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原　　著

Depression among Caregivers of Elderly Patients on Chronic Hemodialysis

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Abstract The present study was conducted to investigate depression in caregivers of elderly hemodialysis patients. Caregivers answered a self-administered questionnaire about various factors that may affect their depression, and also completed a Center for Epidemiologic Studies Depression Scale evaluation (CESD). The frail elderly who received regular nurse visits were used as controls. Compared with the caregivers of controls, those of hemodialysis patients spent less time on caregiving and had more time to go out unaccompanied by their patients. Males were numerous among hemodialysis patients than in the controls. Compared with the controls, hemodialysis patients were less likely to be older old (80 years old and more), diagnosed as demented or severely limited in activities of daily living (ADL). On the other hand, we did not find any significant difference between the two groups with regard to either the prevalence of depression, the rate of those who experienced any life event such as to cause depression within 6 months (e.g., death of family member), duration of caregiving or time looking after patients. Caregivers of hemodialyis patients may feel a heavy burden because they are obliged to play an important role in supporting patients on dialysis. They seem to need more social support regardless of whether or not their patients suffer from dementia.

Key words: caregiver, burden, hemodialyis, elderly, depression

Introduction

Improvement of public health and advances in medicine after World War II have given Japan the highest life expectancies in the world, i.e., 77.2 years for men and 83.8 years for women in 1997[5]. This dramatic increase in the number of older people in this country is well documented, and it means an increase in the number of elderly in need of care (i.e., frail elderly). It is estimated that the number of the frail elderly will increase to 390 million in 2010 and 520 million in 2025[5]. Since the frail elderly cannot

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perform their daily activities without help from family or professionals, family members are often both physically and mentally burdened with caring for them[5]. Therefore, ways to reduce the burden on caregivers looking after the frail elderly is an important issue for society.

According to the increase in elderly population, many aged renal failure patients have started dialysis therapy. In 1998, 30,051 patients began dialysis therapy. Among them, 14,693 patients (48.9%) were elderly (65 years old or older)[2]. Advances in dialysis therapy have improved the survival rate of dialysis patients. The one-year survival rate of dialysis patients increased from 83.5% in 1988 to 86.4% in 1998[2]. The increasing number of aged patients starting dialysis therapy and the improvement in the survival rate of dialysis patients have meant a great number of elderly dialysis patients in Japan. In 1998, there were 70,298 elderly (65 years old or older) patients on dialysis therapy, accounting for 38.7% of all the dialysis patients in Japan[2]. Therefore, reducing the caregivers' burden with elderly dialysis patients may be an important social problem as well. The present study is aimed at investigating depression among caregivers caring for aged hemodialyis patients in comparison with the frail elderly receiving regular nurse visits from a practice nurse clinic.

Method

Subjects

Forty-three pairs of elderly hemodialysis patients and their caregivers and 58 pairs of frail elderly and their caregivers participated in this study. All of these hemodialysis patients were on dialysis therapy in M-hospital from September 2000 to February 2001, and all of the frail elderly received regular nurse visits from M-practice nurse clinic from May 1998 to August 1999. The M-practice nursing clinic is run by M-hospital located in Kurume City, Fukuoka Prefecture, Japan.

Measurements

The caregivers were asked to complete the following self-administered questionnaires in relation to their burden, depression and caregiving situation in the same manner as our previous studies[1)4)13)]: (i) a Japanese version of the CES-D (Center for Epidemiologic Studies Depression Scale)[9)12)]; (ii) questions regarding demographic variables of the caregivers and their patients; (iii) questions regarding the time spent actually helping their patients to perform daily activities, the time used only looking after their patients and the total duration of caregiving; and (iv) the number of formal services the caregivers currently used. Caregivers were divided into two groups according to their CES-D score (i.e., the cut-off point of the CES-D being 16 as defined above): (i) those who were depressed, and (ii) those who were not.

The methods of assessment of physical disability were reported elsewhere[1)4)13)]. In short, Barthel Index (BI)[3)] was employed for physical disability. As reported previously, the patients were divided into two groups: (i) the elderly whose BI was 60 or less (severely dependent), and (ii) those whose BI was more than 60 (moderately dependent).

Analyses

The characteristics of hemodialysis patients and their caregivers were compared with those of the frail elderly receiving regular nurse visits and their caregivers. The frail elderly were used as controls. Statistical analyses were performed using the Statistical Analysis System package (SAS Institute, Cary, USA)[11)]. The Mann-Whitney U-test, the Chi-square test, the Mantel-Haenszel test or the Fisher exact test

compared these two groups.

Results

Table 1 shows the characteristics of caregivers. There was no significant difference between the two groups with regard to either gender, age, relationship of caregiver to patients, the rate of depression, or the rate of those with any life event. Table 2 presents the care setting. Compared with the caregivers of the controls (i.e., the frail elderly receiving regular nurse visits), caregivers of hemodialysis patients spend less time on helping their patients to perform daily activities and had more time to go out unaccompanied by their patients. In contrast, we did not find any significant difference between the two groups with regard to either the duration of caregiving or the time looking after the patients. Table 3 gives the characteristics of the patients. Male patients were more commonly seen in hemodialysis patients than in the controls. Compared with the controls, hemodialysis patients were less likely to be older old (80 years old and more), diagnosed as demented or severely limited in ADL.

Discussion

In the present study, caregivers of hemodialysis patients spent less time on helping their patients to perform daily activities and had more time to go out without accompanying

Table 1 Comparison between hemodialysis patients and frail elderly with regular nurse visit : caregiver characteristics

Caregivers	Hemodialyisis patients (Cases, n=43)	Frail elderly with regular nurse visits (Controls, n=58)	p-value
Gender			
Male	5 (12)	10 (17)	
Female	38 (88)	48 (83)	0.57
Age (years)			
50-59	11 (25)	20 (35)	
60-69	18 (42)	13 (22)	
70+	14 (33)	25 (43)	0.11
Relationship of caregiver to patients			
Spouse	30 (70)	28 (48)	
Child	5 (12)	17 (29)	
Daughter-in-law	6 (14)	9 (16)	
Other	2 (4)	4 (7)	0.12
Depression			
Yes	17 (40)	27 (47)	
No	26 (60)	31 (53)	0.55
Life event			
Yes	9 (21)	12 (21)	
No	34 (79)	46 (79)	0.98

Each set of values represents number and percentage (%)
The Chi-square test, the Mantel-Haenszel test or the Fisher exact test compared these two groups.
Life event : an event which may cause depression within 6 months, e.g., death of family member, divorce.

Table 2 Comparison between hemodialysis patients and frail elderly with regular nurse visits: care setting.

Care setting	Hemodialysis patients (Cases, n=43)	The frail elderly with regular nurse visits (Controls, n=58)	p-value
Duration of caregiving (months)	37.3 (40.6)	38.1 (36.1)	0.58
Time helping their patients perform daily activities (hours/day)	1.2 (1.4)	6.7 (6.8)	0.00
Time looking after their patients (hours/day)	7.6 (9.6)	10.6 (9.7)	0.51
Time going out without accompanying their patients (hours/day)	5.6 (6.3)	3.1 (3.8)	0.01

Values are expressed as the mean (SD)
The Mann-Whitney U-test compared these two groups.

Table 3 Comparison between hemodialysis patients and frail elderly with regular nurse visits: patient characteristics.

Patients		Hemodialysis patients (Cases, n=43)	Frail elderly with regular nurse visits (Controls, n=58)	p-value
Gender				
	Male	29 (67)	23 (40)	
	Female	14 (33)	35 (60)	0.01
Age (years old)				
	60-69	15 (35)	4 (7)	
	70-79	25 (58)	19 (33)	
	80+	3 (7)	35 (60)	0.00
Dementia				
	With	0 (0)	26 (45)	
	Without	43 (100)	32 (55)	0.00
Activities of daily living (ADL)*				
Severely limited ADL		2 (5)	42 (72)	
Moderately limited ADL		41 (95)	16 (28)	0.00

Each set of values represents number and percentage (%)
The Chi-square test, the Mantel-Haenszel test or the Fisher exact test compared these two groups.
* Severely limited ADL: Barthel Index ≦60
Moderately limited ADL: Barthel Index >60

their patients than those of the controls (i.e., the frail elderly with regular nurse visit). However, we did not find any significant difference between the two groups with regard to the rate of depressive caregivers, or the time looking after their patients. These findings were consistent with the result of our previous study[4], which demonstrated that the time monitoring the elderly rather than the time of physically caring them (i.e., helping them to perform daily

activities) was an independent factor related to caregiver's depression. The results of the present study and our previous study[4] suggest that looking after patients for a long time may be an important factor related to the caregivers' depression.

Caregivers are often burdened with caring for the demented elderly[7]. Caregivers of the demented elderly with behavioral disturbances feel a heavier burden than caregivers of the bed-ridden elderly[7]. In our previous study[13], the behavior disturbance associated with dementia was related to the depression of caregivers. In the present study, however, we did not find any difference between the two groups with regard to the rate of depressive caregivers, despite the fact that the dementia was less common in hemodialysis patients than in controls. Since hemodialysis patients must undergo dialysis therapy 4 or 5 hours every other day (i.e., 3 days a week, e.g. Monday, Wednesday and Friday ; or Tuesday, Thursday and Saturday), supporting dialysis patients attending dialysis sessions may be a heavy burden for their caregivers[10]. Approximately 24% of dialysis patients die from congestive heart failure[2], and cardiovascular complications are more common in the elderly than in younger dialysis patients[8]. Therefore, preventing fluid overload and hyperkalemia are important for the dialysis patients. Caregivers of hemodialysis patients are burdened because they must prepare special dishes for their patients and support them attending dialysis sessions[6]. Nursing staffs in dialysis clinics should lend assistance not only to dialysis patients but also their family members[6].

In summary, compared with caregivers of the frail elderly, those of hemodialysis patients spent less time helping their patients perform daily activities. On the other hand, we did not find any significant differences between the two groups with regard to either the prevalence of depressive caregivers or time looking after their patients. These findings suggest that the time helping the elderly to perform daily activities rather than looking after them may be an important factor related to caregiver depression.

Although we did not find any significant difference between the two groups with regard to the prevalence of depressive caregivers, none of the hemodialysis patients suffered from dementia in the present study while nearly half of the frail elderly were so. These findings may suggest that caregivers of hemodialyis patients feel heavy burden not because their patients have behavioral disturbances but because they are obliged to play an important role in the safer dialysis life of their hemodialysis patients. They seem to need more social support regardless of whether or not their patients suffer from dementia.

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References

1) Arai Y, Miura H, Washio M and Kudo K : Depression among caregivers of the elderly in need of care and their service utilization. Psychiatry Clin. Neurosci. 52 : 463-465, 1998.

2) Japanese Society for Dialysis Therapy : An overview of dialysis treatment in Japan (as of Dec. 31, 1998). J. Jpn. Soc. Dial. Ther. 33 : 1-27, 2000 (in Japanese).

3) Mahoney FI and Barthel DW : Functional evaluation : the Barthel index. Maryland State Med. J. 14 : 61-65, 1965.

4) Matsuu K, Washio M, Arai Y and Ide S : Depression among caregivers of the frail elderly in

urban Japan. Psychiatry Clin. Neurosci. 54: 553-557, 2000.

5) Ministry of Health and Welfare: Outline of a new public long-term care insurance service system. In Annual Report on Health and Welfare 1998-1999. pp197-200, Gyousei, Tokyo, 1999 (in Japanese).

6) Mizoguchi K: How to support family members of hemodialyis patients. Jpn. J. Dialysis Caring 6: 416-421, 2000 (in Japanese).

7) Okayama M: How to care for the demented elderly. Nihinippon Shinbunsha, Fukuoka, 1992 (in Japanese).

8) Porush JG and Faubert PF: Chronic Renal Failure. In Renal Disease in the Aged. pp285-313, Little Brown, Boston, 1991.

9) Radloff L: The CES-D Scale: a self reported depression scale for research in the general population. Appl. Psychol. Measurement 1977; 1: 385-401.

10) Sato H: How to support hemodialysis patients in need of care for living with family members after their discharge. In Haruki S, Ohashi N and Maeda Y (ed): Life support of hemodialysis patients. pp241-251, Medika Shuppan, Osaka, 1997 (in Japanese).

11) SAS Institute Inc: SAS/STAT User's Guide. Release 6.03. ed. Cary, NC, 1998.

12) Shima S, Shikano T, Kitamura T and Asai M: Reliability and validity of CES-D. Jpn. J. Psychiatry 1985; 27: 717-723 (in Japanese).

13) Washio M and Arai Y: Depression among caregivers of the disabled elderly in southern Japan. Psychiatry Clin. Neurosci. 53: 407-412, 1999.

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（和文抄録）

高齢慢性血液透析患者の介護者の抑鬱

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介護者の抑鬱ならびに患者の特性，介護状況を，慢性血液透析を受けている高齢患者と訪問看護を受けている要介護高齢者と比較した．訪問看護を受けている要介護高齢者の介護者に比べ，血液透析患者の介護者は身体介護の時間が短く，患者を伴わないで，外出できる時間が長かった．また，男性患者は血液透析患者に多く見られた．

一方，後期高齢者(80歳以上)，痴呆，重度の日常生活動作制限は訪問看護を受けている要介護高齢者に多かった．介護者の抑鬱の割合，家族の死などの抑鬱に影響を与えそうなイベントを6ケ月以内に経験した者の割合，介護期間，食事や排泄などの身体介護ではないがお世話をしている時間（患者から目が離せない時間）は両群間で差を認めなかった．透析患者の介護者は身体介護の時間が短く，透析患者には痴呆患者がいないにもかかわらず，透析患者の介護者と訪問看護を受けている要介護高齢者の介護者との間で，抑鬱の割合に差を認めなかった．このことは，透析患者の介護者は通院の送迎や食事の管理を含む生活の管理など，患者の安全な透析生活に責任を負っていて，介護の負担が高いためだと考えられた．透析患者の介護者には患者の痴呆の有無にかかわらずもっと社会的サポートが必要だと考えられた．