

개정판 인지기능 장애 진단 도구 : 반구조화 인지기능 평가 도구

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Revised Cognitive Impairment Diagnosing Instrument(CIDI) : A Semi-Structured Interview Form for Assessment of Cognitive Functions

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국문초록

연구목적 : CIDI 가 .

방 법 : 60 90 CIDI 64 , , receiver operating characteristic area under curve

결 과 : CIDI Pearson 0.596 0.813 , 0.707 , 0.759 0.890 . Cronbach 0.941

CIDI 가 0.5 , MMSEK CIDI MMSEK 0.894 . CIDI area under curve 0.933 area under curve 0.021(95% CI, 0.891 0.975) . 65/66가 가 , 95.3% 85.6% . MMSEK 0.930, 0.020(95% CI, 0.891 0.969), 22/23, 89.1% 85.6% . CIDI MMSEK area under curve . CIDI

: 2000 1 11

: 2000 3 29

가

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60 receiver operating characteristic area under curve
 60
 1999 6 1
 1999 9 30 4
 CIDI, Samsung Dementia Questionnaire (S-SDQ),⁵⁾ Lawton Instrumental Activities of Daily Living(IADL),⁶⁾ Barthel Activities of Daily Living (BADL),⁷⁾ Blessed Dementia Rating Scale(BDRS)⁷⁾
 Student t-²⁻ , , , CIDI
 under curve Z- CIDI MMSEK area
 11 p<0.05
 SPSS window version 9.0가

결 과

가
 가
 가
 175 CIDI가
 21 154
 가
 23 , IADL 21 , BADL 14 ,
 BDRS 21
 154
 90 , 64
 24 , 21 ,
 DSM - ⁸⁾ 15 , 8 ,
 6 , 4 , 6 ,
 CIDI 가 6
 23 , 가 21 ,
 가 Cronbach 가 5 , 가 2 ,
 Lewy 1 . 12
 가
 24 40 , 25
 CIDI 65 ($\chi^2=1.630$, $df=1$, $p=0.202$).
 CIDI ($\pm SD$) 73.2(± 8.3) ,
 68.5(± 6.5) (t=3.907, p=0.000).
 S- ($\pm SD$) 4.0(\pm
 SDQ, IADL, BADL, BDRS 5.1) , 5.7(± 5.0) (t= -2.031,
 MMSEK CIDI MMSEK p=0.044).
 CIDI Pearson /
 CIDI 0.596 가

Table 1. Pearson's correlations between the Cognitive Impairment Diagnosing Instrument subtests in the 64 patients with dementia and the 90 patients with other mental disorders*

	1	2	3	4	5	6	7	8	9	10
1.	-									
2.	.652	-								
3.	.808	.718	-							
4.	.809	.684	.776	-						
5.	.638	.601	.606	.784	-					
6.	.752	.679	.775	.772	.623	-				
7.	.699	.773	.746	.773	.689	.698	-			
8.	.735	.637	.718	.712	.596	.695	.618	-		
9.	.700	.650	.702	.770	.708	.702	.661	.621	-	
10.	.732	.679	.722	.813	.753	.744	.724	.603	.749	-

1. short-term memory ; 2. long-term memory ; 3. remote memory ; 4. higher cortical functions ; 5. attention/calculation ; 6. comprehension & judgement ; 7. orientation in time ; 8. orientation in place ; 9. object naming ; 10. abstract thinking

*All correlations were significant at $p = 0.000$

Table 2. Subtest and total statistics of the Cognitive Impairment Diagnosing Instrument subtests in 64 patients with dementia and 90 patients with other mental disorders

	Scale mean If subtest deleted	Scale variance if subtest deleted	Corrected subtest- total correlation	Squared multiple correlation	Alpha if subtest deleted
Short-term memory(13)	47.656	366.044	.835	.761	.931
Long-term memory(13)	51.773	312.491	.774	.671	.948
Remote memory(9)	50.851	379.670	.848	.768	.931
Higher cortical functions(11)	50.792	347.591	.890	.831	.928
Attention & calculation(5)	55.649	389.144	.773	.688	.935
Comprehension/judgement(4)	55.351	418.295	.831	.715	.939
Orientation in time(5)	55.240	393.962	.836	.733	.934
Orientation in place(5)	54.292	412.613	.759	.635	.939
Object naming(12)	50.597	362.098	.807	.676	.932
Abstract thinking(8)	53.071	364.446	.845	.753	.930

() : possible maximum scores

가 0.813
 가 0.707
 p=0.000
 (1).
 Cronbach 가 0.941 . 2
 0.759 0.890
 Cronbach
 0.9
 Cronbach 0.941 0.948
 가
 가
 가
 가
 가

Table 3. Scores on S-SDQ, IADL, BADL and BDRS and their Pearson's correlation coefficients(r) to the total scores on the Cognitive Impairment Diagnosing Instrument in demented patients*

	M ± SD	r
S-SDQ (n = 57)	20.8 ± 8.2	-0.527 (p = 0.000)
IADL (male) (n = 20)	18.6 ± 4.8	-0.601 (p = 0.005)
IADL (female) (n = 35)	22.3 ± 6.2	-0.608 (p = 0.000)
BADL (n = 60)	14.0 ± 5.4	0.428 (p = 0.001)
BDRS (n = 57)	6.8 ± 3.9	-0.499 (p = 0.000)

*S-SDQ : Short Samsung Dementia Questionnaire
 IADL : Lawton Instrumental Activities of Daily Living
 BADL : Barthel Activities of Daily Living
 BDRS : Blessed Dementia Rating Scale

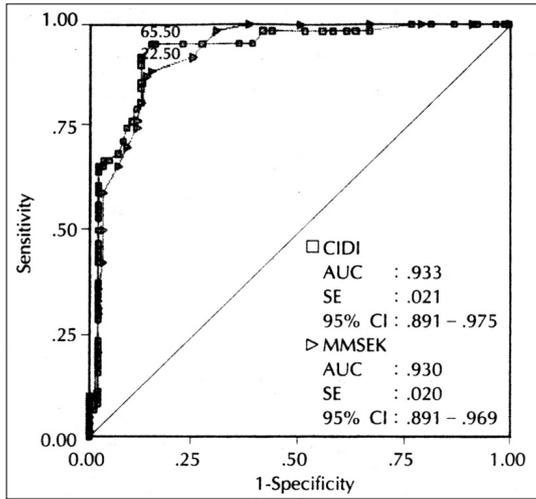


Fig. 1. Receiver operating characteristic curves of CIDI and MMSEK. CIDI : Cognitive impairment Diagnosing Instrument. MMSEK : Korean version of Mini-Mental State Examination. AUC : area under curve. SE : standard error. CI : confidence interval.

가
CIDI
5
CIDI
고
찰
64
90
CIDI
가
0.6
0.8
0.8
가
가
가
1
CIDI
Cronbach
가
(true score)
squared
correlation
CIDI
Cronbach
가
(true cogni-
tive function)
Cronbach
가 0.9
가
가
CIDI
가
가 S-SDQ,
가 BDRS,
IADL
가
BADL
Pearson
0.5
CIDI
S-SDQ
가 BDRS,
IADL, BADL
가
CIDI
가
CIDI
65/77
가
.71
77
1999
1
donepezil
.71
1
가
가
6
CIDI
60
10
1
77
.8
CIDI
47
58
2
CIDI
13
16
.13
IADL, BADL
73
가
.16
81
CIDI가

receiver operating characteristic
 가 가 (, 가 가)
 (1 -) 가 가
 . Receiver operating characteristic

가
 (prior or pretest probability of disease),
 , 가(health costs), 가(financial costs),
 12)

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Objectives : This study was conducted in order to evaluate reliability and diagnostic validity of the CIDI.

Methods : 64 patients with DSM- dementia and 90 elderly patients with other mental disorders entered this study. Inter-subtest Pearson's correlations, corrected subtest-total correlations and Cronbach's were computed for reliability while correlations of the total scores on CIDI with the performances on other scales relating to dementia, sensitivity and specificity, area under curve using the receiver operating characteristic curve, and group comparison were used for the assessment of validity.

Results : The CIDI's inter-subtest correlations ranged from 0.596 to 0.813, with a mean of 0.707. The corrected subtest-total correlations were between 0.759 and 0.890. Cronbach's of the subtests was 0.941 and the Cronbach's were between 0.928 and 0.948 when any subtest was deleted.

In the demented subjects, the correlation coefficients of the total CIDI score with the performances on S-SDQ, IADL, BADL, BDRS, and MMSEK were around 0.5. Area under the receiver operating curve of CIDI was 0.933 with the standard error of 0.021 (95% CI, 0.891 -0.975). At the CIDI cutoff point of 65/66, sensitivity and specificity were 95.3% and 85.6%, respectively. The corresponding values of MMSEK were 0.930, 0.020 (95% CI, 0.891 -0.969), 22/23, and 89.1% and 85.6%. The demented scored much poorer in all CIDI subtests than the nondemented mental patients, and the differences were highly significant.

Conclusions : The CIDI was satisfactory regarding to reliabilities and diagnostic validities. The CIDI and MMSEK are thought to be reciprocal in assessment of cognitive functions : CIDI is preferable for clinical assessment of cognitive dysfunction and MMSEK for as a screening test.

KEY WORDS : Cognition · Dementia · Assessment · Sensitivity-specificity.