

틱 장애의 진단분류에 따른 임상특징과 질환 심각도와 연관된 변인들

THE CLINICAL FEATURES OF THREE SUB-DIAGNOSED GROUPS OF TIC DISORDERS AND FACTORS RELATED WITH ILLNESS SEVERITY

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연구목적 : (Transient tic disorder : TTD), (chronic tic disorder : CTD), (Tourette's disorder : TD)

방법 : DSM - 69 43 가 (Yale Global Tic Severity Scale) / 가 (Child Behavior Checklist)

결과 : TTD CTD TD / CTD, TD 가 CTD TD , CBCL 가 , CBCL (Attention deficit hyperactivity disorder : ADHD)

결론 : ADHD 가

중심 단어 :

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연구대상 및 방법

1. 연구대상

TTD 가
 TTD
 1998 12 2000 1
 DSM - 34
 , 30 TTD, 2 CTD, 2
 TD , 1999 3 2000 4
 가
 , CTD 16 TD 19
)
 13
 30 43
 TTD 30 , CTD 18 ,
 TD 21 , 43 112

2. 평가 도구

1) 예일 틱 증상 평가 척도(Yale global tic severity scale : 이하 YGTSS라 함)

YGTS 1989 Leckman ¹⁵⁾

가 가
 가 가 가
 , , , , 가
 가 . YGTSS

1999 ¹⁶⁾

YGTS

2) 아동 행동 조사표(Child behavior checklist : 이하 CBCL이라 함)

CBCL 4~17

가
 . 1991 Achenbach ¹⁷⁾
¹⁸⁾

7
 113
 3 가
 / , /
 50
 DSM - 34
 /
 CBCL , TTD 가

3. 연구 절차

69 가
 YGTSS 가
 CBCL

4. 자료분석방법

SPSS - WIN 9.0

1) 정상대조군, TTD, CTD, TD군간의 비교

YGTS CBCL

(multivariate analysis of covariance :
 MANCOVA)
 가
 6 (Bonferroni) (pairwise comparisons)

2) 틱 관련 변인과 동반된 사회성/정서/행동문제간의 관계

ADHD, CBCL, (CTD, TD) TTD
 Pearson 가 TTD
 (CTD, TD) (F=22.5, p<0.001).
 3) 틱으로 인한 장애도와 동반된 정서/행동문제의 예측 인자
 CBCL 가 DSM-IV
 ADHD CTD TD
 (multicollinearity) (R²=14.5, p<0.01)(Table 1).
 TTD 22 가
 4 가
 (Stepwise
 multiple regression analysis) 가 4
 CTD

결 과

1. 인구학적 및 임상적 특성

TTD 65.5 ± 22.6
 CTD 108.3 ± 24.3, TD 111.7 ± 34.3
 110.6 ± 21.6
 (F=23.5, p<0.001). TTD
 가 14 (46.7%), 29 (67.4%)
 , CTD 16 (88.9), TD 20 (95.2%)
 가 (R²=17.5, p<0.01).
 가 (F=22.0, p<0.001).

2. 틱 장애 진단분류에 따른 틱 증상의 심각도, 사회적 기능 및 문제행동의 비교

1) YGTSS

(F=3.7, p<0.05), (F=5.0, p<0.05),
 (F=3.7, p<0.05)
 가
 TTD, CTD, TD
 가
 , TTD
 , CTD TD
 가
 CTD
 , TDD TD
 TD 가

Table 1. Demographic and clinical characteristics of subjects(N=112)

	Control(n=43)		TTD(n=30) ¹		CTD(n=18) ²		TD(n=21) ³		Statistics
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	F
Age at interview(month)	110.6	21.6	65.5	22.6	108.3	24.3	111.7	34.3	23.5***
Age of onset(month)	-	-	61.6	21.2	73.0	27.2	75.1	14.7	2.9
Age at diagnosis(month)	-	-	65.5	22.6	105.3	29.3	99.6	24.9	18.2***
Duration of tic symptom	3.1	2.7	38.3	26.7	39.0	30.1	22.5***		
	No	%	No	%	No	%	No	%	²
Sex(male)	29	67.4	14	46.7	16	88.9	20	95.2	17.5**
Family history of tic symptom	-	-	5	33.3	4	26.7	6	40.0	1.1
Presence of comorbid ADHD4	-	-	2	9.5	8	39.1	11	52.4	14.5**

Note : ¹TTD : transient tic disorder, ²CTD : chronic tic disorder, ³TD : tourette's disorder, ⁴ADHD : attention-deficit/hyperactivity disorder

Note : ** : p<0.01, *** : p<0.001 by ANOVA(analysis of variance) and chi-square test

TDD CTD TD (F=5.3, (F=4.3, p<0.05). p<0.01) (Table 3).

(F=9.5, p<0.001) TDD, CTD, TD 가 (Table 2).

2) CBCL 가 , CBCL 가 , 가 , 가 .

(F=11.5, p<0.001). CBCL (F=6.7, p<0.001), (F=5.6, p<0.01), (r= - 0.32, p<0.05) (F=12.0, p<0.001) CTD CBCL (r=0.34, p<0.05), TD TDD (r=0.32, p<0.05) (F=3.4, p<0.05), / (F=2.9, ADHD CBCL (r= - 0.32, p<0.05), (r=0.37. p<0.01), p<0.05) CTD TD 가 (r=0.34, p<0.05), (r=0.41, (F=5.4, p<0.05) p<0.01) (Table 4).

(F=4.2, p<0.01) TD 4. 틱 증상으로 인한 장애도와 동반된 정서/행동문제에 대한 예측 변인 가 5

TTD, CTD (F=7.3, p<0.001) (F=8.0, p<0.001) TTD CTD TD

Table 2. Comparison of yale global tic severity scale scores among three tic disorder groups(N=69)

	TTD(N=30) ¹		CTD(N=18) ²		TD(N=21) ³		Statistics	
	Mean	SD	Mean	SD	Mean	SD	F	Posthoc
Motor tic								
Number	1.4	0.8	2.3	1.2	2.3	1.2	3.7*	1<2<3
Frequency	2.9	1.0	3.1	1.3	3.3	1.4	0.1	
Intensity	2.1	0.9	2.9	1.1	2.9	1.4	0.5	
Complexity	0.1	0.4	1.4	1.3	1.9	1.7	5.0*	1<2,3
Interference	0.9	0.6	1.8	1.3	2.4	1.6	3.7*	1<2,3
Total motor tic	7.4	2.7	11.4	4.6	13.7	6.8	2.8	
Phonic								
Number	0.1	0.3	-	-	1.9	1.4	24.9***	1<3
Frequency	0.4	1.1	-	-	3.0	1.3	38.2***	1<3
Intensity	0.2	0.5	-	-	2.5	1.3	47.3***	1<3
Complexity	0.1	0.1	-	-	1.3	1.5	8.7**	1<3
Interference	0.2	0.6	-	-	2.0	1.5	19.6***	1<3
Total phonic tic	0.9	2.5	-	-	10.7	5.9	36.8***	1<3
Global impairment score	6.3	6.1	15.7	10.9	22.4	14.5	4.3*	1<2,3
Global severity score	14.7	8.8	26.9	14.3	46.2	24.1	9.5***	1<2<3

Note : ¹TTD : transient tic disorder, ²CTD : chronic tic disorder, ³TD : tourette's disorder
 * : p<0.05, ** : p<0.01, *** : p<0.001 by MANCOVA(multivariate analysis of covariance)

Table 3. Comparison of child behavior checklist scores among control and three tic disorder groups(N=112)

	Control(n=43) ¹		TTD(n=30) ²		CTD(n=18) ³		TD(n=21) ⁴		Statistics	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	F	Posthoc
CBCL-Behavior problem scale(T-score)										
Withdrawal	51.5	19.4	52.4	21.4	75.7	17.4	73.5	21.5	6.7***	1<3,4 2<3,4
Somatic complaints	52.3	8.6	56.0	8.1	58.8	13.3	60.6	9.0	3.4*	1<3,4
Anxious/Depressed	48.4	8.7	53.4	14.6	55.1	11.1	54.9	9.9	2.9*	1<3,4
Social problem	51.4	11.7	50.2	9.1	54.9	11.7	62.8	7.8	4.2**	1,2,3<4
Thought problem	53.8	10.4	52.6	8.6	62.8	8.7	64.2	9.6	5.6**	1<3,4 2<3,4
Attention problem	48.0	9.0	49.5	10.8	61.8	8.5	63.3	10.4	12.0***	1<3,4 2<3,4
Delinquent problem	45.9	7.1	47.3	8.2	49.8	11.1	50.1	8.3	1.7	
Aggressive problem	44.9	10.2	50.6	8.3	52.7	4.9	54.7	9.5	5.4**	1<2,3,4
Internalizing problem	50.9	10.2	54.2	12.9	64.5	13.3	64.2	11.5	7.3***	1<3,4 2<3,4
Externalizing problem	49.1	9.6	50.1	8.3	52.9	5.2	54.4	9.6	5.3**	1<2,3,4
Total problems	48.3	10.4	51.9	9.7	59.8	7.9	60.4	7.3	8.0***	1<3,4 2<3,4
CBCL-Social competence scale(T-score)										
	49.9	11.9	44.9	14.3	32.4	15.5	30.2	9.6	11.5***	1<3,4 2<3,4

Note : ¹TTD : transient tic disorder, ²CTD : chronic tic disorder, ³TD : tourette's disorder
 Note : * : p<0.05, ** : p<0.01, *** : p<0.001 by MANCOVA(multivariate analysis of covariance)

Table 4. Correlations among tic-related, social/emotional/behavioral problem and maternal behaviors

	1	2	3	4	5	6	7	8	9	10
1. Motor tic total										
2. Global impairment Score	0.769**									
3. Age of onset	0.189	0.216								
4. Duration of tic symptom	0.390**	0.530**	0.016							
5. CBCL-social competence	-0.264	-0.324*	0.019	-0.232						
6. CBCL-internal behavior	0.228	0.219	0.197	0.337*	-0.421**					
7. CBCL-external behavior	-0.031	0.057	-0.002	0.125	-0.332**	0.663**				
8. CBCL-total behavior	0.189	0.208	0.159	0.320*	-0.481**	0.909**	0.808**			
9. MBRI total	0.138	0.052	0.085	0.140	0.181	-0.142	-0.134	-0.197		
10. Presence of ADHD	0.127	0.238	0.219	0.205	-0.320*	0.371**	0.338*	0.412**	-0.213	

Note : * : p<0.05, ** : p<0.01 by pearson correlation analysis

(), ADHD (), CBCL (), ADHD (), CBCL (), TD ADHD (t=3.4, p<0.01) (Table 5). (t=3.5, p<0.01), (t=3.1, p<0.01), (t=2.9, p<0.01) 고 찰 가 (R=0.819). CBCL /

Table 5. Factors predicting YGTSS global impairment score and CBCL total behavioral problem score in children with tic disorder

Dependent variable	R ²	F	p	Variables entered in equation	Beta	t	p
YGTSS global impairment score	0.684	41.7	0.000	Motor tic-interference	0.392	3.87	0.000
				Duration of tic symptom	0.281	3.54	0.001
				Motor tic-intensity	0.352	0.35	0.001
CBCL total behavioral problem score	0.187	11.5	0.001	Diagnosis of ADHD	0.433	3.39	0.001

Note : YGTSS-yale global tic severity scale, CBCL-child behavior checklist

TD , TTD CTD . TTD

CTD TD CBCL TTD

가 가 가

Brunn Budman⁵⁾

ADHD 가 58 가 , 83%가

TTD 가 가

50%가 TD

TTD¹⁹⁾ TTD

() 가 TTD 8 4 CTD

가 TTD 가 Group)

1²⁰⁾

TTD 11

DSM-IV TTD 6

가 24 (80%)

가

가 - (Tourette's syndrome gene)

TTD, CTD

TTD / 가²¹⁾²²⁾ Golden⁸⁾ TD 가 CTD

가 가

TTD가 가 -²²⁾

가 Kurlan²¹⁾ TD

가 , TTD
 가 CTD TD
 가
 ADHD 가 /
 , ADHD
 ADHD

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ABSTRACT

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Objective : The purpose of this study was to compare the clinical features of children with three sub-diagnoses of tic disorder (transient tic disorder (TTD), chronic tic disorder (CTD) and Tourette's disorder (TD)) and to exam the factors related with illness severity of them.

Method : Subjects were 69 children who met DSM-IV criteria for tic disorder and 43 control children. All subjects were investigated demographic and clinical factors related to tic. The severity of tic was assessed with the Yale Global Tic Severity Scale (YGTSS) in tic disorder children. The Child Behavior Checklist (CBCL) was accomplished by parents of all subjects.

Results : Children with TTD had not only shorter duration of tic symptoms but also milder tic severity and impairment than those with CTD and TD. They also had significantly lower scores on most CBCL subscales than children with CTD and TD, while they were similar with controls in all the CBCL subscale scores except aggressive behavior. Children with CTD and those with TD were similar to each other in clinical variables except number of tic symptom and scores on CBCL social problem subscale. The interference and intensity of motor tic symptoms and duration of tic symptoms were significant predictors of global impairment score on YGTSS, while the presence of comorbid ADHD was a predictor of the total behavior problem score of CBCL.

Conclusion : These findings indicate that duration of tic symptoms and the presence of comorbid ADHD as well as the severity of tic symptoms strongly associated with the illness severity of children with tic disorder. These results also suggest that those clinical factors may be more important for assessing the severity of illness and determining the treatment strategy than the sub-diagnosis itself in children with tic disorder.

KEY WORDS : Tic disorder · Sub-diagnosis · Illness severity · Impairment.