

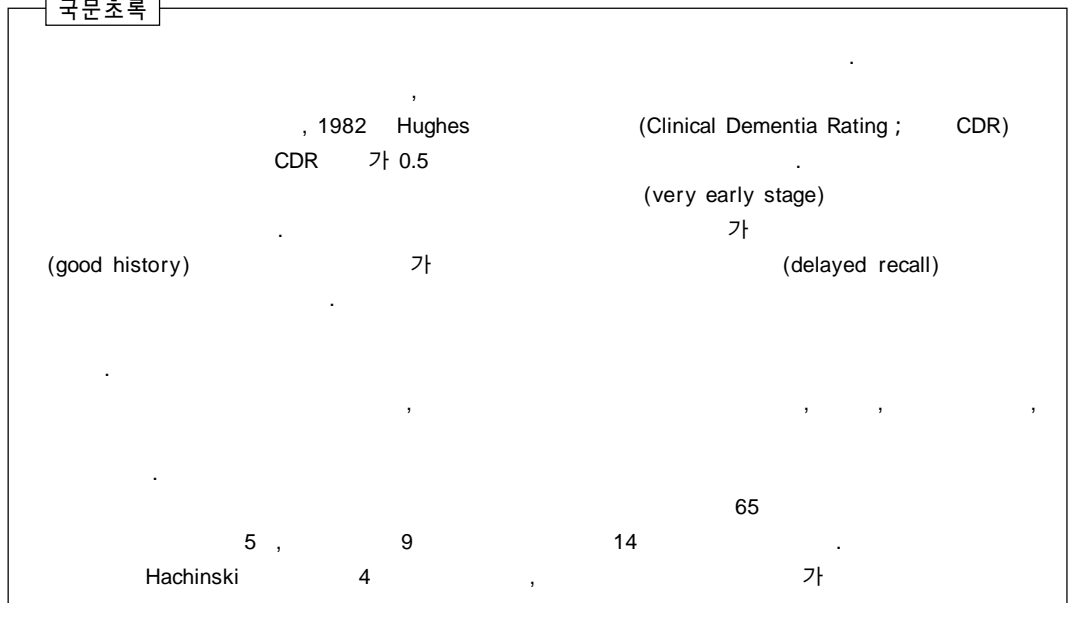
여성 경도 알쯔하이머형 치매군, 치매의심군 그리고 비치매 대조군간의 신경인지기능 비교

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A Neurocognitive Assessment : Mild Dementia of the Alzheimer Type, Questionable Dementia, and Non-Demented Elderly Women

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국문초록



: 1999 7 5
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(Short form Geriatric Depression Scale ; SGDS) 8
 (Diagnostic and Statistical Manual ; DSM-) CDR Wechsler
 (Wechsler, 1987 : WMS-R) (Digit span), (Visual span)
 (Schufried, 1993 : Vienna test system) (Continuous at-
 tention) 가 WMS-R (Logical memory) (Im-
 mediate recall) 30 (Delayed recall), (Verbal paired associate learning)
 - (easy pair)/ (hard pair), 30 - /
 가 (Visual perception) WMS-R
 가 (Visuospatial abilities) (Neurobehavioral Cog-
 nitive Screening Examination : NCSE) (Construction) 가
 (Korean - Wechsler Adult Intelligence Scale : K-WAIS)
 (Comprehension) (Aphasia se-
 verity rating scale) 가 (Higher cortical function) NCSE
 (Similarity), (Judgment), Go - No - Go , Vienna test system 가 (Hypo-
 thesis formation test), (Perseveration test) 가
 one - way ANOVA
 5 , 9 14
 가 (4.80 ±
 3.34, 6.0 ± 2.0, 8.85 ± 2.14), (0.50 ± 0.58, 1.00 ± 1.55, 3.50 ± 1.87), (2.83
 ± 0.40, 3.78 ± 0.67, 4.71 ± 0.47), (2.80 ± 3.56, 2.11 ± 1.54, 7.36 ± 1.98)
 가
 가
 중심 단어 :

서 론 가
 가
 1)2)
 (neurocognitive function)
 가 (Age Associated
 Memory Impairment),³⁾
 (Benign Senescent Forgetfulness)⁴⁾
 가 5)6)
 (progressive deterioration) 가
 7-9)
 Hughes ¹⁰⁾

가 .

2. 연구 방법

1) 임상적 평가

(1)

1, 1, 1, 1

자료 및 방법

1. 연구 대상

1998 9 1 1999 3 30 7 (6 /

x2 / x10)

65

) 4

42
21)가 4

Hachinski (5),
(Short form of geri-
atric depression scale ; SGDS)²²⁾가 8
(7) 12 30

30 1

(Lacunar infarction)

, CDR 가
가 (1)

28

(CDR) 10)

(Diagnostic and Statistical Manual ;

DSM -) 23) 가 , 14 (CDR =
0), 9 (CDR=0.5), 5

(CDR=1)

(2) 가
(가) (CDR)

가 ,

가 (Memory), (Orien-
tation), (Judgment and pro-
blem solving), (Community affairs),
가 (Home and hobbies)
(Personal care) 6

0 0.5, 1, 2, 3
CDR 가
10)

CDR 0
가 , 0.5 , 1
, 2 , 3 가

() Hachinski
Hachinski

가
(flu-
ctuating course),

13 가
가 4

, 7
() (Short - form Geriatric De-
pression Scale ; SGDS)

(SGDS)
Yasavage Brink²⁴⁾가 30
(Geriatric depression scale ; GDS)
GDS

가 가

15 가 , GDS SGDS가 (Delayed recall)(50),
 24) 가 . (Verbal paired associates) (Immediate re-
 SGDS call) (Easy pair)(12)/ (Hard
 15 pair)(12)(24), 30 (Delayed re-
 8 . SGDS 가 call) (Easy pair)(4)/ (Hard
 pair)(4)(8) .

(3) () (Visual perception and vis-
 1 uospatial abilities)
 , Hachinski SGDS (Neurobehavioral Cog-
 2 1 nitive Screening Examination ; NCSE)²⁷⁾
 (Construction)(6) WMS - R
 (Visual recogni-
 tion test) (10) 가 . NCSE
 28) 가

가 . 가 , 가
 (consensus) , 가
 , DSM -

가 , () (Language)
 가 1 (Korean - Wechsler Adult
 Intelligence Scale : K - WAIS)²⁹⁾
 1 (Comprehension ; 32) (Ap-
 hasia severity rating scale)³⁰⁾ 가
 29)

2) 신경인지기능검사

(1) 가 가 , 5
 (가) (Attention) 가 . 가 가
 Wechsler ²⁵⁾(Wechsler memory
 scale - revised ; WMS - R)
 (Digit span) (24)
 (Visual span) (26)
 26)(Vienna test
 system) (Continuous at-
 tention) T
 () (Memory) 28) 가
 WMS - R (Logical mem-
 ory) (Immediate recall)(50) 30 . Go - No - Go
 . 가 가 ,

Table 1. The demographic characteristics in the groups of normal control, questionable dementia and mild dementia of the Alzheimer type

	NL(n = 14)	QD(n = 9)	MDAT(n = 5)	Total(n = 28)	F/ ²	p
Age(yrs)	73.7 ± 5.0	76.3 ± 6.4	76.2 ± 5.3	75.0 ± 5.5	0.751	0.482
Education(No. of subjects)					9.341 [†]	0.500
None	6	8	5	19		
Educated	8	1	0	9		
L iteracy(No. of subjects)					7.239 [†]	0.124
Illiterate	2	4	3	9		
Reading	7	5	1	13		
Read & write	5	0	1	6		

ANOVA, LSD method

가 ()/ 0.05

: (가 +)/ 결과

R1(redundancy of the 1st order) R2(redundancy of the 2nd order)가 R1

1. 연구대상의 사회인구학적 자료

가 , 28

가 R2 , 1 75.0

가

(2) 가 , (6 , 8 , 5) , 6

가 (8 , 1 , 0)

2 10

2 1

40 48

2. 주의력 (Visual span)

Go - No - Go 가 , (tapping forward) (6.29 ± 1.33), (4.00 ± 1.00)

1 가 가 (F = 3.427, df = 2, p = 0.048). (tapping forward)

3) 연구 설계 및 통계 방법 가 (p = 0.015).

(1) , , (2).

3. 기억력

(2) SPSS 8.0 for windows one way 가

Table 2. Comparison of performances in attention tests among the groups of normal control, questionable dementia and mild dementia of the Alzheimer type

	NL(n = 14)	QD(n = 9)	MDAT(n = 5)	F
Digit span				
Digit forward	3.00 ± 1.57	2.78 ± 1.39	2.60 ± 1.94	0.134
Digit backward	2.71 ± 1.32	1.77 ± 1.92	1.00 ± 1.41	2.538
Visual span				
Tapping forward	6.29 ± 1.33	5.78 ± 2.33	4.00 ± 1.00	3.427*
Tapping backward	4.36 ± 1.98	3.44 ± 2.24	2.20 ± 1.92	2.103
Continuous attention				
Correct response	61.50 ± 29.05	53.78 ± 23.73	34.20 ± 15.47	2.089
False response	43.57 ± 21.99	78.44 ± 51.39	68.00 ± 45.54	2.499
Missed response	58.50 ± 29.05	66.22 ± 23.73	85.80 ± 15.47	2.089

* : p<0.05 in one-way ANOVA and in post-hoc analysis between normal control and questionable dementia

Table 3. Comparison of performances in memory tests among the groups of normal control, questionable dementia and mild dementia of the Alzheimer type

	NL(n = 14)	QD(n = 9)	MDAT(n = 5)	F-value
Logical memory				
Immediate recall	7.07 ± 5.97	5.11 ± 3.76	3.60 ± 2.88	1.049
Delayed recall	1.36 ± 3.46	0.00 ± 0.00	0.00 ± 0.00	1.038
Associate learning				
Immediate recall				
Easy pair	8.85 ± 2.14	6.00 ± 2.00	4.80 ± 3.35	7.344*
Hard pair	2.64 ± 1.95	1.67 ± 1.73	1.00 ± 1.73	1.724
Delayed recall				
Easy pair	3.36 ± 0.63	3.00 ± 1.00	2.20 ± 1.64	2.577
Hard pair	1.36 ± 0.75	1.56 ± 1.33	0.60 ± 0.89	1.562

* : p<0.05 in one-way ANOVA and in post-hoc analysis between normal control and questionable dementia ; between normal control and mild dementia of the Alzheimer type

± 2.14), (6.00 ± 2.00), (8.85 ± 2.14), (6.00 ± 2.00), (4.80 ± 3.35), (1.00 ± 1.73), (3.50 ± 1.87), (1.00 ± 1.55), (p=0.038), (p=0.008), (p=0.003), (p=0.003), (F = 7.740, df = 2, p=0.003), (p=0.006), (p=0.005), (F = 7.344, df = 2, p = 0.003).

4. 시지각공간 능력 (7.50 ± 1.78), (7.11 ± 2.20), (4.80 ± 1.48), (4.71 ± 0.47), (F = 3.853, df = 2, p = 0.035), (3.78 ± 0.67), (2.83 ± 0.40), (p = 0.011), (F = 25.380, df = 2, p = 0.0003).

5. 언어능력

Table 4. Comparison of performances in visual perception and visuospatial ability tests among the groups of normal control, questionable dementia and mild dementia of the Alzheimer type

	NL(n = 14)	QD(n = 9)	MDAT(n = 5)	F-value
Visual perception	7.50 ± 1.79	7.11 ± 2.20	4.80 ± 1.49	0.035**
Construction	3.50 ± 1.87	1.00 ± 1.55 [†]	0.50 ± 0.58 [‡]	7.740*

* : p<0.05 in one-way ANOVA and in post-hoc analysis between normal control and questionable dementia ; between normal control and mild dementia of the Alzheimer type

** : p<0.05 in one-way ANOVA and in post-hoc analysis between normal control and mild dementia of Alzheimer type ; between questionable dementia and mild dementia of Alzheimer type

† : N = 6

‡ : N = 4

Table 5. Comparison of performances in language tests among the groups of normal control, questionable dementia and mild dementia of the Alzheimer type

	NL(n = 14)	QD(n = 9)	MDAT(n = 5)	F-value
Comprehension	9.86 ± 3.79	7.89 ± 3.86	4.40 ± 3.36	3.960*
Aphasia	4.71 ± 0.47	3.78 ± 0.67	2.83 ± 0.40	25.380**

* : p<0.05 in one-way ANOVA and in post-hoc analysis between normal control and mild dementia of the Alzheimer type

** : p<0.05 in one-way ANOVA and in post-hoc analysis between normal control and questionable dementia ; between questionable dementia and mild dementia of Alzheimer type ; between normal control and mild dementia of Alzheimer type

=2, p=0.000).

(p=0.000), (p=0.003) secondary memory (Verbal paired associates) (Immediate recall) (5). (easy pair) (Visuospatial ability) (Construction), (9.86 ± 3.79), (4.40 ± 3.36) (Language) (Aphasia severity rating scale) (Higher cortical function) (Similarity) (7.89 ± 3.86), (F = 3.960, df = 2, p = 0.032). (p=0.010).

6. 고위피질 기능 결과 (7.36 ± 1.98), (2.80 ± 3.56) (Visual span) (Tapping forward) (Language) (Comprehension) (2.11 ± 1.53), (F = 18.251, df = 2, p = 0.000). (p=0.001) (Visual perception) (p=0.000), 가 가 가 (6).

고 찰 가 가 (Digit span), 가 가 (Visual span) 가 가 (Continuous attention)

Table 6. Comparison of performances in higher cortical function tests among the groups of normal control, questionable dementia and mild dementia of the Alzheimer type

	NL(n = 14)	QD(n = 9)	MDAT(n = 5)	F-value
Similarity	7.36 ± 1.98	2.11 ± 1.53 [†]	2.80 ± 3.56 [‡]	18.251*
Judgment	4.07 ± 1.14	3.67 ± 1.03	3.00 ± 1.41	1.373
Go-No-Go test	2.29 ± 2.89	6.40 ± 5.32	6.00 ± 4.83	2.919
Hypothesis formation				
Hypothesis 1 [§]	0.95 ± 0.00	0.89 ± 0.00	0.87 ± 0.12	3.007
Hypothesis 2 [§]	0.93 ± 0.12	0.92 ± 0.00	0.97 ± 0.00	0.361
Hypothesis 3 [§]	0.79 ± 1.03	0.83 ± 1.04	0.92 ± 0.00	2.645
Perseveration				
p 1	0.44 ± 0.39	0.53 ± 0.48	0.15 ± 0.13	1.472
p 2	40.61 ± 16.75	39.01 ± 14.72	57.71 ± 21.10	2.537

* : p<0.05 in one-way ANOVA and in post-hoc analysis between normal control and questionable dementia ; between normal control and mild dementia of the Alzheimer type

† : N=6, ‡ : N=4

§ : (Point of hypothesis formation + error numbers)/total matrix point. Total matrix point N = 55, 78, 247 respectively

(working memory) (visual version) (visual perception) 가 (visual perception) (visual memory) (capacities for arousal) (responsive focusing) 가 (visual perception) 가 (Logical memory) (Immediate recall) (Delayed recall) 가 (delayed recall) 가 (verbal span) (visual span) 가 WMS- (26) 9.39 (30) . 3 5 (24) 4.96 (32) (33) (34 - 36) R (32) 가

30

가

가

50 가 5.82 ± 4.94

50 가 0.68 ± 2.49

가

가

가

0

가 WMS-R

가

(Visual perception)

(Visual recognition test)

가 (Visuospatial ability) (Con-

8 struction)

5

가 30

가

(visuoperceptual deficit)

⁴⁴⁾

가

가 (recall) ³⁷⁾

가

(encoding) 가 (Block

가 design) 가

가

(cueing), (prim-³⁹⁾ 가 17)

ing) ⁴²⁾⁴³⁾

가 ¹⁹⁾

가

slowing ⁴⁴⁾

가 ⁴³⁾

가

14)

가

가

가

(Verbal paired associates) (Immediate recall) (Easy pair) (Visuospatial ability) (Language) hasia severity rating scale (Similarity) 가

(Construction), (Ap- 가

가 가

가

가 KWAIS

가 NCSE

, Vienna test system 가

52)

가

가

51)

가 가

가

14)17)19)20)

가

가가

가

가 A (Trail making A) 14)17)19)20)53)

(Wechsler Adult Intelligence Scale ; WAIS - R) 54) (Digit symbol) 가 14)17)19)20)

가

가 (N = 14, N = 9, N = 5, N = 28). 10 4

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The objective of this study is to differentiate the mild dementia of Alzheimer type from the questionable dementia and non-demented elderly using the neurocognitive assessment. Subjects of 28 women who were registered to kwangju Community Mental Health Center were as follows : 14 non-demented, 9 questionable dementia, 5 mild dementia of Alzheimer type. The diagnosis were made using DSM- , Clinical Dementia Rating Scale. The neurocognitive functions were assessed with following test tools 1) attention : Digit span, Visual span, Continuous attention ; 2) memory : Logical memroy, Verbal paired associates-easy/hard 3) visual perception and visuospatial ability : Visual recognition test, Construction ; and 4) language : Comprehension and Aphasia severity rating scale ; 5) higher cortical function : Hypothesis formation, Perseveration, Similarity, Judgment, and Go-No-Go test. Group differences were analyzed with one way ANOVA test in SPSS 8.0 for win and LSD method as post-hoc analysis.

The questionable dementia group showed significant difference in Verbal paired associates easy pair, Construction, Aphasia severity rating scale and Similarity from the non-demented normal control group but showed no difference from the mildly demented group. These results suggest that the questionable dementia is actually very early or very mild stage of dementia of the Alzheimer type.

KEY WORDS : Neurocognitive assessment · Dementia of the Alzheimer type · Questionable dementia.