Surveys of Behavioral and Psychological Symptoms of Dementia (BPSD) in Dementia Patients

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Abstract

Introduction: Behavioral and Psychological Symptoms of Dementia (BPSD) is a major problem in dementia patients. BPSD is not only increased morbidity and mortality of the patients, but also impair quality of life in both patients and caregivers. The patients with BPSD have myriad clinical manifestations, ranging from psychiatric, affective and somatic symptoms. This study was intended to survey the incidence and effects of BPSD in dementia patients and caregivers in our hospital.

Objective: To survey the incidence and effects of BPSD.

Material and Methods: 100 dementia patients were tested with TMSE and 100 caregivers were answered the Neuropsychiatric Inventory-Questionaire (NPI-Q).

Results: The three most common BPSD in mild dementia group (TMSE score 20-24) were anxiety (60%), motor disturbance (38.7%) and apathy/indifference (35.5%). In moderate dementia group (TMSE score 13-20) were nighttime behavior (63.1%), apathy/indifference (60.5%) and anxiety (57.9%). Caregivers in mild dementia group rated anxiety as the most distress symptom (distress level 3), while caregivers in moderate dementia group rated nighttime behavior, anxiety and hallucination as the most distress symptoms (distress level 4).

Conclusion: The common symptoms were anxiety, apathy/indifference, motor disturbance and nighttime behavior. The severities of BPSD and caregiver distresses were higher, depends on the severity of dementia. Knowing the incidence of common BPSD symptoms will alert caregiver and physicians taking care of dementia patients, so early management to prevent morbidity and improve quality of life in both patients and caregivers can happen.

Keywords: Dementia, BPSD

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Introduction

Dementia resulted from declining of cognitive functions, which interferes with a person's daily life and activities.[1] The symptoms of dementia ranging from mild degree such as attention deficit to more severe degree, which the patients cannot perform basic activities of daily living (ADLs). While forgetfulness is the main problem that caregivers recognize, there are many other cognitive problems such as abnormal in perception, concentration, calculation, planning, reasoning, making decision and language that play an important role in this degenerative disease. Apart from these, there are many affective symptoms in dementia patients, such as depression, anxiety, apathy, delusion, hallucination, agitation, aggression, dysphoria, elation, disinhibition, irritability, and problem with eating and appetite. These symptoms called Behavioral and Psychological Symptoms in Dementia (BPSD), which impact on quality of life, morbidity, mortality and suicidal attempt risk of the patients and quality of life of the caregivers.[2-4]

Many dementia patients have been visited neurology clinic at Rajavithi hospital. We performed history taking, complete physical and neurological examination, mental status examination, laboratory and brain imaging for diagnosis and plan of management for each patient, but we only had a little time for complete evaluation about affection, behavior and social aspects of the patients. This study aims to survey the incidence of BPSD and their effects on the patients and caregivers. Knowledge of the incidence and common symptoms of BPSD may help patients, caregivers and physicians aware of the problems and can cope with these symptoms appropriately.

Objectives

1. To survey the BPSD symptoms in dementia patients
2. To survey the effect of BPSD to the caregivers

Materials and Methods

Study design

A retrospective descriptive study was done in 2550-2561. Total 100 patients and 100 caregivers were recorded. Basic patient profiles, BPSD severity and effect on the caregivers were recorded. Basic patient profile record form includes sex, age, education level, underlying disease, current medications and TMSE score. Severity of dementia was categorized by TMSE score, which patients who got score of 20-24 were in mild dementia group, and patients who got score of 13-20 were in moderate dementia group. NPI-Q was used for evaluate BPSD symptoms of the patients including apathy, anxiety, agitation or aggression, depression, motor disturbance, elation or euphoria, delusion, hallucination, disinhibition and irritability or lability, and evaluate the caregivers' distresses.

Characteristics of study samples

The patients who were diagnosed with dementia, age at least 60 years, and graduated at least high school were included. The patients who were diagnosed with delirium or had severe dementia that cannot communicate were excluded.

Statistical analysis

Descriptive statistics were used to quantitatively describe the features of our data, and the data were showed in number, percentage, and bar charts.

Results

Basic patient profiles were sex, age, graduation level, underlying disease, current medications and TMSE score which categorized patients into two groups, mild and moderate dementia.

We reported total 100 patients, 62 patients were in mild dementia group and 38 patients were in moderate dementia group. In mild dementia group, male to female ratio were 29:33, mean age was 69.6 years old and mode TMSE score was 23. In moderate dementia group, male to female ratio were 18:20, mean age was 71.4 years old and mode TMSE score was 17. The three most common underlying diseases were hypertension (79 cases), diabetes (47 cases) and dyslipidemia (36 cases). The basic patient profile was shown in Table 1.

BPSD symptoms in each dementia group were shown in Table 2. In mild dementia group we found all BPSD symptoms except delusion. The BPSD symptoms were hallucination (17.7%), agitation or aggression (9.7%), depression or dysphoria (21%), anxiety (60%), elation or euphoria (8%), apathy or indifference (35.5%), disinhibition (8.1%), irritability or lability (9.7%), motor disturbance (38.7%), nighttime behaviors (16.1%), appetite or eating (3.2%). In moderate dementia group we found delusion (18.4%), hallucination (44.7%), agitation or aggression (15.8%), depression or dysphoria (31.6%), anxiety (57.9%), elation or euphoria (10.5%), apathy or indifference (60.5%), disinhibition (29%), irritability or lability (23.7%), motor disturbance (39.5%), nighttime behaviors (63.1%), appetite or eating (10.5%). The three most common BPSD in mild dementia group were anxiety, motor disturbance and apathy or indifference which were 60%, 38.7% and 35.5% respectively (Chart 1). The three most common BPSD in moderate dementia group were nighttime behavior, apathy or indifference and anxiety was 63.1%, 60.5% and 57.9% respectively (Chart 2). The most distress symptom to the caregivers in mild dementia group was anxiety which was in level 3 distress (moderate distress) (Chart 3), while in the moderate dementia group were nighttime behavior, anxiety and hallucination, which were in level 4 distress (severe distress) (Chart 4).

Table 1 Patient basic profiles

	Mild dementia	Moderate dementia
Number (Male : Female)	62 (29:33)	38 (18:20)
Age	69.6 (64-82)	71.4 (62-88)
TMSE score	23 (20-24)	17 (13-20)
Underlying disease		
Hypertension	47	32
Diabetes mellitus	26	21
Dyslipidemia	22	14
Gout	2	0
OA knee	0	4

Table 2 NPI-Q result

Symptoms		NO	SEVERITY			Percent	DISTRESS					
			1	2	3	affected	0	1	2	3	4	5
Delusion	mild	62				0						
	mod	31		7		18.4		2	2	3		
Hallucination	mild	51	11			17.7	11					
	mod	21	1	12	4	44.7		1	9	5	2	
Agitation	mild	56	6			9.7	2	4				
or Aggression	mod	32	1	5		15.8		2	4			
Depression	mild	49	13			21	8	5				
or Dysphoria	mod	26	7	5		31.6		5	6	1		
Anxiety	mild	25	17	18	2	60		14	12	11		
	mod	16	8	9	5	57.9		10		8	4	
Elation	mild	57		5		8	5					
or Euphoria	mod	34	3	1		10.5	2	2				
Apathy	mild	40	8	14		35.5	16	6				
Indifference	mod	15	8	13	2	60.5		4	16	3		
Disinhibition	mild	57	5			8.1	3	2				
	mod	27	5	6		29	5	2	4			
Irritability	mild	56	4	2		9.7	5	1				
or Lability	mod	29	4	5		23.7	2	4	3			
Motor disturbance	mild	38	8	11	5	38.7	19	5				
	mod	23	2	6	7	39.5	3	6	6			
Nighttime Behaviors	mild	52	8	2		16.1	9	1				
	mod	14	4	13	7	63.1	2	9	3	6	4	
Appetite	mild	60	2			3.2	2					
or Eating	mod	34	4			10.5	3	1				

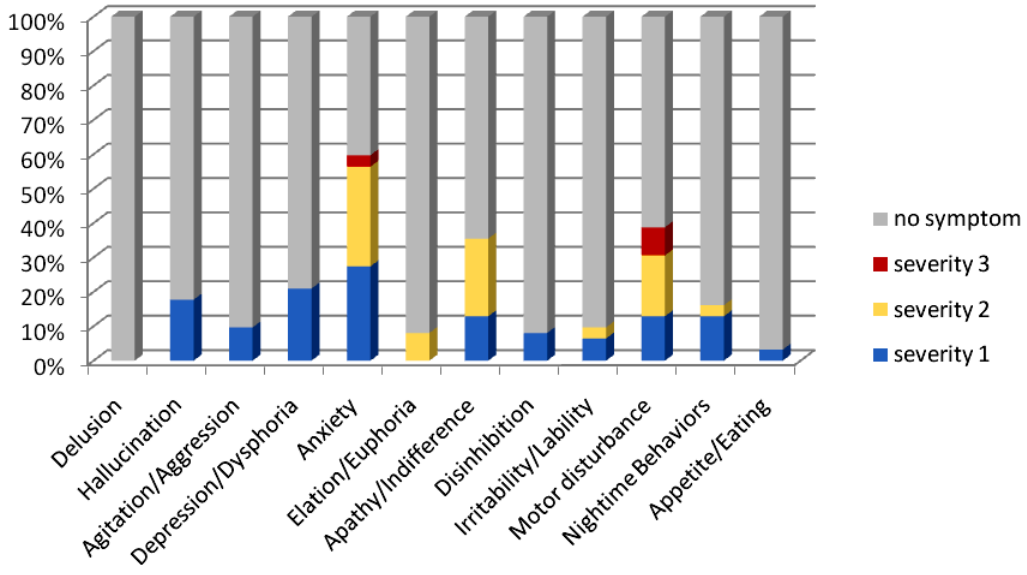

Chart 1 Severity of the symptoms in mild group

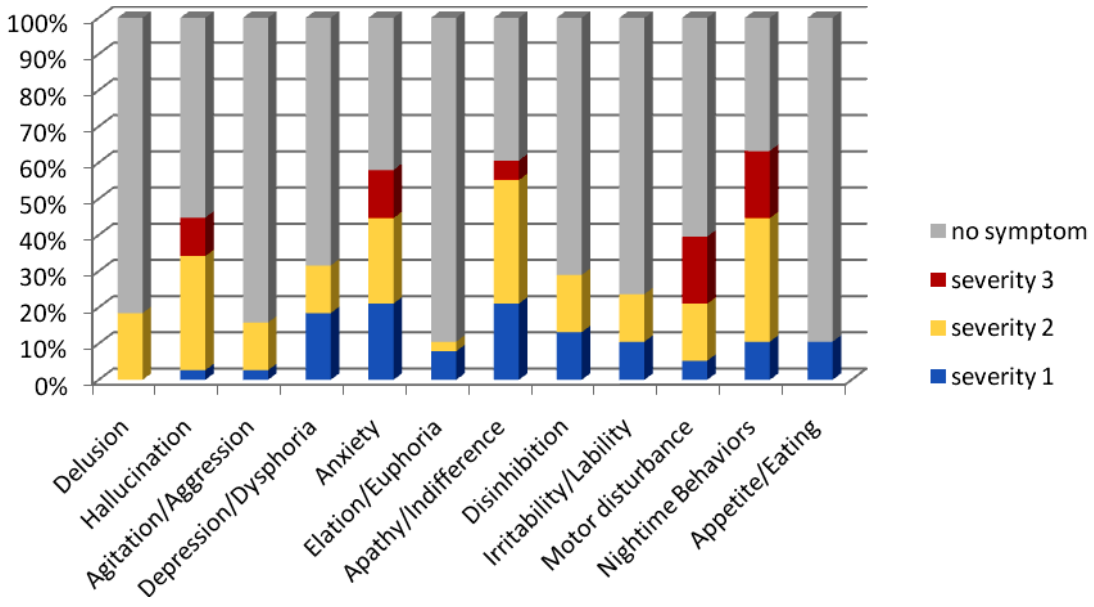

Chart 2 Severity of the symptoms in moderate group

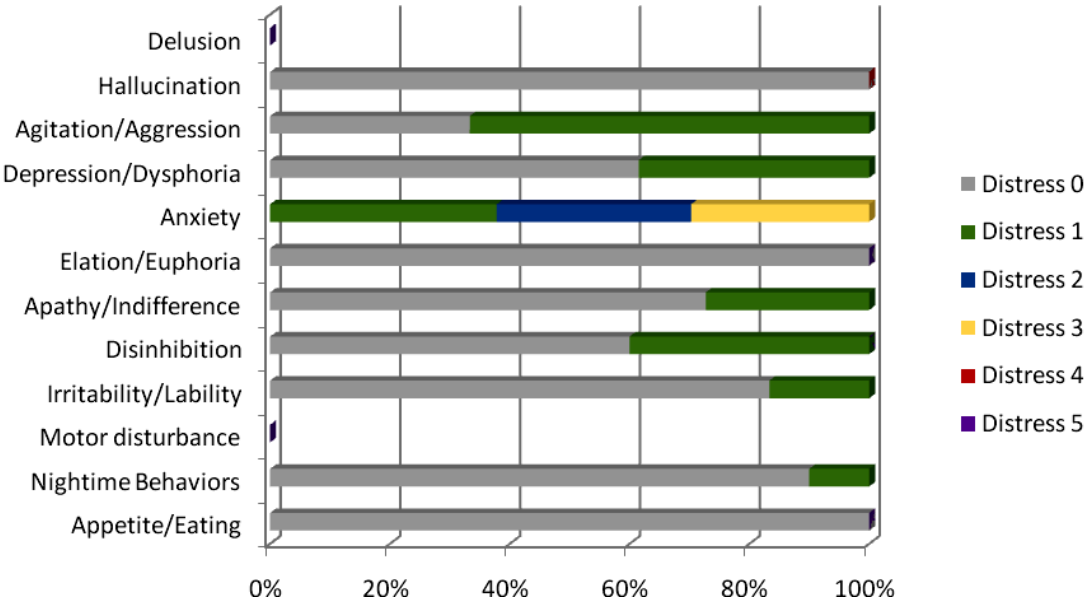

Chart 3 Distress of the symptoms to caregiver in mild group

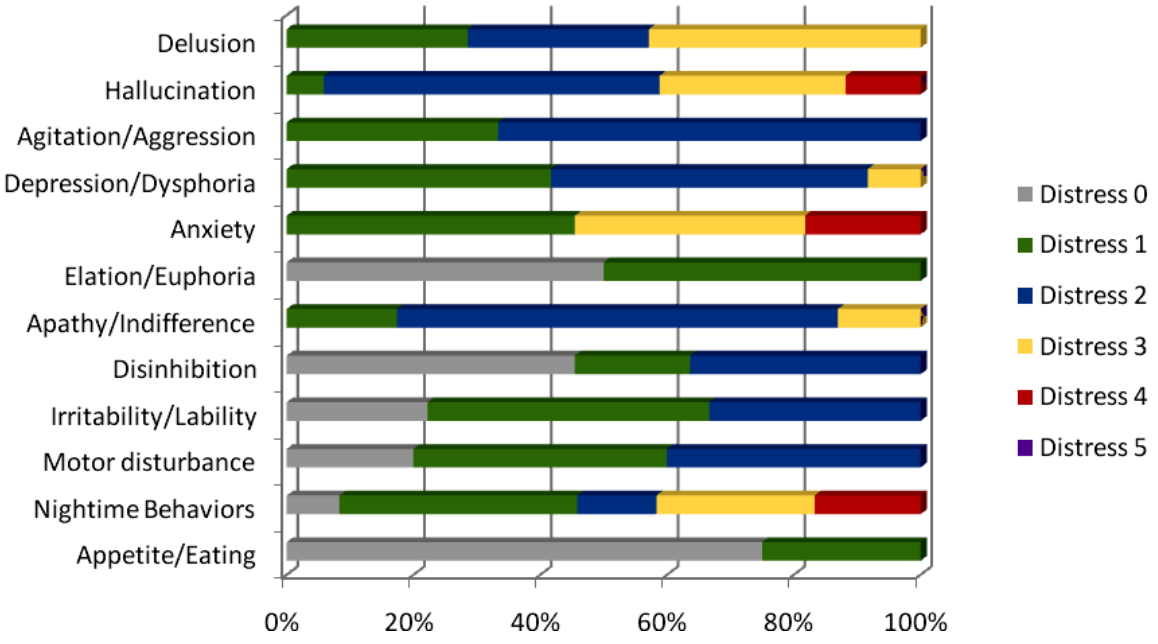

Chart 4 Distress of the symptoms to caregiver in moderate group

Discussion

In the patient's viewpoint, the most severe symptom in mild dementia group were anxiety and motor disturbance while in moderate dementia group were motor disturbance, night time behavior, anxiety, hallucination and apathy or indifference. We also found that more BPSD symptoms happened when the severity of dementia progressed. The reason that delusion was not found in mild dementia group may be that the patients still can perceive things, think, speak and feel normally. BPSD symptoms varied in both type of symptoms and severity, which may be explained by multiple factors such as rate of neuronal degeneration, baseline brain activity, intervention and management to delay degenerative process including medications, brain-training game and family/social support.

In the caregiver's viewpoint, the most distress symptom in mild dementia group was anxiety, while in moderate dementia group were anxiety, hallucination and nighttime behavior. The more severe dement patients causing the more distress to the caregivers. The caregivers feel that the BPSD symptoms causing them problem when they interfere with their quality of life. For example, anxiety caused minimal distress if it was shown in the form of frequent sigh. On the other hand, anxiety in the form of frequent asking, yelling or excessive need for caregiver to stay with them all the time will cause more distress to the caregiver. Delusion in the patients who worry that some strangers will steal their stuffs was less distress than delusion in the patients who hide everything and cannot remember where they were. Nighttime behaviors were one of the most frequent distressing symptoms because it interrupted the caregiver' samount of sleep and it took quite some times to get the patients back to sleep again.

From the results of this study, we conclude that BPSD symptoms were worsen as the severity of cognitive decline progressed. The patients with

many symptoms and more severe of BPSD will cause more distress to the caregivers. There are some limitations of our study. First, most of the patients stayed with their relatives as Thai culture, the data must be retrieved from the relatives who taking care and spent most of the time with the patients. Second, all of the data came from patients and caregivers' answers which may have different viewpoints of their symptoms and degree of severity. Third, in most situations, caregivers tend to rated the symptoms that affected them higher than the symptoms that did not affect them much. For example, the distress score that caregiver rated for nighttime behavior will be less distress if the patients have more than one caregiver, compared to the patients who have only one caregiver. So, the results of the severity of distress may not reflect the real BPSD severity of the patients. However, these situations confirm the need for caregiver support, so they could get some rest and have time for their own.

Conclusion

Our dementia patients presented with various BPSD symptoms, which anxiety, motor disturbance, and apathy/indifference were the three most common symptoms in mild dementia, and nighttime behavior, apathy/indifference and anxiety were the three most common symptoms in moderate dementia. Delusion was found only in moderate dementia. The severities of BPSD were higher in more dement patients. Caregiver distresses were also increased with the severity of dementia. Knowing the incidence of common BPSD symptoms, will improve recognition of caregiver and physicians taking care of dementia patients, so early management to prevent morbidity, suicidal attempt and improve quality of life in both patients and caregivers can happen.

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