ORIGINAL ARTICLE

Animal assisted therapy for people with dementia

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Abstract

Background: The effects of animal assisted therapy on patients with dementia were investigated through the use of mental state batteries.

Methods: The subjects were eight patients admitted in a local nursing home. Their mean age was 84.8 years ±7.0; four were dementia of Alzheimer's type patients, and the others were vascular dementia patients. Mental state tests included the apathy scale, the irritability scale, the depression scale, the activities of daily living and mini-mental state examination. Dog therapy with two dogs from the Japanese Rescue Association took place for 1 h over four consecutive days.

Results: The patients could communicate with and observe the dogs, and the dogs could interact with the humans. The results indicated no significant difference in the irritability scale, the depression scale, activity of daily living and mini-mental state examination. However, most patients had a good impression of dog therapy, and all improved their apathetic state.

Conclusions: These results might imply that animal assisted therapy has the possibility to influence the mental state of patients with dementia.

INTRODUCTION

The elderly compose the fastest growing population group in Japan. It is projected that in the year 2020, 25% of the Japanese population will be 65 years or older. The care of people with dementia is one of the most important problems in Japan today. Many causes of dementia has been shown; with dementia of Alzheimer's type (DAT) and vascular dementia (VD) being the most common forms of dementia. Demented patients manifest many neurobehavioral problems.[1–3] For example, they demonstrate delusion, depression, apathy, irritability, anxiety, sleep disorders or difficulty in social activities. For managing such behavioral problems associated with dementia, strategies such as planned walking, pet therapy, an attention focusing program, music and visual barriers show promising results in improving these behavioral abnormalities in Western countries.[4–6] However, in Japan we have only a few reports regarding the effects of animal assisted therapy (AAT) for managing patients with dementia through the use of mental state batteries.[7,8]

SUBJECTS AND METHODS

Subjects were eight female patients admitted in a local nursing home. Their mean age was 84.8 years ±7.0; four were DAT patients and the others were VD patients. The diagnosis of dementia was performed according to the *Diagnostic and Statistical Manual of Mental Disorders, Forth Edition* (DSM IV) diagnostic criteria,[9] NINCDS-ADRDA or NINCDS-AIREN. All of these patients agreed to attend the dog therapy activities and informed consent was obtained. As there was very mild cognitive change in the subjects of present study, we did not request informed consent from their families. In the present study we did not prepare control subjects, because we could not find a matched control group.

We conducted mental status tests before and after the dog therapy activity. Mental status examination included the apathy scale, the irritability scale, geriatric depression scale (GDS), physical self-maintenance scale (PSMS) and mini-mental state examination (MMSE). The irritability tests were composed of seven questionnaires and the apathy tests; four questions.

Apathy scale is composed of five questions and evaluates activity and apathy state of the patients.[10] Scores vary from 0 to 25 points. Irritability scale is also constructed by five questions and evaluate patients' irritability. Scores vary from 0 point to 17 points.[10] GDS includes 30 questions and if the patients have more than eleven points, they may be diagnosed as 'depressive state'.[11] PSMS composes eight questions in terms of activity of daily living. These include telephone use, shopping, dining, housekeeping, washing, going outside, taking medicine, and managing money.[12] MMSE is composed by tests for orientation, attention, calculation, recall, repetition, reading and writing. The scores vary from 0 to 30 points.[13]

Animal assisted therapy with two dogs from the Japanese Rescue Association took place for 1 h over four consecutive days. Two therapy dogs, aged 3 years participated in this AAT program. There were three types of activities which were done by therapy dogs. First type of the activity was the communication with dogs. The dogs were introduced and the participants instructed them to sit down or wait. Then they could touch the dogs or call dog's name. The second type of activity was to observe the dog's exercise. For examples, they could see dogs jumping into the ring. Third type of the activity was that the dogs interact with the humans.

RESULTS

The results indicated no significant difference in the irritability scale, the depression scale, ADL and MMSE between before therapy and after therapy (Table 1). However, most patients had a good impression of dog therapy. Seventy-five percent of the patients quoted that it is a fun to attend dog therapy and they like dogs very much.

Sixty-three percent of the patients mentioned that they like dogs better after attending this activity and they would like to attend this activity again. Furthermore, all improved their apathy state and a significant difference was found before and after the dog therapy (Table 1).

Table 1 Mental state change before and after dog therapy

	Before therapy (SD)	After therapy (SD)	*P*-value
MMSE	20.5 (6.3)	19.5 (7.4)	NS
PSMS	5.2 (2.1)	5.0 (2.1)	NS
GDS	12.5 (7.8)	13.4 (3.8)	NS
Irritability	7.5 (3.8)	7.0 (3.1)	NS
Apathy	19.4 (3.7)	14.0 (3.5)	≤0.05

GDS, geriatric depression scale; MMSE, mini-mental state examination; NS, not significant; PSMS, physical self-maintenance scale; SD, standard deviation.

DISCUSSION

We conducted AAT for patients with dementia and found that most of them prefer to take AAT. Furthermore, patients with dementia had improved apathy state by taking AAT. Zisselman *et al.* reported that women with dementia who received AAT had improved irritable behavior scores after treatment, although no significant differences in the multidimensional observation scale for elderly subjects scores (MOSES), which has 40 subscale items, were found between or within groups before and after the intervention.[6] Their AAT was for 1 h a day for five consecutive days. These results are almost consistent with our data although our results mainly change in the apathy scale rather than irritability scale. Kongable *et al.* mentioned the presence of a pet dog on a special-care DAT unit significantly increased social behaviors, such as greeting other people, speaking with other people or attending activities in the nursing home.[14] On the basis of these observations we believe that AAT programs are desirable components of multidisciplinary treatment for patients with dementia and AAT is essential to increase socialization, activity and sense of mastery. As we could conduct dog therapy on only a small number of patients and could not perform a controlled study. This pilot study shows the need for further research on animal-assisted interventions for people with dementia.

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