many disease-modifying treatments are in early stages of development [11]. Multimodal therapies, targeting i-amyloid, tau, inflammation and cognitive symptoms, may prove to be more efficacious than monotherapy. However, as these are more likely to cause adverse effects, they may not be acceptable to many patients during the earliest stages of the disease. On the other hand, the availability of an early predictor for rapid disease progression may mean those positive would be willing to accept aggressive treatments and concomitant side-effects.

This case demonstrates that Alzheimer’s disease can progress extremely rapidly, with seizures and myoclonus as early manifestations. The presence of 14-3-3 proteins in the cerebrospinal fluid may suggest rapid disease progression. However, other neurological diseases associated with extensive neurological damage and 14-3-3 proteins in the cerebrospinal fluid should always be considered, and excluded with a detailed history and physical examination, together with appropriate investigations and imaging.

Key points

- In some cases of Alzheimer’s disease, the progression of dementia can be extremely rapid.
- The presence of 14-3-3 proteins in the cerebrospinal fluid occurs in many diseases that cause acute or sub-acute neurological damage.
- Further research is needed on the association between rapidly progressive dementias and positive 14-3-3 proteins.

Conflicts of interest

None

References


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Research letters

Interventions were known to exhibit positive effects, a combined effect has not been fully investigated [11]. We hypothesized that donepezil has an effect in slowing cognitive deterioration, and that the additional psychosocial intervention would increase their QOL.

Methods

Patients

We studied institutionalised patients in nursing homes. Inclusion criteria were (1) they met the probable AD criteria (National Institute for Neurological and Communicative Disorders and Stroke–Alzheimer’s Disease and Related Disorders Association) [15]; (2) the Mini-Mental State Examination (MMSE) [16] scores ranged from 10 to 20; (3) magnetic resonance imaging (MRI) showed hippocampal atrophy with only small lacunes. Exclusion criteria were (1) severe aphasia affecting communication with staff members; (2) the presence of severe behavioural and psychological symptoms of dementia (BPSD) which need drug therapy. The BPSD were assessed using the BEHAVE-AD-FW [17], and those with a total score greater than 5 were operationally excluded.

A total of 30 AD patients were recruited, and eventually 28 patients’ families agreed to participate in the study. After checking the adverse effects of donepezil following 3 mg/day administration, 24 patients who did not show adverse effects were randomly divided into two groups (Donepezil Group versus Donepezil + Psychosocial Group). We did not randomly allocate any patients to receive only psychosocial intervention as the beneficial effect of donepezil has now been established, so delaying would be unethical. Members of the Psychosocial Group consisted of (1) those who manifested adverse effects with donepezil and had stopped treatment ($n = 4$), and (2) those who received psychosocial intervention in the same nursing homes before donepezil was licensed in Japan in 1999 ($n = 8$). Figure 1 illustrates the protocol.

Since none of the patients had capacity to give consent, written informed consent was received from relatives. The Medical Ethics Committee of the nursing homes approved the study.

Intervention

Donepezil group

The randomly divided 12 patients received donepezil only without psychosocial intervention. They received 3 mg/day of donepezil for 2 weeks to check for any adverse effects, which was then followed by administering 5 mg/day (in Japan, a maximum dose of 5 mg/day had been officially allowed till August 2007).

Donepezil + Psychosocial group

The remaining 12 patients received donepezil and psychosocial intervention. The interventions were performed 40 times in 12 months (every week for 8 months and twice a month for 4 months). This design was based on the clinical practice of our team.

Individual interventions

Three patients went through a reminiscence programme supported by Japanese traditional flower arranging. Before suffering from AD, the patients had had some experience with flower arrangement and one patient was a licensed teacher. A nurse, who is also a teacher (Mitsue Meguro) supported this intervention. We performed this intervention for 1 h for each patient. At the start of the intervention the RO was performed followed by naming the flowers. Past life histories associated with flower arrangement were used for reminiscence.

Group work

Nine patients were divided into three groups. One group consisted of three patients who were urged to cook. An occupational therapist (Mari Kasai) and a dietician led this group for 1 h to promote cooking small traditional dishes. These patients were good at cooking dishes, and past life histories associated with cooking were used for reminiscence. At the start RO for time and place was performed. A recipe was printed and given to the participants each time. Another group comprised of three patients who were urged to perform ancient Japanese calligraphy. These patients had made a hobby of calligraphy and one patient was a licensed
Research letters

Psychotherapies for mild cognitive impairment: reminiscence or rote rehearsal?

A recent study [1] reported that reminiscence therapy could improve cognitive performance in patients with mild cognitive impairment (MCI). However, the effect of rote rehearsal (RO) therapy is less clear. In this study, we compared the effects of reminiscence therapy and RO therapy on cognitive performance in patients with MCI.

Materials and Methods

Patients with MCI were recruited from a local hospital. The inclusion criteria were as follows: age between 65 and 85 years, Mini Mental State Examination (MMSE) score between 21 and 28, and a significant memory complaint. The exclusion criteria were as follows: diagnosis of dementia, neurologic disease, or psychiatric disease. Patients were randomly assigned to three groups: a reminiscence group, a RO group, and a control group. The reminiscence group received reminiscence therapy using their life histories, while the RO group received RO using a series of word lists. The control group received no therapy.

Results

The MMSE score was higher in the reminiscence group than in the RO group and the control group. The difference between the reminiscence group and the control group was significant (p < 0.05). No significant difference was found between the RO group and the control group.

Discussion

These results suggest that reminiscence therapy is more effective than RO therapy for improving cognitive performance in patients with MCI. Further studies are needed to investigate the mechanisms underlying these effects.

References


Research letters

AD [21–25]. All the patients exhibited a moderate severity of dementia, and our drug control (Psychosocial Group) also exhibited similar changes. Also, the donepezil effect on apathy has been reported [26]. Therefore, we considered that donepezil could maintain cognitive function and reduce apathy. For psychosocial intervention, no significant effect for cognitive function was noted. However, the outcome measure was MMSE, which assesses global function. A further investigation using frontal lobe function tests would be needed since the intervention might stimulate executive function.

As for QOL measure, a combined positive effect of donepezil and psychosocial intervention was noted when compared with donepezil only. After their attentions were stimulated by donepezil, their preserved functions might be stimulated by psychosocial intervention, leading to an increase in their QOL. Clinically, we know that AD patients who manifest impairment in recent memory, are able to recollect distant memories. We considered the patients’ past life histories and designed the intervention programs, which may be associated with their distant memory. Regarding the content, good emotional relationships between the patients and the staff showing excellent participation rate may have positive effects. Namely, for reminiscence supported by Japanese flower arrangement and old calligraphy, one patient who manifest impairment in recent memory, are able to recollect distant memories. We considered the patients’ past life histories and designed the intervention programs, which may be associated with their distant memory. Regarding the content, good emotional relationships between the patients and the staff showing excellent participation rate may have positive effects. Namely, for reminiscence supported by Japanese flower arrangement and old calligraphy, one patient who manifest impairment in recent memory, are able to recollect distant memories. We considered the patients’ past life histories and designed the intervention programs, which may be associated with their distant memory. Regarding the content, good emotional relationships between the patients and the staff showing excellent participation rate may have positive effects.

Key points
- We examined the combined effect of donepezil and psychosocial intervention for cognitive function and QOL for AD patients.
- Donepezil Group (n = 12) received donepezil without psychosocial intervention, whereas Donepezil + Psychosocial Group (n = 12) received donepezil and psychosocial intervention (RO with reminiscence).
- There was no group effect for MMSE changes, however, a significant group effect with a time by group interaction was noted for QOL-AD changes.

Conflicts of interest
None

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Research letters

Stroke in the very old: clinical presentations and outcomes

SIR—The number of people aged 80 and above is growing faster than any other age group. In 2006, people aged 80 and over were approximately 19% of the population in developed countries and around 10% in developing countries. In 2050, these figures are projected to be 29 and 18% in developed and developing countries respectively [1]. The octogenarian population has an average annual growth rate twice as high as the growth rate of the population group of over 60 years of age. Stroke will unavoidably be a major problem of this age as one-third of incidence is in this group [2]. In the UK, about 130,000 people suffer a stroke each year, almost 80% of the cases occur over the age of 65, and nearly half the strokes occur over the age of 75 [3]. Although the Oxford Vascular Study showed a decrease in the incidence of first-ever stroke by 40% over 20 years from 1981–84 to 2002–04, which means the drop of stroke incidence to approximately 88,000 patients per year, the overall incidence in patients aged ≥85 did not significantly change compared to the change of incidence in the younger patients [4, 5]. Moreover, the incidence rate in patients aged ≥85 was 12 times higher than the younger (16.36 versus 1.33 per 1,000 per year). Stroke in the very old (age ≥80 years) might be different from younger patients. The aim of this study was to investigate and compare demographics, risk factors, clinical presentations and clinical outcomes in two groups of patients with stroke, those aged 80 and over and those younger than 80 years.

Method

Data were collected prospectively from all patients with a confirmed diagnosis of acute stroke admitted to the Acute Stroke Unit (ASU), John Radcliffe Hospital, Oxford, between July 2006 and March 2007. The patient characteristics, clinical presentations, clinical outcomes and discharge destination were all collected. The data were compared between two age groups, less than 80 years and above 80 years of age. The National Institute of Health Stroke Scale (NIHSS) was calculated from the qualitatively recorded neurological examination in patients whose NIHSS were not measured quantitatively. Use of an estimated NIHSS has been shown to have a high degree of reliability and validity [6].

Results

There were 178 ischaemic strokes, 22 haemorrhagic strokes and 14 transient ischaemic attacks. There were 111 patients aged <80 with the mean age of 66.9 (±11.8) years, and 103 patients aged ≥80 with the mean age of 85.2 (±4.3) years. Females comprised 66 out of 103 in the very old, and 47 out of 111 in the counterpart (P = 0.001). The very old were more likely to have a higher pre-morbid modified Rankin Score (mRS 2–5) (59.2% versus 21.6%, P<0.0005), tended to live alone (47.6% versus 35.1%, P = 0.065), had more frequent history of hypertension (64.1% versus 50.5%, P = 0.044), and were less likely to currently drink alcohol (4.9% versus 14.4%, P = 0.019) or smoke (2.9% versus 11.7%, P = 0.014). For patients with known onset of stroke (69 patients in the very old, and 76 patients in the other), the very old presented to the hospital later (265 versus 105 min; P<0.0005). Twelve of the total 214 patients developed stroke while they were in hospital and were not included in analysis of time to presentation. Patient characteristics are summarised in Table 1.

The very old presented to the hospital more frequently with falls (14.4 versus 32%, P = 0.002), reduced mobility (0.9 versus 6.8%, P = 0.030) and less frequently with sensory symptoms (6.3 versus 0%, P = 0.015). Chief complaints and clinical findings are shown in Table 2. The median estimated NIHSS was 7 in patients aged under 80 and 8 in the very old (P = 0.376). Time from hospital arrival to CT scan tended to be longer in the very old (395 versus 205 min; P = 0.132), and thrombolysis tended to be utilised less in the very old (5.8 versus 9.0%, P = 0.376).

The very old were discharged home less often (61.3 versus 45.6%, P = 0.022), had higher in-hospital mortality (7.2 versus 17.5%, P = 0.022) and were less likely to be independent at discharge (50.5 versus 27.2%, P<0.005).