptic sensitivity reactions. Although it is generally known that most common causes of death in DLB patients include aspiration pneumonia and fall-related injury,<sup>10</sup> which are closely associated with neuroleptic sensitivity reactions, the cause of death for the patients in the present study was not available. Furthermore, we implemented nonpharmacologic approaches in both AD and DLB patients, and this potentially ameliorated some of the symptoms. However, the effect was not systematically evaluated. Finally, this study was conducted in a particular region in Japan. Thus, the generalizability of the results could be questioned. A future well-designed, multicenter study could be warranted to confirm the findings reported herein.

In conclusion, the outcomes for DLB patients after admission for the treatment of behavioral and psychological symptoms of dementia are comparable to those of AD patients. This finding could be attributed to optimization of pharmacologic treatment under close monitoring by specialists during the period of hospitalization. The findings of the present study also highlight the importance of providing care practitioners in the community with a correct understanding of DLB and its neuroleptic sensitivity reactions.

**Drug names:** aripiprazole (Ablify), haloperidol (Haldol and others), olanzapine (Zyprexa), quetiapine (Seroquel), risperidone (Risperdal and others).

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## ORIGINAL ARTICLE

## Predictors of home discharge among patients hospitalized for behavioural and psychological symptoms of dementia

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### Abstract

**Background:** The Japanese government recently announced the 'Five-Year Plan for Promotion of Measures Against Dementia (Orange Plan)' to promote people with dementia living in their communities. To achieve this, it is imperative that patients hospitalized with behavioural and psychological symptoms of dementia (BPSD) are helped to return to their own homes. The aim of the present study was to identify predictors of home discharge among patients hospitalized for BPSD.

**Methods:** A single-centre chart review study was conducted on consecutive patients hospitalized from home between April 2006 and March 2011 for the treatment of BPSD. The frequency of discharge back to home was examined in relation to a patient's active behavioural problems and demographics at the time of admission. Diagnoses of dementia were made on the basis of the *Diagnostic and Statistical Manual of Mental Disorders, 4th edition*, and consensus guidelines for the clinical and pathologic diagnosis of dementia with Lewy bodies.

**Results:** In all, 391 patients were enrolled in the study. Of these patients, 163 (42%) returned home. Multiple logistic regression analysis identified high Mini-Mental State Examination and Nishimura-style senile activities of daily living scores as significant independent predictors of home discharge. In contrast, living alone and manifestation of aggressiveness at the time of admission were negatively associated with home discharge.

**Conclusions:** Few patients hospitalized for BPSD are discharged home, and this number is affected by a patient's clinical and demographic characteristics at the time of admission. These findings should be considered in designing and implementing optimal management and care strategies for patients with BPSD.

**Key words:** behavioural symptoms, dementia, inpatients, patient care management, patient discharge.

### INTRODUCTION

Japan has the highest life expectancy in the world, and this increased longevity has resulted in an increase in the number of people with dementia among the total population.<sup>1–4</sup> Despite efforts such as the Long-Term Care Insurance programme, the number of patients with dementia hospitalized in psychiatric hospitals continues to rise within Japan, with >50 000 patients currently hospitalized.<sup>5</sup> The primary reason for hospitalization of dementia patients is behavioural and psychological symptoms of dementia (BPSD), which manifest in 90% of those with demen-

tia.<sup>6</sup> The goal of inpatient treatment is to achieve prompt remission of BPSD and return patients home as soon as possible. However, family members often disapprove of a patient's discharge, even after symptom remission, leading to prolonged hospitalization, with the national average now being 944 days.<sup>7</sup> Some of these patients are eventually transferred to a medical hospital, and others are reluctantly institutionalized into care facilities.

In September 2012, the Japanese government announced the 'Five-Year Plan for Promotion of Measures Against Dementia (Orange Plan)' not only to

improve patients' quality of life,<sup>9</sup> but also to reduce medical expenditures. The policy aims to promote the independent living of demented people to enable them to remain in their own home for as long as possible,<sup>9</sup> with assistance provided by enhanced coordination between health-care services and social care services.<sup>10</sup> In this situation, it becomes more crucial to facilitate the home discharge (HD) of patients hospitalized for BPSD. As such, optimal treatment and care strategies should be developed from the early stages of hospitalization for individual patients based on their characteristics. However, the exact factors that may affect HD remain unclear.

As reviewed by Luppá *et al.*,<sup>11</sup> studies in other countries have investigated predictors for institutionalization within community-dwelling populations. However, the findings from those few studies of hospitalized populations may not be directly applicable to Japan because of differences in both cultural background and the health-care insurance system.<sup>12</sup> Thus, the situation in Japan requires domestic research, but studies of this nature are scarce, with only one study having investigated predictors for HD in hospitalized patients with significant BPSD under Japan's current Long-Term Care Insurance system.<sup>13</sup>

Previously, we demonstrated that patients' clinical and environmental characteristics at the time of admission are closely associated with time to discharge.<sup>14</sup> In the present study, we examined the frequency of HD in relation to patient profiles at the time of admission and determined factors that could be used to predict HD.

## METHODS

In the present study we reviewed the medical records of patients who were hospitalized in the acute psychogeriatric ward of Ishikawa Prefectural Takamatsu Hospital. Patient anonymity was carefully preserved. This retrospective study was approved by the Ethics Committee of Ishikawa Prefectural Takamatsu Hospital.

### Participants

Consecutive patients who were admitted to the acute psychogeriatric ward of Ishikawa Prefectural Takamatsu Hospital from their own home for the treatment of BPSD from April 2006 to March 2011 and completed inpatient treatment were enrolled in the study. All patients had severe BPSD such that they

could not be cared for in their own home or be treated in an outpatient setting. Patients with severe physical comorbidities were judged ineligible for hospitalization in the acute psychogeriatric ward, so that medical treatment for their physical condition(s) could be prioritized. Patients were excluded from this study if they met any of the following criteria: (i) lived in care facilities prior to admission; (2) were patients of a medical hospital prior to admission; (iii) had a record of past hospitalization in the acute psychogeriatric ward of Ishikawa Prefectural Takamatsu Hospital; (iv) had behavioural symptoms prior to their cognitive decline; or (v) had psychiatric comorbidities.

### Measures

Six factors (demography, reason for admission, type of dementia, BPSD, cognitive function, and functional state of daily living) were evaluated and recorded in all patients within 1 week of admission according to institutional protocols.

### Demography

Information regarding a patient's age, gender, and living situation (i.e. family style, relationship with caregiver) was obtained from interviews with family members or from questionnaires administered by psychiatric social workers and completed by family members or public service staff. 'Family style' refers to the people with whom the patient was living; people were categorized as either the patient's partner or 'others', which included all other family members. Caregivers were identified as being the patient's partner, son or daughter, other family member or relative, or public service staff.

### Reason for admission

Behavioural problems that caused distress to the caregiver and that were the primary reason for hospitalization were recorded following interviews with the caregiver. Reasons for hospitalization were classified as combative behaviour, overactivity, or apathy/depression. Combative behaviour comprised physically or verbally aggressive behaviour, such as hitting, kicking, biting, throwing things, cursing, and screaming, during or between care provisions. Overactivity included non-aggressive behaviour that required monitoring, such as aimless wandering, trying to reach a different place, restlessness, or repetitive actions and/or mannerisms. Apathy/depression included

serious apathetic or depressive behaviour, such as severe loss of appetite, refusal to eat, refusal to take medication, or suicidal tendencies.<sup>14</sup>

### **Type of dementia**

Diagnoses of Alzheimer's disease and vascular dementia were made by either of the two experienced geriatric psychiatrists (TK and MK) according to the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition. Diagnoses of dementia with Lewy bodies were made according to the consensus guidelines for the clinical and pathologic diagnosis of dementia with Lewy bodies.<sup>15</sup> All diagnoses were made after interviews with patients and family members or public service staff and based upon physical and neurological findings, laboratory data, and results of brain imaging studies.

### **Behavioural and psychiatric symptoms**

The prevalence of behavioural and psychiatric symptoms was evaluated by the two geriatric psychiatrists (TK and MK) using the Behavioural Pathology in Alzheimer's Disease rating scale.<sup>16</sup> The presence or absence of symptoms in each of the following seven clusters comprising a subscale of Behavioural Pathology in Alzheimer's Disease was recorded: paranoid and delusional ideation; hallucinations; aggressiveness; activity disturbances; diurnal rhythm disturbances; affective disturbances; and anxieties or phobias.

### **Cognitive function**

Cognitive function was evaluated by the geriatric psychiatrists in the acute psychogeriatric ward using the Mini-Mental State Examination (MMSE).<sup>17</sup>

### **Functional state of daily living**

Activities of daily living (ADL) were scored by well-trained nursing staff according to the Nishimura-style senile activities of daily living (N-ADL) scale,<sup>18</sup> which is one of the most used scales for the evaluation of ADL in Japan. On the N-ADL scale, five items are evaluated: walking/sitting; range of activities; dressing/bathing, eating; and excretion. Each item is scored from 0 to 10 points, with a score of 0 indicating that that activity is not performed and a score of 10 indicating no impairment in the activity. The total

(maximum score: 50) is taken as the N-ADL score. Nursing staff rated the reliability of the scale, when completed, as good.<sup>18</sup>

### **Intervention**

Patients received pharmacological intervention as clinically indicated. All patients were treated under the supervision of the two geriatric psychiatrists based on their clinical judgement. Non-pharmacological interventions included occupational therapy and psychoeducation of patients and their families.

To aid patients settling back into their homes after discharge, we held care meetings with family members prior to discharge and identified potential problems in each patient's home care. We also visited patients' homes to confirm whether the help planned at the hospital was feasible in the specific environment and to provide advice. If necessary, we continued periodic home visits after discharge to follow up on patients' living and care status.

### **Statistical analysis**

The primary end-point of the study was discharge home. For analysis, discharge destination was dichotomized into HD and all other destinations (not home discharge (NHD)), which included discharge to a care facility, transfer to a medical hospital, or death during hospitalization in the acute psychogeriatric ward.

Data management and statistical calculations were performed with the software package Stata version 11.0 (Statacorp, College Station, TX, USA).

Differences between groups (HD vs NHD) in terms of age, MMSE score, N-ADL score, and dose of antipsychotics used during hospitalization were evaluated by *t*-tests. Differences in frequency data were analyzed by  $\chi^2$  tests.

Univariate logistic regression analysis was conducted to determine the potential association of each demographic and clinical variable with HD. To determine independent predictors of HD and to create a predictive model, variables with  $P < 0.10$  in the univariate analysis were included in a multiple logistic regression model. In this model, backward elimination was used to establish a cut-off  $P$ -value of 0.10.

For all statistical tests conducted, two-tailed  $P < 0.05$  was considered significant. For multiple comparisons,  $P$ -values were adjusted with Bonferroni correction.

## RESULTS

From April 2006 to March 2011, 600 patients were admitted to the acute psychogeriatric ward for the treatment of BPSD. Of these, 209 patients were excluded from the study because they had resided in a group home (49 patients), another care facility (92 patients), or a medical hospital (68 patients). Thus, 391 patients admitted from their own home were identified as eligible for inclusion in the study. All patients had been discharged (including those who died) when the study ended.

Table 1 lists the demographic and clinical characteristics of the 391 patients at the time of admission. Of these, 163 patients (42%) were identified as having an HD after inpatient treatment. Of the 228 patients (58%) recorded as having an NHD, 52 went to a group home, 107 went to a care facility, 61 were transferred to a medical hospital, and 8 died during hospitalization. Patients in the HD group were less likely to have

lived alone and were more likely to have lived with others prior to their admission compared with patients in the NHD group. Both MMSE and N-ADL scores at the time of admission were higher in the HD group, and these patients were more likely to manifest hallucinations and less likely to manifest aggressiveness in BPSD at the time of admission. The mean  $\pm$  SD length of hospital stay for the 391 patients was 132  $\pm$  211 days. The length of hospital stay was shorter in the HD than the NHD group (71  $\pm$  82 vs 176  $\pm$  259 days, respectively;  $P = 0.000$ ).

Table 2 details the psychotropic medications used during hospitalization by patients in the HD and NHD groups. There were no significant differences in the maximum daily dose of antipsychotics used during hospitalization or in the frequency of cholinesterase inhibitor use.

Univariate analysis revealed a significant positive correlation between HD and living with others, higher

Table 1 Demographic and clinical characteristics at the time of admission

	HD ( <i>n</i> = 163)	NHD ( <i>n</i> = 228)	<i>P</i> -value	Total ( <i>n</i> = 391)
Age, mean $\pm$ SD	81.5 $\pm$ 7.4	81.6 $\pm$ 6.6	0.8216	81.6 $\pm$ 6.9
Male ( <i>n</i> )	59 (36%)	101 (44%)	0.108	160 (41%)
Type of dementia ( <i>n</i> )			0.346	
AD	90 (55%)	145 (64%)		135 (60%)
DLB	37 (23%)	41 (18%)		78 (20%)
VD	16 (10%)	22 (10%)		38 (10%)
Others	20 (12%)	20 (9%)		40 (10%)
Family style ( <i>n</i> )			0.000	
Alone	14 (9%)***	55 (24%)***		69 (18%)
With partner only	28 (17%)	38 (17%)		66 (17%)
With others	121 (74%)**	135 (59%)**		256 (65%)
Relationship with caregiver ( <i>n</i> )			0.489	
Partner	51 (31%)	62 (27%)		113 (29%)
Son or daughter	84 (52%)	113 (50%)		197 (50%)
Other family member or relative	18 (11%)	32 (14%)		50 (13%)
Public service staff	10 (6%)	21 (9%)		31 (8%)
MMSE score, mean $\pm$ SD	13.3 $\pm$ 7.4	9.9 $\pm$ 7.6	0.000	11.3 $\pm$ 7.7
N-ADL score, mean $\pm$ SD	31.4 $\pm$ 10.2	27.4 $\pm$ 11.6	0.0004	29.1 $\pm$ 11.2
Reason for admission ( <i>n</i> )			0.423	
Combative behaviour	58 (36%)	96 (42%)		154 (39%)
Overactivity	77 (47%)	98 (43%)		175 (45%)
Apathy or depression	28 (17%)	34 (15%)		62 (16%)
BPSD ( <i>n</i> )				
Paranoid and delusional ideation	61 (37%)	66 (29%)	0.078	127 (32%)
Hallucination	46 (28%)	41 (18%)	0.017	87 (22%)
Aggressiveness	84 (52%)	147 (64%)	0.010	231 (59%)
Activity disturbances	114 (70%)	176 (77%)	0.106	290 (74%)
Diurnal rhythm disturbances	112 (68%)	171 (75%)	0.170	283 (72%)
Affective disturbances	50 (31%)	55 (24%)	0.150	105 (27%)
Anxieties and phobias	49 (30%)	60 (26%)	0.415	109 (28%)

\* $P$  value <0.05; \*\* $P$  value <0.01; \*\*\* $P$  value <0.001. AD, Alzheimer's type dementia; BPSD, behavioural and psychological symptoms of dementia; DLB, dementia with Lewy bodies; HD, patients discharged home; MMSE, Mini-Mental State Examination; N-ADL, Nishimura-style senile activities of daily living; NHD, patients not discharged home; VD, vascular dementia.

**Table 2** Psychotropic medications used during hospitalization

	HD ( <i>n</i> = 163)	NHD ( <i>n</i> = 228)	<i>P</i> value	Total ( <i>n</i> = 391)
Dose of antipsychotics <sup>†</sup> , mean ± SD	2.8 ± 3.2	2.7 ± 3.5	0.7639	2.8 ± 3.4
Patients using cholinesterase inhibitors ( <i>n</i> )	92 (56%)	125 (55%)	0.751	217 (55%)

<sup>†</sup>Maximum daily dose of antipsychotics, given in chlorpromazine equivalents (mg/day), used during hospitalization. HD, patients discharged home; NHD, patients not discharged home.

**Table 3** Univariate and multivariate logistic regression analyses on the relationship between characteristics at the time of admission and discharge to home

	Unadjusted			Adjusted		
	OR	95%CI	<i>P</i> -value	OR	95%CI	<i>P</i> -value
Type of dementia						
AD	0.71	0.47–1.06	0.096			
Family style						
Alone	0.30	0.16–0.55	0.000	0.19	0.10–0.38	0.000
With others	1.98	1.28–3.08	0.002			
MMSE (per unit increase)	1.06	1.03–1.09	0.000	1.05	1.02–1.09	0.002
N-ADL (per unit increase)	1.03	1.01–1.05	0.001	1.03	1.01–1.05	0.010
BPSD						
Paranoid and delusional ideation	1.47	0.96–2.25	0.078			
Hallucination	1.78	1.10–2.88	0.018			
Aggressiveness	0.59	0.39–0.88	0.011	0.56	0.36–0.87	0.010

Variables with *P* < 0.10 are listed. AD, Alzheimer's-type dementia; BPSD, behavioural and psychological symptoms of dementia; CI, confidence interval; MMSE, Mini-Mental State Examination; N-ADL, Nishimura-style senile activities of daily living; OR, odds ratio.

MMSE score, higher N-ADL score, and manifestation of hallucination. Negative correlations were found between HD and living alone and the manifestation of aggressiveness. Multiple logistic regression analysis identified higher MMSE and N-ADL scores as being significantly and independently associated with HD. In contrast, living alone and manifestation of aggressiveness in BPSD were independently and negatively associated with HD (Table 3).

## DISCUSSION

From the early stages of hospitalization, we start to design a support plan for patients based on the assumption that they will live at home after leaving hospital. However, the results of the present study show that fewer than half the patients were discharged home. In addition to living alone, multivariate analyses identified lower MMSE scores, lower N-ADL scores, and the manifestation of aggressiveness in BPSD as being independently and negatively associated with HD.

Findings of an association between functional state and HD were not surprising. Ono *et al.* demonstrated a positive correlation between N-ADL and HD in men and between revised Hasegawa's Dementia Scale

(HDS-R) and HD in women.<sup>13</sup> However, because that study was conducted in a single institution, it was crucial to verify the generalizability of the previous findings in the present study. Although the study by Ono *et al.* focused on gender differences in predictors of HD,<sup>13</sup> our data did not show any significant effect of gender, even in univariate analysis.

It is of note that our data clearly showed a negative impact of aggressiveness on the likelihood of HD. Because we did not evaluate chronological changes in symptoms in detail, it is unclear whether the aggressiveness exhibited by our patients was less likely to respond to pharmacotherapy than other clusters of BPSD. However, some studies have indicated that antipsychotics may be more effective in treating aggression rather than hallucinations and delusions.<sup>19–23</sup> This means that the lower likelihood of HD for patients who exhibited aggressiveness at the time of admission could be due to the family's unwillingness to take the patient back into their home, even with symptom control. Because the aggressiveness exhibited by our patients could be harmful and is often directed at those close to them, the interpersonal relationships between the patients and their families may have already been disrupted prior to the patient's

hospital admission. In addition to strengthened service provisions, intervention strategies targeting family members may be required to decrease the stress associated with caregiving and to improve patient-family relationships.<sup>24-26</sup> There is growing empirical evidence that these measures can simultaneously improve the quality of life of both the patient and caregiver.<sup>27,28</sup>

In contrast with aggressiveness, hallucinations usually manifest as disorganized speech or behaviour; they are associated with a less harmful nature towards others and are generally less disruptive.<sup>29</sup> A psycho-educational approach could help patients acquire an insight into their disease and enable their families to calmly deal with the problem behaviours, even if mild symptoms persist after pharmacological treatment.

The Orange Plan promotes earlier detection of and intervention for dementia. To this end, the Japanese government encourages primary care doctors to develop a better understanding of dementia and to collaborate with specialists from the earliest stages of the condition.<sup>9</sup> We hope that this strategy may, in turn, help prevent the development of prominent BPSD. Kunik *et al.* recently examined factors associated with the development of aggression and identified worsening of severe pain, caregiver burden, and declining mutuality over time as independent predictors.<sup>30</sup> Determining the factors precipitating BPSD could facilitate the development of preventive strategies in such cases.

Because the family is the first-line support for older people in Asian societies, stronger support systems are needed for patients living alone.<sup>26</sup> However, under the current Japanese Long-Term Care Insurance system, the absence of cohabitants is not taken into account when determining the level of care required. As nuclear families have become more common as the family unit, more elderly Japanese are living alone. This issue should be addressed in future changes to systems used to determine the level of care.

Several limitations of the present study must be acknowledged. The retrospective nature of the study, which was based on a review of patients' medical charts, means that the information available is limited. In addition, there could be other relevant variables that may have influenced HD. In particular, despite findings indicating its potential association with HD, we did not evaluate caregiver burden.<sup>31</sup> Furthermore, our routine practice does not include detailing of chronological responses to treatment. Finally, the

present study was conducted in a single institution in a particular region of Japan, and the likelihood of HD largely depends on the number of social workers or resources available in the region. To confirm the generalizability of our results, future well-designed multicentre studies are warranted.

In conclusion, lower MMSE scores, lower N-ADL scores, the manifestation of aggressiveness in BPSD at the time of admission, and living alone prior to hospital admission could predict a lower likelihood of HD in patients with BPSD. These findings should be taken into consideration when managing patients with dementia to enable implementation of optimal intervention and care strategies to improve patients' quality of life.

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## 特集

認知症の身体合併症医療：認知症患者の身体疾患治療に関する臨床的諸問題

2016  
G.V.V.

## 精神科病院における身体合併症医療

— 東京都立松沢病院の実践 —

齋藤正彦

## 抄録

精神科病院である東京都立松沢病院の身体合併症病棟の運営について、人的資源の状況、収支の状況について分析した。精神科病院で身体合併症医療を行うためには、医療法の精神科特例による人的資源の貧弱さと、それに対応した低い診療報酬が障害となることを示した。当院における4か月間の身体合併症病棟退院患者41例を認知症病棟退院患者93例と比較した。身体合併症病棟では血管性認知症の割合が高く、入院の原因となる身体疾患が認知症の原因疾患と密接に関係している例が多かった。両病棟とも、入院前後の日常生活動作（ADL）の変化には大きな差はなく、60～80%の患者は入院前後のADLに差がなかったが、向精神薬の使用が退院時ADL低下と関係している可能性が示唆された。身体合併症病棟の入院者の約56%、認知症病棟では入院者の約73%が自宅から入院していたが、自宅に退院する患者の割合は、身体合併症病棟29.3%、認知症病棟で19.4%であった。

Key words：認知症、身体合併症、精神科病院、身体拘束、向精神薬

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## はじめに

認知症患者の身体合併症治療にはいくつかの課題がある。第1に、患者が自分の身体症状を的確に伝えられないために、発見が遅れやすい。第2に、医師とのコミュニケーションがうまくできないために、診察や検査の同意を得にくい。第3に、患者が医師の指示を理解できなかったり、忘れてしまったりするために、検査や治療に支障が生じる。第4には、入院を要する事態になった場合、医療、看護上の指示に従えないばかりか、入院環境が刺激となって、それまでみられなかった認知症の行動・心理症状（behavioral and psychological symptoms of dementia；BPSD）が出現し、患者にとっても医療機関にとっても本来の疾患とは無関係のリスクが増す。こうした課題が解決でき

ずにいることは、患者や家族にとっても、医療機関にとっても大きな負担となっており、その結果、認知症患者の身体疾患の治療は、一般高齢者の身体医療と比較して必ずしも満足のいく状況にはなっていない。

厚生労働省の新オレンジプラン（認知症施策推進総合戦略）<sup>1)</sup>は、身体合併症への適切な対応を行うためには、「身体合併症等への対応を行う急性期病院等における行動・心理症状（BPSD）への対応力を高めること」および「精神科病院における身体合併症への対応力を高めること」がともに重要であるとしている。さらに、BPSDや身体合併症に対して、医療機関・介護施設等を適切に利用したとしても、医療機関・介護施設等での対応を固定化せず、退院・退所後もそのときの容態に最もふさわしい場所で適切なサービスが提供される循環型の仕組みを構築するとしている。

東京都立松沢病院（以下、当院）は2つの認知

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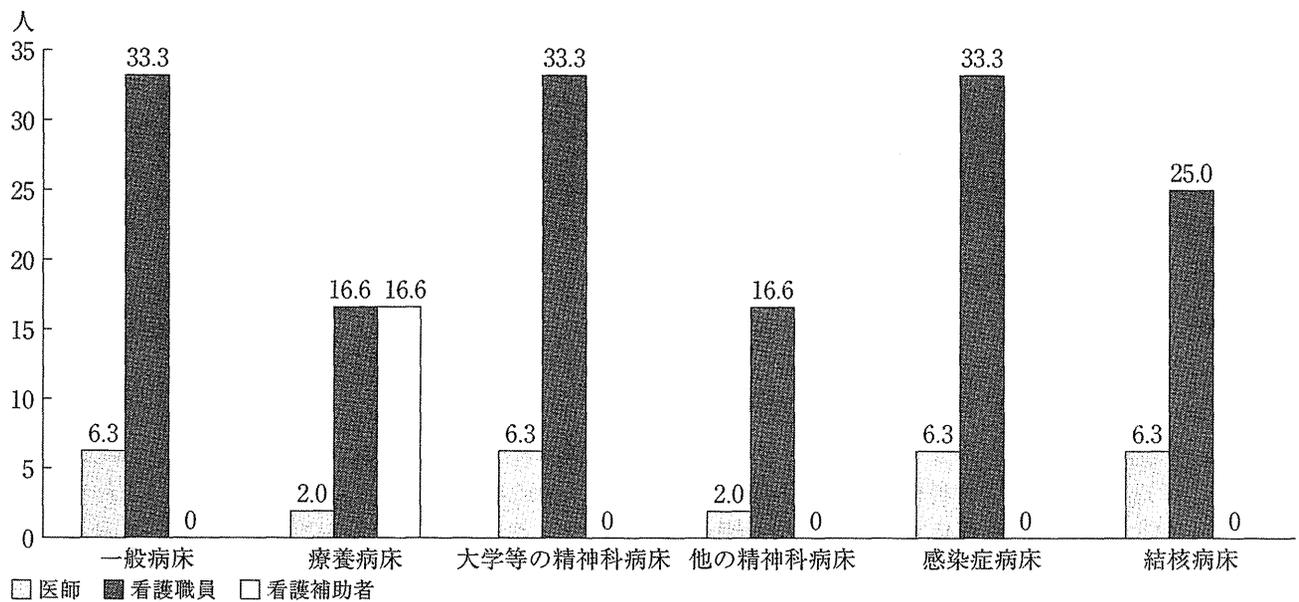


図1 精神科病床とその他の病床の100床あたり職員配置基準 (2018年3月31日まで)

症専門病棟と、4つの身体合併症病棟をもち、認知症患者の身体合併症治療を行ってきた。新オレンジプランが想定する合併症治療の場としている急性期病院ではないが、一般の精神科病院に比較すれば限定的であるとはいいながら、かなり専門的な身体合併症治療が可能である。

本論文では、当院で行われている身体合併症医療の現状について概観し、それに基づいて新オレンジプランの方針を実現するための課題について考察する。

## 1 精神科病院における身体合併症医療

精神科病床の職員配置は医療法上の精神科特例のため、一般病床に比較して著しく低い。図1には精神科病床とその他の病床との法令上の職員配置を示している。当院の890床のうち、800床は精神科病床であり精神科特例に従った人員配置であり、90床は看護基準13:1の一般病床である。認知症病棟(36床・41床)はいずれも精神科病床でおのおの指定医1人+精神科シニアレジデント1人が配置され、このうち身体合併症患者を受け入れる41床の病棟には内科医1人が兼務で配置されている。合併症病棟は5病棟(221床)あ

り、3病棟(131床)が精神科病床、2病棟(90床)が一般病床である。このうち、結核患者を受け入れる精神科1病棟を除いた4病棟を合併症病棟としてその機能を論じる。これらの4病棟には精神科医3人、精神科シニアレジデント2人のほか、内科医10人、神経内科医2人、外科医3人、整形外科医2人、脳外科医2人、麻酔科医2人、リハビリテーション科医1人、放射線科医1人(2016〈平成28〉年3月13日現在)が配置されている。

当直医は890床に対して5人であるが、精神科医以外の身体科医は1人である。当院には身体科の後期研修医はいないので、この1人が、合併症病棟のみならず、890床全体で起こる身体疾患と、救急受診する精神科患者の合併症について診療を支援する。残る4人のうち、2人は精神科精神保健指定医、またはそれに準じる経験をもつ医師、1人は精神科の後期研修医、1人は上席当直医について研修を行う初期研修医である。当院では、年間およそ200件の手術(外科、整形外科、脳外科)が行われるが、手術当日の当直医に、外科系医師がいないことも珍しくない。同様に、金曜日の午後に内科の重症患者が入院して、土日の当直