

만성 여성 정신분열병 환자에서 Estrogen 병합투여의 임상시도

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A Clinical Trial of Combined Treatment with Estrogen and Antipsychotics in Females with Chronic Schizophrenia

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ABSTRACT

Objective : This study was a open clinical trial aimed at exploring the effectiveness of combined treatment with estrogen and antipsychotics to the chronic female schizophrenics.

Method : 40 female patients who met DSM- criteria for schizophrenia who were chronically ill were randomly assigned to estrogen group(EG) and control group(CG). EG patients were received estrogen 1.25mg for 8weeks in addition to their routine antipsychotic regimens. CG patients were received their routine antipsychotic regimens only. Both groups were evaluated by PANSS(Positive and Negative Syndrome Scale), CGI(Clinical Global Impression) at 0, 4, 8 week during the trial period and compared with each other.

Results : 40 female patients have completed the study during 8weeks. EG was significantly improved in PANSS and CGI scores than CG during the 8weeks. In EG patients, all symptom subtypes(positive symptoms, negative symptoms, general psychopathology symptoms) of PANSS were significantly improved and positive symptoms were most significantly improved at 8week.

Conclusions : This results support the clinical value of combined estrogen therapy among chronic female schizophrenics.

KEY WORDS : Estrogen · Schizophrenia · Combined treatment.

서 론

estrogen
가 . Häfner(1987) estrogen
(vulnerability)
,
가 estrogen
estrogen
(catalepsy) , amphetamine ap -
omorphine
(Gordon 1980).
estrogen 가
가 (Endo 1978), es -
trogen 가
가 (Nott 1982). 20 ,
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estrogen 가 (Seeman 1983). Seeman Lang(1990) estrogen 가 , 가 . 50% (Hales 1994). clozapine , benzodiazepine (1994 ; 1997 ; 1994 ; 1996 ; Becker 1983 ; Bodkin 1990 ; Dose 1987 ; Owen 1988 ; Siris 1978 ; Terao 1995 ; Prusoff 1979). Kulkarni (1996)

- 가 (Montgomery - Asberg Depression Rating Scale, MADRS ; Montgomery Asberg 1979) ' 가

40 . estrogen 가 estrogen(conjugated estrogen, estrogen) (EG) 20 (CG) 20 가 .

2. 연구방법

20 conjugated estrogen 1.25mg 8

가 estrogen

chlorpromazine

(Postive and Negative Syndrome Scale, PANSS ; Kay 1987) ' ,

(Clinical Global Impression, CGI ; Guy 1976) ' 4 ,

8 3 가 .

가 ,

chlorpromazine 가

가 t - test

Chi - square

estrogen

(ANOVA with repeated measures)

가 ,

Contrast method

가 가 8 가

가 100

(; X = [- X]/ x 100%)

(±)

SAS(Statistical Analysis System,

6.11)

p 0.05

대상 및 방법

1. 연구대상

DSM - (American psychiatric association 1994)

2 , 6

, estrogen 가 (

),

estrogen

estrogen

(Lon 1997 ; Seeman 1997), '

결 과

1. 연구대상의 특징

38.55(± 6.85)

36.42(±7.49) (2). 30.52%
 chlorpromazine 100mg , PANSS 가 (3).
 가 742.50(± 4
 510.25)mg 717.10(±446.95)mg . PANSS 4
 8.05(±1.60) 8.57(±2. , 8 (p<0.001)
 46) . 14 , (p<0.05). 4 , 8
 15 , (time effect within group ; p<0.001)

가 , 가
 MADRS 9.60(±7.20) ,
 7.27(±5.81) , (cut -
 off point) 16 (1).
 2. PANSS Scores
 1) 양성점수
 , 4 , 8 26.05(±
 5.17) , 20.60(±6.85) , 18.10(±7.46)
 23.26(±6.08) , 23.74(±6.75) , 23.16(±5.77)

Table 1. Characteristics of the subjects

	EG(N=20) Mean(SD)	CG(N=20) Mean(SD)	Statistical Values
Age(years)	38.55(±6.85)	36.42(±7.49)	N.S
Antipsychotic dose(mg)	742.50(±510.25)	717.10(±446.95)	N.S
Duration of illness (years)	8.05(±1.60)	8.57(±2.46)	N.S
Amenorrhea	14	15	N.S
MADRS scores	9.60(±7.20)	7.27(±5.81)	N.S

EG : Estrogen Group, CG : Controlled Group,
 SD : Standard Deviation
 MADRS : Montgomery-Asberg Depression Rating Scale, N.S : Non-Significant

Table 2. Changes of PANSS and CGI scores

Time in study	Scale or subscale	EG(N=20) Mean(SD)	CG(N=20) Mean(SD)	p
Baseline	PANSS			
	Total	95.45(±15.69)	93.05(±16.29)	N.S
	Positive	26.05(±5.17)	23.26(±6.08)	N.S
	Negative	24.90(±6.61)	27.05(±8.18)	N.S
	General	44.50(±8.85)	42.74(±9.18)	N.S
4th week	CGI	5.45(±0.51)	5.21(±0.98)	N.S
	PANSS			
	Total	82.95(±17.64)**	94.21(±17.60)	N.S
	Positive	20.60(±6.85)***	23.74(±6.75)	N.S
	Negative	22.75(±8.30)	28.47(±9.35)	N.S
8th week	General	39.60(±8.07)*	42.00(±9.93)	N.S
	CGI	4.25(±1.12)***	5.21(±0.97)	0.0071
	PANSS			
	Total	77.70(±19.56)***	92.37(±16.55)	0.0161
	Positive	18.10(±7.46)***	23.16(±5.77)	0.0237
8th week	Negative	21.15(±7.04)**	28.05(±6.82)	0.0036
	General	38.45(±10.62)**	41.16(±9.41)	N.S
	CGI	4.40(±1.50)***	5.15(±1.07)	N.S

EG : estrogen group, CG : controlled group, N.S : Non-Significant, * : paired t test vs baseline p<0.05, ** : p<0.01, *** : p<0.001
 SD : Standard Deviation

Analysis of variance(ANOVA) with repeated measures

	PANSS(Total)			PANSS(Positive)			PANSS(Negative)			PANSS(General)			CGI		
	f	df	p	f	df	p	f	df	p	f	df	p	f	df	p
Estrogen	2.53	1	0.1294	0.98	1	0.32	4.66	1	0.374	0.17	1	0.68	2.85	1	0.996
Time	9.17	2	0.0003	12.35	2	0.0001	1.38	2	0.2572	5.73	2	0.0048	9.39	2	0.0002
Estrogen by time	8.63	2	0.0004	12.46	2	0.0001	4.15	2	0.195	2.28	2	0.1095	8.70	2	0.0004

(Contrast method)
 4 (p<0.001) 가가 (2).
 ANOVA 'estrogen (estrogen effect)'
 0.001) 'estrogen (time effect ; p<0.001)'
 by estrogen effect ; p<0.001)'
 가 .
 가 (2).

2) 음성점수

4 , 8 24.90(±6.61) , 22.75(±8.30) , 21.15(±7.04)
 27.05(±8.18) , 28.47(±9.35) , 28.05(±6.82)
 (2). 15.06%
 (3). PANSS
 8 (p<0.01)
 (p<0.01)(2). ANOVA
 'estrogen' , 'estrogen'
 가
 (2).

3) 일반정신병리 점수

4 , 8 44.50(±8.85) , 39.60(±8.07) , 38.45(±10.62)
 42.74 (±9.18), 42.00 (±9.93), 41.16(±9.41)
 (2). 13.
 60% (3). PANSS
 4 (p<0.05) , 8

4 , 8 (p<0.01), 4 (p<0.05)
 가가 (2).
 ANOVA (p<0.01)
 , 'estrogen' 'estrogen'
 가
 (2).

4) 총 점

4 , 8 95.45(±15.69) , 82.95(±17.64) , 77.70(±19.56)
 93.05(±16.29) , 94.21(±17.60) , 92.37(±

16.55) . 18.60%
 (3). PANSS 4 (p<0.001), 8 (p<0.05). 4 ,
 8 (p<0.001), 가가
 (p<0.01)(2). ANOVA 'estrogen'
 'estrogen' (p<0.001) ,
 가 (p<0.001) '
 가 (2).
 3. CGI scores
 4 , 8 5.45(±0.51) , 4.25 (±1.12), 4.40 (±1.50)
 5.21(±0.98) , 5.21(±0.97) , 5.15(±1.07)
 CGI 19.27% (3).
 CGI 4 (p<0.001) ,
 (p<0.01).
 4 , 8 (p<0.001),
 4 CGI 가가
 (p<0.001)(2). ANOVA 'estrogen' (p<0.05) '
 'estrogen' (p<0.001) ,
 가 CGI
 가 (2).

고찰

Table 3. Score changes from baseline to 8th week

	EG(N=20) Mean ^a (%)	CG(N=20) Mean ^b (%)
PANSS		
Total	17.75(18.60%)	0.68(0.73%)
Positive	7.95(30.52%)	0.10(0.43%)
Negative	3.75(15.06%)	-1.00(-3.70%)
General	6.05(13.60%)	1.58(3.70%)
CGI	1.05(19.27%)	0.06(1.15%)

EG : estrogen group, CG : control group,
 a : mean changes of scores from baseline to 8th week
 b : percentile changes of scores from baseline to 8th week

olam 가 (Owen 1988), Bodkin(1990) alprazolam 가

ozapine, risperidone, olanzapine, zotepine quetiapine 가

clozapine 가 Siris (1978) 가 (anergia) 가

estrogen 가 estrogen

PANSS 8

CGI Kulkarni (1996) 8 estrogen

PANSS 가 30.52%, 15.06%, 13.60% Kulkarni (1996) estrogen

8 PANSS BPRS,

PANSS 4 가 CGI SAPS(Scale for Assessment of Positive Symptoms, SAPS ; Andreasen 1982), SANS(Scale for Assessment of Negative Symptoms, SANS ; Andreasen 1982) 가 Kulkarni (1996)

fluoxetine 5 BPRS SAPS 8

가 (Goff 1990), (Aranow 1989 ; Ciraulo Sh - ader 1990) (1997) 가 SANS Ku -

Benzodiazepine lkarni (1996) 8 PANSS CGI

lorazepam clonazepam 가 (Bodkin 1990), lithium Kulkarni (1996)

가 (Brief Psychiatric Rating Scale, BPRS ; Overall Gorham 1962) Karin (1996)

BPRS - (anxiety - depression) , (thought disturbance), (anergia), - (activation and hostile - suspiciousness) (Terao 가 , Kulk -

1995). tegretol arni (1996) 가

(Dose 1987). rogen Estrogen 가 (Lon

estrogen 1997 ; Seeman 1997), MADRS 가

etine 가 (Goff 1990)가 MADRS 9.60(±7.20) 7.27(±16

가 (1997), alpraz - 5.81)

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