

정신분열병환자의 언어지각 능력*

- 우울증 환자군, 정상인과의 비교 연구 -

정영조** · 이순정** · 이승환**†

Speech Perception Ability of Schizophrenics*

- A Comparative Study with Depressives & Normal Control -

Young-Cho Chung, M.D., Ph.D.,** Soon Jeong Lee, M.D.,** Seung-Hwan Lee, M.D.,Ph.D.**†

ABSTRACT

Object : This study was to investigate the difference of speech perception ability in schizophrenic patients, and depression patients in order to explore trait - dependent speech perception ability of each disorder.

Methods : The speech perception ability was assessed with masked speech tracking test(MST) in schizophrenic patients(N=31), depression patients(N=25), and normal controls(N=21). The continuous performance test(CPT) and sentence repetition test(SRT) were also used for assessment of attention and working memory.

Results : The schizophrenic patients showed significant impaired MST performance, compared with depressive patients and normal controls. The performances of CPT and SRT were also more impaired in schizophrenic patients. The difference of MST performances between two patient group was cancelled out after consideration of differences in CPT & SRT performances.

Conclusions : These results imply that schizophrenic patients have the impaired speech perception ability compared with depressive patients and normal controls. But speech perception ability was significantly influenced with CPT and SRT. For evaluation of pure speech perception ability, the more elaborate controlled study that excluded factors such as attention, working memory and intelligence is needed.

KEY WORDS : Schizophrenia · Speech perception.

서 론

(speech perception)

tex)

.1)
(superior temporal cor-
2)

2000

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Department of Neuropsychiatry, College of Medicine, Inje University, Ilsan Paik hospital, Koyang, Korea

†교신저자 : , 411 - 706

2240

) (031) 910 - 7260,) (031) 910 - 7268 E - mail) LSHPSS@ilsanpaik.ac.kr

가

3) (left , 4) , 5) and right anterior cingulate gyrus), (medial and anterior aspects of the right prefrontal cortex)

4)5) (working memory), (sustained attention), (cognitive flexibility), 가

1) DSM - (Diagnostic and Statistical Manual of Mental Disorders,4th edition)¹⁰⁾

, 2) 가 18~65 , 3) 9 () , 4) , 5) 1) DSM - 18~65 , 3) 9 , 4) , 5) , 2) 가 (, 4) , 5) 1) (,) , 2) , 3) , 4) , 5) , 6) 가 , 7) , 8) 9) , 10) 가 , 11) - , 12)

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6) 가

가

2) 대조군 선정 18 65

방 법

1. 연구 대상

1) 환자군 선정 2001 3 2002 2

2. 연구 도구

1) 청력 검진(Audiometric screening test) 가

tone audiometry) , 500Hz, 1000Hz, 2000 Hz 25dB (pure interjudge reliability) 가 , 가 (in- 0.87, 0.91, 0.85

2) Masked speech tracking(MST) test

가 , “ word sensitivity ” Hoffmane ⁹⁾ 3 3가 90~135 2~3 가 12 가 40% (HA - G55) 70%, 95% JVC Hoffman ⁹⁾

3) 청각 지속 수행 검사(Auditory continuous performance task(CPT))

(distraction) 가 CPT ⁸⁾ 90dB 3가 (640, 1000, 1600Hz) 가 6 (1600Hz) , 1000Hz, 90dB 200ms, 100ms (), (...), () 2 6 (correct : CPT - c) 가 (incorrect : CPT - i) CPT Hoffman ⁹⁾

4) 문장 반복 검사(Sentence repetition test(SRT))

(serial linguistic expectation) (verbal working memory) ¹²⁾ 3 18 14 가 (1~14) Benton Hamsher¹³⁾

3. 통계 분석

1 (syntactic) 1 (: /) 0.5 (bizarre non- (unmotivated substitution) 0 Windows SPSS ver- sion 10.0 , p<0.05 (one way ANOVA)

MST
(repeated measures ANOVA) 12.77 ± 2.09 ,
Scheffe 12.72 ± 3.85 , 13.09 ± 3.33

가

Pearson correlation test
(CPT), (SRT)
(Analysis of Covariance ; ANCOVA)

2. 언어지각 능력(Speech perception ability) 평가
(repeated measured ANOVA)
MST
가 (df=2, F=7.25, p=0.001), (df=2, F=10.56, p=0.000),
(df=2, F= 8.95, p=.000)
Scheffe

결과

1. 인구 통계학적 특성

31
6
가
2 , 4
31 , 25
21
1
33.45 ± 10.36 ,
35.44 ± 9.06 , 33.66 ± 12.28
(p=0.020), (p=0.004)
(F=7.25, p=0.001)
(p=0.778)
(p=0.009),
(p=0.000) (F= 10.56,
(p=0.428)
(p=0.049),

Table 1. Demographic characteristics in schizophrenia, depression and normal control subjects

Characteristics	Schizophrenia(N=31)	Depression(N=25)	Control(N=21)	df	²	p
Gender, No(%)						
Male	10(32.2)	11(56.2)	10(47.6)	2	.219	0.896
Female	21(67.8)	14(44.0)	11(52.4)		F	
Age, yrs	33.45 ± 14.28	35.44 ± 9.06	33.66 ± 12.28	2	.246	0.783
Education, yrs	12.77 ± 2.09	12.72 ± 3.85	13.09 ± 3.33	2	.097	0.908

Table 2. Comparison of mean scores of MST, SRT and CPT in schizophrenia, depression, and normal control subjects

Measure	Schizophrenia(N=31)		Depression(N=25)		Control(N=21)		Group difference		
	Mean	SD	Mean	SD	Mean	SD	F	p-value	Post-hoc
MST									
Low noise	82.04	16.37	91.76	10.95	94.40	6.11	7.25	<.001	a, c
Middle noise	63.28	20.26	76.59	12.21	82.68	10.86	10.56	<.001	a, c
High noise	36.82	19.18	47.81	15.96	55.97	11.30	8.98	<.001	a, c
SRT	9.45	1.08	11.76	1.96	12.61	1.53	24.90	<.001	a, c
CPT	77.55	25.23	90.55	12.51	99.93	10.02	5.71	<.001	a, c

MST : masked speech tracking test, SRT : sentence repetition test, CPT : continuous Performance task

a : significant difference between schizophrenia and normal control (p<0.05)

b : significant difference between depression and normal control (p<0.05)

c : significant difference between schizophrenia and depression (p<0.05)

Table 3. Correlations among sets of variables in schizophrenia, depression, and normal control subjects

	Age	Education	SRT	CPT	MST-low	MST-mid	MST-high
Age	1.000	.001	-.124	-.219	-.097	-.176	-.175
Education		1.000	.483**	.240*	.384**	.388**	.337*
SRT			1.000	.413**	.521**	.571**	.504*
CPT				1.000	.496**	.511**	.432*
MST-low					1.000	.827**	.701*
MST-mid						1.000	.877**
MST-high							1.000

* : p<.05, ** : p<.01

MST : masked speech tracking test, SRT : sentence repetition test , CPT : continuous Performance task

Table 4. ANCOVA for MST

	MST-LOW		MST-MID		MST-HIGH	
	F	P	F	P	F	P
Education	2.56	.114	1.74	.191	0.87	.354
SRT	3.53	.064	5.13	.026*	3.12	.081
CPT	8.83	.004*	8.36	.005*	4.00	.049*

MST : masked speech tracking test, SRT : sentence repetition test, CPT : continuous Performance task

* : p<.05

(p=0.000)
(F=8.98, p=0.000)
(p=0.43)

3. 주의력(Attention) 평가
가
(ANOVA) 가
(df=2, F=5.71, p<0.005). Scheffe
(p=0.012)
(F=5.71, p=0.005)
(p=0.832)

4. 작업 기억(Working memory) 평가
SRT 2
가
(df=2, F=24.903, p<0.001). Scheffe
p

5. 언어지각 능력에 영향을 미치는 변인들과의 관계
pearson (r)
3
, SRT,
CPT
, SRT,
CPT ANCOVA
4 CPT
가 (df=1, F=8.839, p=0.04).
SRT (df=1, F=5.132, p=0.026)
CPT (df=1, F=8.369, p=0.05)
가 CPT (df=1, F=4.003,
p=0.049) 가

고 찰
value p value

, , , Pierre ¹⁴⁾
 가 , ,
 (volition)
 가 ²³⁾
¹⁵⁾ 가 가 ²⁴⁾ Morice
 가 가 가 ²⁵⁾ (Wisconsin Card Sorting Test)
¹⁶⁾¹⁷⁾ 가 Kapur ²⁶⁾ (Positron Emission Tomography)
 가 ¹⁸⁾ 가 가
 가 CPT 가 SRT
 가
 Thomas ²⁷⁾
 (writing tasks)
 가
 linguistic ability 가 , retrieval ability
 가
¹⁹⁾ Bus-
⁴⁾ 10 chke ²⁸⁾
 (information - processing model) 가
²⁰⁾²¹⁾ ²⁹⁾
²²⁾ (confabulation)
 가
^{30 - 32)}
 가 2
 SRT, CPT

가
 Hoffman 9)
 가
 가
 가
 가 31, 25, 21
 , 가
 가
 가
 가
 33)
 ,
 34-36)
 risperidone bztropine
 37)
 ,
 ,
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중심 단어 :

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