



서 론

가

17)21)

DSM - , -R,

가

가

가

가

가

가

7)23)

DLD

가

1-3)

4)5)

6)7)

8-10)

X

, Marker

methylphenidate<sup>24)</sup>, risperidone<sup>25)</sup>, naltrexone<sup>26)</sup>,  
clonidine<sup>27)</sup>

, Ito

, Goldenhar

fluoxetine<sup>1)</sup>,

carba -

, Rett

, Moebius

, Lactic acidosis,

mazepine<sup>2)</sup>

clomipramine<sup>28)</sup>

fluvoxamine<sup>4)</sup>

William

가

11)12)

13)14)

15)16)

29)

가

가

가

17-22)

17)21)

## 연구 방법

### 1. 연구대상

1996 1 1999 3  
 1 11  
 DSM -  
 516 (ICD - 10  
 F80.9 F84.9)  
 164  
 352  
 209 , 143  
 CARS PDD  
 64  
 106

### 2. 연구방법

#### 1) 진단

DSM - PDD  
 , DSM - (comm -  
 unication disorder) - (mixed  
 receptive - expressive language disorder) DLD  
 DSM - 가  
 가 가  
 가 (SMS), 가(CARS),  
 (PEP) 78  
 가 , 가  
 , 가  
 2 , 가,  
 , )

### 2) 평가도구

- (1) (Korean Social Maturity Scale)  
 가 , 가
- (2) (Childhood Autism Rating Scales)  
 DSM - 29.5 , 30 36.5  
 , 37 60
- (3) (Psycho - educational Profiles)  
 가 7  
 가

### 3) 각 동반증상의 항목 및 내용

- 17-22) 13
- (1) (poor attention & concentration, inattention) :
  - (2) (hyperactivity) :
  - (3) (morbid or unusual pre-occupation) :  
 ( : , , , , )  
 , , , TV , )
  - (4) (obsessive or ritualistic behavior) :  
 ( : , , , , )
  - (5) (aggression & impulsivity) :

가 ( : , chi-square test )

(6) (self-stimulation) : student's t-test . CARS ( : , thumb sucking ). (ANOVA test)

(7) (self-mutilation) : 가 ( : )

(8) (repetitive or stereoty-ped behavior) : ( : , 가 , )

(9) (anxiety or fears) : ( : , , )

(10) (depressed mood, agitation or inappropriate affect) : ( : , temper tantrum , )

(11) (sleep problem) : ( )

(12) (tics) : ( : , , )

(13) (odd response) : ( : 가 )

### 3. 자료의 분석

SPSS/PC<sup>+</sup>

chi-square test

PEP

student's t-test

CARS

(ANOVA test)

### 결 과

#### 1. 사회인구학적 특성 및 임상소견 (Table 1)

##### 1) 진단, 연령 및 성별

352

209 (59.4%),

Table 1. Demographic data

Demographic	Patient's		p
	PDD(N=209)	Diagnosis DLD(N=143)	
Age(Month)	56.04 ± 11.62	48.16 ± 16.28	NS
Sex(Male/Female)	179(85.6)/ 30(14.4)	119(83.2)/ 24(16.8)	NS
Age at first visit (years)			NS
1 to 2	4( 1.9)	8( 5.6)	
2 to 3	38(18.2)	32(22.4)	
3 to 4	41(19.6)	41(28.7)	
4 to 5	31(14.8)	28(19.6)	
5 to 6	22(10.5)	16(11.2)	
6 to 7	25(12.0)	12( 8.4)	
7 to 8	18( 8.6)	1( 0.7)	
8 to 9	9( 4.3)	3( 2.1)	
9 to 10	3( 1.4)	1( 0.7)	
Over 10	18( 8.6)	1( 0.7)	
Visit form			SG
For the first time	46(22.0)	44(30.8)	
Via hospital	152(72.7)	92(64.3)	
Via agency	11( 5.3)	7( 4.9)	
Birth order			
First	117(56.0)	64(44.8)	
Second	83(39.7)	73(51.0)	
Over third	9( 4.3)	6( 4.3)	
Resident area			NS
Metropole	154(73.7)	100(69.9)	
City	36(17.2)	29(20.3)	
Country	19( 9.1)	14( 9.8)	
Family history	35(15.8)	25(17.5)	NS

PDD : Pervasive developmental disorder, DLD : Developmental language disorder, Values : number(% of cases, NS : non significant(p>0.05) in  $\chi^2$  test, SG : significant(p>0.05) in  $\chi^2$  test

143 (40.6%), 298 (84.7%), 54 (15.3%) . 28.4% , PDD 19.6%, DLD 41.2% , 29 (8.2%) (  $\chi^2=0.38$ , df = 1, p>0.05).

2) 초진시의 연령 가 ' 3 4 , (23.3%) , ' 2 3 ; ' 4 5 ' 가 (17.3%) 가 , PDD 가 가 (  $\chi^2=1.61$ , df = 1, p>0.05). ADHD DLD (p<0.05). , 61 PDD

3) 방문 형태 (69.3%) 가 (  $\chi^2=3.43$ , df = 2, p>0.05).

4) 출생 순위 (51.4%) 가 , PDD , DLD 가 (  $\chi^2=4.54$ , df = 2, p>0.05).

5) 거주 지역 (72.2%) 가 , (  $\chi^2=0.63$ , df = 2, p>0.05).

6) 손잡이(오른손, 왼손, 양손), 부모의 동거상황, 임신 중 합병증 등 가 .

7) 가족력 유무 58 (16.5%) 가 (  $\chi^2=0.17$ , df = 1, p>0.05).

8) 뇌파 및 기질적 이상소견 27 3 (244 ) 7 . 7 ( 1 , 2 , 4 ) .

2. 공존 질환(Table 2) 가

**Table 2.** Comparison of comorbid disorders by patient's diagnosis

Comorbid disorders	Patient's diagnosis		Total (N=352)
	PDD(N=209)	DLD(N=143)	
Seizure disorder	14( 6.7)	15(10.5)	29( 8.2)
ADHD	7( 3.3)***	27(18.9)****	34( 9.7)
Depression	13( 6.2)*	15(10.5)*	28( 8.0)
Tourette's syndrome	4( 1.9)	2( 1.4)	6( 1.7)
Fragile X syndrome	2( 0.9)	0( 0.0)	2( 0.6)
Schizophrenia	1( 0.5)	0( 0.0)	1( 0.3)
Total	41(19.6)	59(41.2)	100(28.4)

PDD : Pervasive developmental disorder, DLD : Developmental language disorder, ADHD : Attention-Deficit/Hyperactivity Disorder, Values : number(%) of cases with comorbid disorders, \*with ' cases of rule-out (R/O) ' or ' cases with associated symptom ; \*\*\*p<0.05 in chi-square test

**Table 3.** Comparison of associated symptoms by patient's diagnosis

Associated symptoms	Patient's diagnosis		$\chi^2$	df	p
	PDD (N=209)	DLD (N=143)			
1. Inattention	98(46.9)	64(44.8)	0.15	1	0.69
2. Hyperactivity	73(34.9)	49(34.3)	0.16	1	0.89
3. Preoccupation	139(66.5)	45(31.5)	41.78	1	0.00*
4. Obsession	57(27.4)	19(13.3)	9.81	1	0.00*
5. Aggression	73(34.9)	57(39.9)	0.88	1	0.34
6. Self-stimulation	33(15.8)	16(11.2)	1.49	1	0.22
7. Self-mutilation	56(26.8)	22(15.4)	6.40	1	0.01*
8. Stereotypy	114(54.5)	29(20.3)	41.32	1	0.00*
9. Anxiety	52(24.9)	39(27.3)	0.25	1	0.61
10. Depression	86(41.1)	50(35.0)	1.36	1	0.24
11. Sleep problem	29(13.9)	8( 5.6)	6.19	1	0.01*
12. Tics	10( 4.8)	6( 4.2)	0.06	1	0.79
13. Odd response	35(16.7)	7( 4.9)	11.34	1	0.00*

PDD : Pervasive developmental disorder, DLD : Developmental language disorder, Values : number(%) of cases with associated symptoms, \*p<0.05 in chi-square test

**Table 4.** Comparison of PEP profiles by patient's diagnosis

PEP profiles	Patient's diagnosis		df	T	p
	PDD(N=65)	DLD(N=41)			
1. Imitation	40.49 ± 15.31	64.68 ± 20.17	104	7.00	0.000*
2. Perception	41.17 ± 22.44	64.32 ± 24.83	104	4.96	0.000*
3. Fine motor	53.26 ± 19.72	71.37 ± 20.13	104	4.57	0.000*
4. Gross motor	55.88 ± 20.22	75.51 ± 19.52	104	4.98	0.000*
5. Eye-hand coordination	55.85 ± 20.39	74.60 ± 17.99	104	4.82	0.000*
6. Language understanding	39.37 ± 17.87	51.41 ± 13.94	104	3.67	0.000*
7. Language expression	36.58 ± 19.88	51.32 ± 21.56	104	3.60	0.000*
Total	47.78 ± 15.87	65.93 ± 15.90	104	4.50	0.000*

PDD : Pervasive developmental disorder, DLD : Developmental language disorder, Values : M ± SD of developmental percentage, \*p<0.05 in t-test

37 (17.7%), DLD 24 (16.8%)

3. 양군에서의 동반 증상 비교(Table 3)

13  
PDD 31.4%, DLD  
22.1% 27.0%  
(p<0.05).

4. 양군에서의 교육진단검사상 발달 양상 비교(Table 4)

352 106 (PDD 65  
, DLD 41 )  
PDD 57.04 ± 12.13 , DLD 49.14  
± 15.35 (t  
= 1.97, df = 48, p>0.05). 가  
, PDD 47.78 ± 15.87(%), DLD  
65.93 ± 15.90(%), DLD  
(t = 12.13, df = 1, p<0.05).  
가  
(p<0.05).

**Table 5.** PEP profiles that are significantly different (p<0.05) when associated symptoms are present or not

Associated symptoms	PEP profiles		
	PDD+DLD (N=106)	PDD (N=65)	DLD (N=41)
1. Inattention	none	none	none
2. Hyperactivity	none	none	none
3. Preoccupation	imitation* language expression*	none	none
4. Obsession	none	none	none
5. Aggression	none	none	none
6. Self-stimulation	total*	none	none
7. Self-mutilation	none	none	none
8. Stereotypy	total* imitation* perception* Fine motor* language understanding* language expression*	none	none
9. Anxiety	none	none	none
10. Depression	none	none	none
11. Sleep problem	total* imitation* perception* gross motor*	none	none
12. Tics	none	none	none
13. Odd response	gross motor* language understanding* language expression*	none	none

PEP : Psycho-educational profile, PDD : Pervasive developmental disorder, DLD : Developmental language disorder, 'none': no profile was significantly influenced by associated symptoms, \*p<0.05 in t-test

**Table 6.** Comparison of associated symptoms by CARS in PDD

Associated symptoms	CARS			df	p
	C1 (N=15)	C2 (N=30)	C3 (N=17)		
1. Attention	6(40.0)	14(46.7)	12(70.6)	2	0.01
2. Hyperactivity	3(20.0)	12(40.0)	9(52.9)	2	0.15
3. Preoccupation	10(66.7)	24(80.0)	15(88.2)	2	0.32
4. Obsession	6(40.0)	6(20.0)	4(23.5)	2	0.34
5. Compulsion	6(40.0)	7(23.3)	7(41.2)	2	0.34
6. Self-stimulation	5(33.3)	3(10.0)	5(29.4)	2	0.11
7. Self-mutilation	3(20.0)	9(30.0)	8(47.1)	2	0.24
8. Stereotypy	3(20.0)	16(53.3)	13(76.4)	2	0.01*
9. Anxiety	9(60.0)	9(30.0)	3(17.6)	2	0.03*
10. Depression	8(53.3)	11(36.7)	9(52.9)	2	0.42
11. Sleep problem	3(20.0)	1( 3.3)	5(29.4)	2	0.04*
12. Tics	0( 0.0)	1( 3.3)	0( 0.0)	2	0.58
13. Odd response	1( 6.7)	6(20.0)	6(35.3)	2	0.13

PDD : Pervasive developmental disorder, Values : number(%) of cases with associated symptoms, C1 : below 29.5 in CARS, C2 : 30 - 36.5 in CARS, C3 : over 37 in CARS, CARS : Childhood autism rating scale, \*p<0.05 in ANOVA test

**Table 7.** Comparison of treatment drugs by patient's diagnosis

Treatment drugs	Patient's diagnosis		Total
	PDD(N=209)	DLD(N=143)	
Psychostimulants (MPD)	33(15.83)	11(7.7)	44(12.5)
Antipsychotics(HP)	31(14.8)	0(0.0)	31( 8.8)
Benzodiazepine	8( 3.8)	0(0.0)	8( 2.3)
SSRI*	9( 4.3)	0(0.0)	9( 2.6)
Tegretol	5( 2.4)	0(0.0)	5( 1.4)
Clonidine	3( 1.4)	0(0.0)	3( 0.9)
Combined drugs	17( 8.1)	3(2.1)	20( 5.7)
Total	89(42.5)	11(7.7)	100(28.4)

PDD : Pervasive developmental disorder, DLD : Developmental language disorder, MPD : Methylphenidate, SSRI : Selective serotonin reuptake inhibitor, HP : Haloperidol, Values : number(%) of cases with drug treatment, \*Sertraline or fluoxetine

가 5

5. 동반증상에 따른 교육진단검사 소항목들의 양상 비교 (Table 5)

106 ( , ), ( , ), ( , ), ( , ), ( , ) (p<0.05). PDD(65 ) DLD(41 )

6. PDD 아동에서 CARS에 따른 동반증상의 양상 비교 (Table 6)

PDD 209 CARS 94 CARS

7. 약물치료 (Table 7)

28.4% , PDD

42.5%, DLD 7.7%가

28.4%

고 찰

84.7% , PDD

85.6%, DLD 83.2%

가

' 3 4 '

가 . 가 .

가 3 가

6.2%, DLD 10.5% PDD , DLD

, DLD 가 30)31) 가 가

, DLD PDD 가 가

가 PDD mania 가

가 , mania 가 PDD

23)

(TS) 가 32),

, ADHD, TS PDD 4 (1.9%), DLD

, X 2 (1.4%)

가 X (Fra - X)

1 (0.9%) Fra - X,

1

가 PDD 17.7%, DLD 16.8%가

(0.6%)

가 DSM 7),

가 1 (0.5%)

6.7%, DLD 10.5% 8.2% , PDD 가

, DLD

가 ( , )

가 19.6%, DLD 41.2% PDD

PDD



가 가

가 PEP

가

가 가

가 18.9% 가 DLD ADHD 가

가 DLD ADHD 가

가

가

64%가 , 36 48%가 가

, 43 88%가 , 37%가 , 16

86 %가 , 50 89%가 )

68 74%가 , 17 74%가 가

, 9 44%가 , 11% CARS

, 23 43% , 8% CARS

17-22) 13 가 CARS

PDD 31.47%, DLD 22.13% 가

DLD

PDD가 , CARS가 가

PDD

PDD 42.5%, DLD

11% PDD methylphenidate(MPD)(15.8%) haloperidol

, DLD ADHD (14.8%) , 가

(8.1%)

DLD가 PDD (<5%).

PDD ADHD MPD haloperidol

, DLD SSRI

ADHD 가 benzodiazepine tegretol, clonidine

PEP

가 가

PEP



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## A STUDY ON COMORBID DISORDERS AND ASSOCIATED SYMPTOMS OF PERVASIVE DEVELOPMENTAL DISORDER CHILDREN

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**Objective :** The purpose of this study was to investigate the prevalence and characteristics of comorbid disorders and associated symptoms in pervasive developmental disorder (PDD) and to examine the correlation between associated symptoms and developmental characteristics in PDD children.

**Method :** The sample consisted of 209 cases of PDD and 143 cases of developmental language disorder (DLD) (control group) who were treated at the Seoul National Mental Hospital from Jan. 1996 to Mar. 1999. The diagnostic work based on DSM- criteria was performed by one or two child psychiatrists, while the clinical feature was evaluated by doctors's notes, occupational/speech therapy reports, and results of social maturity scale (SMS), childhood autism rating scale (CARS), and psycho-educational profile (PEP). Two groups were compared on a wide range of measures including comorbid disorders, associated symptoms, treatment drugs, and PEP. The relation between associated symptom & PEP was investigated in total (106 cases) and in each diagnostic group. Sixty-four cases of PDD were divided into three groups by CARS and then compared on associated symptoms.

**Result :** The prevalence of comorbid disorder was 19.6% in PDD, 41.2% in DLD. The rate of manifestation of 13 associated symptoms was 31.47% in PDD, 22.13% in DLD on the average. Associated symptoms significantly high in PDD were preoccupation, obsession, self-mutilation, stereotypy, sleep problems, and odd response. In total patient group, associated symptoms that significantly influenced PEP were preoccupation, self-stimulation, stereotypy, inappropriate affect, sleep problems, and odd response. But, in each diagnostic group, no associated symptom influenced PEP. Associated symptoms significantly different between the 3 groups of CARS were stereotypy, anxiety, and sleep problems.

**Conclusion :** These preliminary results suggest that developmental characteristics may influence associated symptoms in PDD children and a realistic approach considering minute diagnosis by associated symptoms and comorbid disorders is required.

**KEY WORDS :** PDD · Comorbid disorder · Associated symptom.