

세로토닌 수송체 관련 전사체 부위 유전자 다형성과 강박장애 발병 연령과의 관련성

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ABSTRACT

Association between Serotonin Transporter Linked Promoter Region(5-HTTLPR) Polymorphism and Age of Onset of Obsessive-Compulsive Disorder

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Objective : Many researches strongly suggest that early- and late-onset obsessive-compulsive disorder (OCD) represent separate subtypes of the disorder, possibly with distinct underlying pathogeneses. The aim of this study was to determine the association between 5-HTTLPR genotypes and the onset of OCD. **Methods** : We recruited 124 OCD patients and classified them into an early-onset group (age of onset <18 years) and a late onset-group (age of onset ≥18 years). From the blood, DNA was isolated using standard techniques and the 5-HTTLPR polymorphism was genotyped by polymerase chain reaction and electrophoresis. We classified the subject as s/s, s/l, and l/l group according to their genotype. We also combined the s/l and l/l genotypes (l allele non-carrier) and compared these with the s/s genotype (l allele non-carrier) for our analysis. Genotype and allele frequencies of early- and late-onset OCD were analyzed by chi-square statistics. **Results** : The frequencies of s/l+ l/l genotype and l allele in early-onset OCD group were significantly higher than late-onset OCD group. **Conclusion** : These results suggest that a 5-HTTLPR polymorphism is an important factor in the onset of OCD. (Korean J Psychopharmacol 2005;16(1):76-80)

KEY WORDS : Serotonin transporter polymorphism · Early-onset · Late-onset · Obsessive-compulsive disorder.

서 론

(heterogeneous)¹⁾
가

: 2004 10 12 / : 2004 10 28
교신저자 : , 135 - 720 146 - 92

(set of related syndromes)

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²⁻⁴⁾

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(subtype)

(bimodal distribution) (early - onset)

OCD) 가 가 가 가

가 가

clomipramine (SSRI)

가

SSRI clomipramine (target structure) (serotonin transporter, 5 - HTT (5 - HTTLPR)

가 (biallelic) 5 - HTTLPR (long allele, l)

44 bp (short allele, s)

5 - HT

5 - HTTLPR (development)

가

(onset) 5 - HTTLPR 5 - HTTLPR

대상 및 방법

1. 연구대상

2002	3	2004	2	24
			2	DSM - 124
18				18

2. 연구방법

1) 정신과적 평가

SCID(Structured Clinical Interview for DSM -),¹⁹⁾ (Yale - Brown Obsessive - Compulsive Scale, Y - BOCS),²⁰⁾ (Hamilton Depression Rating Scale, HDRS)

2) 유전자 분석

QIAamp (Qiagen Inc, Valencia, Calif)

DNA 5 - HTTLPR

5' - GGCGTTGCCGCTCTGAATGC - 3' 5' - GAGGGACTGAGCTGGACAACCAC - 3' (primer)

(PCR)

95	10	(denaturation)
94	10	62
	35	15
		72
		32

PCR 2.5% 가 (agarose gel)

ethidium bromide(1 µg/ml, Sigma)

DNA (molecular marker) (genotype)

5 - HTTLPR	528 bp
가 l/l	484 bp
가 s/s	528 bp
484 bp	가 s/l

3) 자료 분석

Caucasian	l/l	s/s	가 32.3%
18.8%. ¹³⁾			3.2% 63.7%
가			
Caucasian	s/s	가	
가 s/l	l/l	가	
5 - HT uptake Vmax ²¹⁾	s/s	(l allele)	

Table 1. General and clinical characteristics of OCD patients according to age of onset

	Early-onset OCD (n=60)	Late-onset OCD (n=64)	p-value
Sex	Male 45 (75.0%) Female 15 (25.0%)	Male 38 (59.4%) Female 26 (40.6%)	0.07 ^a
Age of onset	13.77 ± 2.87	27.95 ± 9.35	<0.01 ^b
Illness duration	13.10 ± 8.42	9.64 ± 8.10	0.63 ^b
Y-BOCS	27.26 ± 4.29	27.37 ± 5.10	0.32 ^b
HDRS	14.70 ± 7.72	14.15 ± 8.90	0.93 ^b

^a chi-square test, ^b t-test, Y-BOCS : Yale-Brown obsessive-compulsive scale, HDRS : Hamilton depression rating scale

Table 2. Genotype and allele frequencies of the 5-HTTLPR polymorphism in early- and late-onset OCD groups

	Early-onset OCD (n=60)	Late-onset OCD (n=64)	p-value
Genotype			
s/s	32 (53.3%)	47 (75.4%)	0.06
s/l	25 (41.7%)	16 (25.0%)	
l/l	3 (5.0%)	1 (1.6%)	
l allele non-carrier (s/s)	32 (53.3%)	47 (75.4%)	0.02
l allele carrier (s/l+l/l)	28 (46.7%)	17 (26.6%)	
Allele			
s	89 (74.1%)	110 (85.9%)	0.02
l	31 (25.8%)	18 (14.1%)	

non - carrier) s/l+l/l (l allele carrier)

결 과

1
Y - BOCS HDRS
($\chi^2=3.42, p=0.07$).

5 - HTTLPR
Hardy - Weinberg ($\chi^2=0.46,$
p=0.50, and $\chi^2=0.08, p=0.78$)
s/l+l/l s/s
s/l+l/l 가 ($\chi^2=5.41,$
p=0.02).
($\chi^2=5.41, p=0.02$)(2).

고 찰

75.0%
60~70%²²⁻²⁴
Y - BOCS 가
^{10,11}
가 ⁵⁾
Y - BOCS
HRDS
Beck
HDRS 가
^{10,11,25}
s/l+l/l 가
5 - HTTLPR
($\chi^2=0.20, p=0.91$),
5 - HTTLPR
가
SSRI
^{9,10,24}

SSRI Kim
 , s/l l/l 가 s/s
 가 SSRI s/l+l/l 가
 26)
 SSRI 가 s/l+l/l 가
 가
 5 - HTTLPR 가
 가
 5 - HTTLPR 가
 5 - HTTLPR 가 가
 가 가
요 약
목 적 :
 가 가 가
 가 가
 5 - HTTLPR
방 법 : 124
 (18) (18)
)
 5 -
 HTTLPR s/s (l
 allele non - carrier) s/l+l/l (l allele carrier)

결 과 : -
 s/l+l/l 가
결 론 : 5 - HTTLPR 가
중심 단어 :

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