

# 우울증 아형들의 이해\*

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## The Understanding of Depression Subtypes\*

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### ABSTRACT

The debate about whether depressive disorders should be divided into categories or arrayed along a continuum has gone for decade, without resolution.

In our review, there is more evidence consistent with the spectrum concept than there is with the idea that depressive disorders constitute discrete clusters marked by relatively discontinuous boundaries. First, "depression spectrum", "is there a common genetic factors in bipolar and unipolar affective disorder", "threshold model of depression" and "bipolar spectrum disorder" are reviewed. And, a new subtype of depression is so called SeCA depression that is a stressor - precipitated, cortisol - induced, serotonin - related, anxiety/aggression - driven depression. SeCA depression is discussed.

But, there is with the idea that depressive disorders constitute discrete subtypes marked by relatively discontinuous boundaries. This subtypes of depressive disorder were reviewed from a variety of theoretical frames of reference. The following issues are discussed ; Dexamethasone suppression test(DST), TRH stimulation test, MHPG, Temperament Character Inventory(TCI), and heart rate variability(HRV).

**KEY WORDS** : Depression · Subtype · Depressive spectrum disease · SeCA depression · Dexamethasone suppression test (DST) · Heart rate variability(HRV).

서론

operational diagnostic criteria) 가 ,

(minor depression), , (NOS) 가

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2001 3 23  
Recent advances in understanding of depression

가 가 - - - (familial pure depressive disease(FPDD)), - - (depression spectrum disease(DSD)), - - (sporadic depressive disease(SDD)) (Winokur 1982), - 가 (Andr-

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season Winokur 1979) ( 1).  
 2 . , , , ,  
 3 . 가 , 가? 가?  
 가 . , ,  
 . 1970  
 (Dexamethasone suppression  
 test : DST), MHPG(Urine 3 - Methoxy - 4 - Hydroxy -  
 Phenethylene Glycol : u MHPG) 가

**본 론**

**1. 아형의 평가 필요성과 평가 도구는 무엇인가?**

(Angst 1997 ;

Schotte 1997) . (Angst 1997 ;  
 , 가 ,  
 ( 4).  
 , , ,  
 (Schotte 1997) ,  
 , 가 ,

**Table 3.** Overlapping dichotomies of mood disorders that are not necessarily synonymous

Manic-depressive	Psychogenic
S(somatic) type	J(justified) type
Autonomous	Reactive
Endogenous	Exogenous
Psychotic	Neurotic
Acute	Chronic
Major	Minor
Melancholic	Neurasthenic
Typical	Atypical
Primary	Secondary
Biological	Characterological

**Table 4.** 우울증 아형의 이해

1	가	가	가?
2		/	가?
3		(DST) /	가?
	TRH	(TRHST) /	
	MHPG		
4	가 /	(TCI) /	
		(Heart rate variability, HRV) /	
		Genetic APOE	
5		Norepinephrine-related type/ Serotonin-related type :	
		SeCA depression	
6	REM /	/	/ 가 /
	/		
7	/	/	/ Bipolar /
	(Seasonal type)		
8	:		가? 가?
9	가		

**Table 1.** Types of unipolar depression based on familial pattern

Types	Familial pure depressive disease	Depressive spectrum disease	Sporadic depressive disease
Onset	Late	Younger	
Familial pattern	Depression	Alcoholism, drug abuse, hysteria, antisocial personality	Negative
Treatment	Good response	Poorer response	

**Table 2.** Subtypes of depression

Depressive episode / recurrent depression
Major depressive disorder(MDD), single episode / MDD, recurrent
Unipolar depression / bipolar depression
Major depression / minor depression
Severity / psychotic feature / chronic/
Catatonic feature / melancholic feature / atypical feature / post-partum onset
Acute / chronic
Major depression / bipolar disorder / dysthymia / bipolar disorder / cyclothymia

Schotte 1997) .  
 가  
 가 (Brenney 1986 ; 1987).

(major depressive disorder),  
 (dysthymia), (minor depression)  
 (recurrent brief depression)

(longitudinal stability) (Angst 1997) (spectrum)

( ) 가 . , 15

51%

44%

가

가

(Angst Merikangas 2000).

(spectrum)

(minor)

가

가

10

(Coryell 1997).

가

가

가

가

2) 우울증은 연속선상의 질병이다.

threshold model

TRH

threshold model

(Schotte 1997).

5HIAA, 3 - Methoxy - 4 - Hydroxy - Phenethylene Glycol(MHPG), APOE

220

(rapid eye movement, REM)

가

(Temperament - character inventory : TCI),

(Heart rate variability, HRV)

가

가

threshold model

2. 우울증 전체를 하나의 질병으로 볼 필요성이 있는가?

(sub - threshold depression)

가

(spectrum)

(Wood

가

Moore 1996).

가

가

13.6

, 가

1) 우울증 스펙트럼 장애(Depressive spectrum)

(Subtype)

spectrum

1980

가

3) 양극성 스펙트럼 장애(Bipolar spectrum disorder)

Winokur가

(depressive spectrum

(cyclothymia),

(Bi-

disease)

polar NOS) 가 (HPA Axis) NE 가  
 III 가 , 가 (Akiskal . NE - receptor CRF, ACTH  
 1983). 1% , - receptor ACTH cortisol  
 2.5% 6.5% (Angst 1998). , serotonin H - P - A , cholinergic  
 (fluctuation), , ACTH , endorphin cortisol , dopami-  
 nergic(DA) ACTH , GABA .

(2) dexamethasone 1mg 11 .  
 4 , 11 . radi-  
 oimmunoassay . 4  
 (Mackinnon Yudofsky 1991). 가 5 µg/100ml

4) 양극성 우울증과 단극성 우울증 과연 다른가?

가 . Winokur(1980) , melancholia  
 가 - - . Tsuang (1985) (Feinberg Carroll 1984 ; Brown shney 1980 ; Carroll  
 가 HPA ( )  
 “ ” 가  
 ” 가 가 (false positive)

3. 기왕의 생물학적 지표에 의한 아형구분은 의미 있는가?

가 ,  
 가 32% (Adinoff  
 1991).  
 50% 42% ( 1993).  
 40 50% 25 40%  
 (Nemiah Uhde 1989)

1) 텍사메타존 억제 검사 양성군

(1) 1970 , :  
 가  
 (norepineprine : NE)가 ,  
 (Dexamethasone suppression test : DST) ( NE 가 - imipramine, desipramine

5HT 가 - amitriptyline, 4 11  
clomipramine (electroconvulsive therapy) (Gold 1980 ; (Mackinnon Yudofsky 1991). Cortisol  
Albala 1981). DST가 ( 1985)가 .  
(Davanand 1991).  
가, 가 가 가  
DST - (state marker) 가  
( 1987 ; Greden .  
1980). DST  
DST 2) TRH 자극 검사 둔화 집단  
(indicator) (1)  
(Holsboer 1983 ; Grunhaus 1983). Loosen Prange(1982) TRH  
DST (Thyrotropin Releasing Hormone Stimularion Test : TR-  
HST) (blunt) -  
(central regulation)  
DST가 가 TRH가  
(Yerevanian 1982). TRH 가 TSH  
18 (Charles 가  
1989). TRH가 TRH 가  
(down regulation) TRH  
( 1993) TRH 가  
NE TRH 가 ,  
(monitors) (Martin 1977 ; Reichlin 1974)  
3 (Schweitzer 1987). 5HT , NE 가  
DST 가 THR  
- 가 가 (Loosen Prange 1982).  
(predictor) .  
DST otirelin ( ) pr-  
- (state marker) , dopamine (Loosen 1979).  
, dopamine 가  
(Prange 1979)  
(5) 26.7% DST TRH  
(Mackinnon , 16.6% DST , 20.0%  
Yudofsky 1991). TRH 가 63.3%  
5~10% , ( 1989). 4  
, 가  
, 가 1/4  
, 가  
8 , 4 , 11 11 (2)  
6 (NPO)

8 30 catheter , 5 2  
 catheter 가 .  
 8 59 3 way - stopcock , T<sub>3ru</sub>, TRH .  
 T<sub>3ria</sub>, T<sub>4</sub> TSH , , , , , (dry mo-  
 9 TRH(Protirelin) 500 µg 30 uth), (chest tightness), (pleasant genital  
 sensation) 가  
 , (dry mouth), (chest tightness), .  
 (pleasant genital sensation) Loosen(1979)  
 가 TRH GH 가, prolaction  
 TRH 15 , 30 ,60 , 90 TSH TSH ,  
 TRH ( TSH) . DA (Central Dopaminergic activity) 가  
 ( max TSH)가 7 µIU/ml . TSH  
 (blunt) .  
 TSH max 가  
 TSH( ) 2 µIU/ml (Loosen 1983).  
 (MacKinnon Yudofsky 1991).  
 TRH  
 가 .

(3) TRH

가 (Chazot  
 1974). DST TRH ( )  
 gum 1984). , DST (Tar-

(4) TRH

가 ,  
 ( ) 가 , 5 -  
 HT 가 .( )  
 1989). 가,  
 가 (Langer 1986). 가 - (trait ma-  
 rker) (blunt)  
 , 가  
 (Loosen Prange 1982 ; Targum 1984).  
 가 가  
 (Loosen 1983).

(5)

(Specificity)가 (hypothyroi-  
 dism), (alcoholism) . TSH ( 1989)

3) 뇨 MHPG 검사에 따른 약형

(1)  
 Catecholamines 가 1968 Maas  
 MHPG(Urine 3 - Methoxy - 4 - Hydroxy -  
 Phenethylene Glycol : u MHPG) 가 NE  
 index . NE  
 MHPG 가 가  
 NE NE  
 MHPG 가  
 (Siever 1987) 가 ( 1989).  
 (2)  
 2 3 가 24  
 MHPG . Mass(1975) Cobbin  
 (1979) Weil - Malherbe 1600  
 µg/24h 1300 µg/24h  
 Schatzberg (1982) 1950 µg 2500 µg  
 가 가  
 Malherbe ( 1986).  
 NE

(3) MHPG ( B)  
MHPG가  
amitriptyline B  
(subgroup) A, B, C ( 5)  
(Cobbin 1979 ; Schilkraut 1973 ; Beck-  
mann Goodwin 1975)( 5). MHPG가  
type) 1, 2, 3 ( 6) (sub- mann 1989). MHPG가 5HIAA가 ( A) MHPG가 5HIAA가  
MHPG ( A, 1)  
(Maas 1968).  
(Potter 1985 ; Rees 1970)  
5 A (Maas 1975 ; Cobbin 1979).  
bipolar 1 bipolar (Mu-  
scettola 1984).  
6 1 (Maquire Norman 1983 ; Sch-  
arzberg 1982).  
E, MN MAO  
가 (Schilkraut 1978). Dexamethasone  
MHPG 가 HVA blunting  
MHPG가 HVA 가 (Wolkowitz  
1987).  
( 6).  
1 , 2 NE  
3 cortisol  
가 MHPG, cotrisol ac-  
etylcholine가 (Schatzberg 1982). Physo-

**Table 5.** Three subgroups of patients of all kinds of depression

	Subgroup A	Subgroup B	Subgroup C
Urine MHPG	Low	Normal or high	
Drug effect		Amitriptyline(+)	Amitriptyline(-)
Diagnosis	Bipolar Unipolar	Unipolar	Unipolar
Drug effect	Schizoaffective Nortriptyline Desipramine Imipramine Protriptyline Maprotiline	Doxepine	
Mechanism (Hypothesis)	Norepinephrine (5HIAA : normal)	5HT CSF 5HIAA : Low (MHPG : normal)	Dopamine HVA : low (MHPG, 5HIAA : slig inc) (E+ M : inc)

**Table 6.** Three subtypes of patients with unipolar depression

	Subtype 1	Subtype 2	Subtype 3
u MHPG	Low	Normal	High
u free cortisol			High
Mechanism	Low NE output	NE normal 5HT related	High NE High cholinergic
Effect	Maprotiline(high dose)(+++) Imipramine(++)	Maprotiline(-) Imipramine(-) Oxaprolone(++)	Maprotiline(small dose)(+) Imipramine(+) Alprazolam(+++)

stigmine(anticholinesterase) 4 liability) 가 . MHPG, VMA 0.70  
 가 , cortisol 0.81, 0.86 . serotonin, HVA,  
 MHPG cholinergic hyperactivity DA, NE 0.7  
 noradrenergic response (Linnola 1983).

(4)

MHPG A nortriptyline, desipramine,  
 imipramine (Cobbin 1979 : Maas  
 1972) B amitriptyline (Cobbin  
 1979). A NE 2  
 , B 3  
 5HT 가 . imipramine  
 3 desipramine  
 A amitriptyline nortri-  
 ptyline B  
 (Davis Breanaham 1987).

4. 유전(Genetic) 또는 기질(Temperament)로 보는 아형과 특징

1) 가족력에 따른 아형은 과연 의미가 있는가?  
 (genetic subtype)  
 가 가 -  
 - - (familial pure depressive disease(FPDD)),  
 - - (depressive spectrum disease(DSD)),  
 - - (sporadic depressive disease(SDD))  
 (Winokur 1982)

Davis . Maprotiline 가 가 가  
 A MHPG가  
 ( 3)  
 가 (Willner 1983).  
 , MHPG 1  
 maprotiline, imipramine , 2  
 3 가 (Schatzberg  
 1982). MHPG( 2) oxaprotiline .  
 ( , ) MHPG( 1)  
 ( 3) alprazolam 가 (Mo-  
 oney 1985)

(pure depression) 가 가  
 (Andrew 1998).

2) 기질 - 성격 특성에 따른 아형 구분 가능한가?

Cloninger(1993)  
 가 가 (Temperament Chara-  
 cter Inventory : TCI)  
 가  
 (temperament)  
 (novelty seeking : NS), (harm avoidance  
 HA), (reward dependence RD), (pers-  
 istance : PS) 4  
 , 가, (character)  
 (self directedness SD), (coo-  
 perativeness C), (self transcendence ST)  
 (Cloninger 1993).  
 (euthymic bipolar) TCI  
 (NS)  
 (HA) 가, (RD) 가, (PS)  
 (genetic diathesis)

가,  
 가  
 (state marker) (Pickar  
 1978).  
 MHPG 가  
 (Potter 1985 : Willner 1985 : Post  
 1984). 4 가 (Bond  
 1972 : Jones 1973).  
 MHPG, NE가 가 가  
 (Systolic BP)  
 REM density , REM (latency)가 . Cy-  
 clic process (Post 1977).

(6)

24



(Osher Cloninger 1996).

## 2) 세로토닌 관련 우울증 아형

CSF 5 - HIAA가

(marker)가 . 5 - HT

Cloninger가 TCI

가

(HA)가

5 - HT<sub>1A</sub> 5 - HT<sub>2C</sub>

(RD) (PS)

(SD) 5 - HT<sub>1A</sub>가

가

(C) ( 2001).

(NS) SD C가

( , , , ) 가

NS가 PS ST

가 /

SD C가

van Praag(1994)가

HA RD

HPA

CRH

NS

ACTH

, cortisol

( 2001).

(flattening)

(Chien Dunner

DST

HPA

1996, Hansenne 1999)

(corticosteroid)

가 (Nelson Cloninger 1997) , (gene expression)

(Bulik 1999)가

가

가

, 가

가

(HA)

가

. CRH

ACTH

(RD)

(PS)

4 가

5HT HPA

(hippocampus) 5 - HT<sub>1A</sub>

5 - HT<sub>2C</sub> 가

## 5. 신경전달물질로 본 우울증의 아형

### 1) 노르에피네프린 관련 우울증 아형

DST

-

HPA

HPA

(HPA axis)

HPA

NE

5 - HT , 5 - HT<sub>1A</sub>

, 5 -

. 1970

NE가

HT<sub>2</sub>

(upregulation)

. MHPG

(corticosteroid)

가 MHPG

HPA

NE가

van Praag

NE

가

(1996)

(stress)

, (sero-

(cortisol)

cold pressor

NE

(anxiety/aggression)

“SeCA depr-

NE

CRF

NE

(phenotype)

가

CRF 가

(Heim Nemeroff 1999)

HPA , CRF , NE 5HT (Kau- , GABA/benzodiazepine fman 2000). flattening, DST , cortisol 가, cortisol , CRF , 5HIAA 가

4) 불면증과 빠른안구운동 잠복 시간 단축

(rapid eye movement, REM), REM(in-tense REM sleep ; 1 가) (Foster 1976). (marker) DST REM Amitriptyline 가 (Kupfer 1980)

6. 우울증 증상으로 구분된 아형과 그 필요성

DST 가 가

5) 높은 생활사건 동반군이나 반항장애 동반군

가 REM density , REM (latency)가 (Post 1977) 가 trazodone (oppositional defiant disorder) (Levi Sogos 1997). 가

1) 죄책감, 공격성을 가지는 아형

가 가 가 (Bleichmar 1996). 가

2) 망상형과 비-망상형 구분

가 가 (Paunovic 1996). 가

6) 조기 조발 우울증은 가족력에 따라 차이 있다.

가 25 가 (Wickramaratne 2000). 가

3) 무쾌형과 식물형은 다른 아형이다.

(anhedonia) (vegetative) 가 (Young 1986). 가 ntinuum (definition) 가

co-

7) 기분부전장애의 조기 조발형과 후기 조발형의 차이점

( 1987). 가

3 : 1

가 , 가 가  
가 (Kleins Schtzberg 1999)  
가 가

(Alexopoulos 1988).

3) 멜란콜리형 특징은 무엇이며 평가를 어떻게 할 것인가?

‘ Clomipramine prolactin ’ seroton-  
ergic system

7. 진단 유형별 특징과 평가

(Gonzalez - Pinto 1996).

1) 심한 정도에 따른 유형

‘ cold pressor NE ’  
NE

(Chen 2000). 가  
가  
가

(Kelly Cooper 1998).

‘ NE ’

(Chen 2000).  
(diathesis - stress theory) continuum

4) 이중우울증은 또 다른 아형인가?

가  
가  
(heart rate variability, HRV) 가 가  
(Kritta- 가  
yaphong 1997). (Keller 1997).

2) 정신 증상 동반 유형

5) 불안을 동반한 주요우울장애는 유형의 차이를 보이는가?

가 . 가  
가 APOE epsilon 4 가  
allele . (Lydiard 1998).  
가 APOE epsilon 4 allele (heart rate variability, HRV)  
가 가 가 가  
APOE  
‘ APOE epsilon 4 allele ’  
가 가 (orthostatic challenge test)  
가 (Zubenko 가  
1996). 가  
가 10% (high - frequency fluctuations)

가 (low - frequency fluctuations) 가 (heart rate variability, HRV) 가 (fluctuation) 가 (Dilaveris (1996) (heart rate variability, HRV) (2001). 5 7 (2001 ; Dilaveris Zervopoulos 1996).

6) 비정형형 우울증은 대비되는 다른 아형인가?

(8). 가 MAOI flu- imipr- 가 TCA (McGrath 2000). oxetine 가 amine 가 (Nierremberg 1998).

7) 양극성 우울증과 단극성 우울증 과연 다른가?

가 Winokur(1980) 가 Tsuang (1985) 가

Table 7. heart rate variability(HRV) indices

The mean RR interval(RR5),
The standard deviation of normal R-R intervals(SDNN)
The standard deviation of all RR intervals(SD Index5),
The corresponding coefficient of variation(CV5),
The natural log(Ln) of spectral components
Total power at 0.000 to 0.400Hz(TP5),
Ultra low frequency power(ULF : <0.0033Hz),
Very low frequency power(VLF : 0.0033 - 0.04Hz),
Low frequency power at 0.040 to 0.150Hz(LF5),
High frequency power at 0.150 to 0.400Hz(HF5),
The ratio of the low to high frequency power(LF5/HF5).

\* 5 means 5-minute period

(heart rate variability, HRV) 가 (fluctuation) 가 (Dilaveris (1996) (heart rate variability, HRV) (2001).

8) 양극성 II 장애는 단극성 우울증과 같은가?

5 7 (Benazzi 1999).

9) 계절형 정동장애

(seasonal affective disorder) 가 ipsapirone cortisol response (Schwarz 1999). (irritability), (lower socialization) 가 가 (Pendes 1999)가 (detachment),

8. 한국인의 우울증

1) 환병은 하나의 아형인가? 아닌가?

(1975).

Table 8. DSM-IV diagnostic criterias for melancholia and atypical depression

Melancholic feature	Atypical feature
Anhedonia / non-reactive mood	Reactive mood
at least 3 of the followings	at least 2 of the followings
Distinct depressed mood	Hypersomnia
Depression worse in the morning	Leadens paralysis
Early morning awakening	(intense lethality)
Psychomotor retardation/agitation	Hyperphasia
Anorexia/ weight loss	Rejection sensitivity
Excessive guilt	

가

가

, ,

가

AIDS

( 1977).

가

( 1979)

가

( 1986 :

1985)

4

(ICD - 10 1998)

가

가

가

가

ICD -

10

### 결 론

가

가

가

가?

가

가?

, 가

가

가

(SeCA depression)

가

### 9. 우울증 아형 평가 검사에 따른 위험성

가

(risk - be-

가

가 가

nefit of laboratory testing)

### 요 약

(Mackinnon Yudofsky 1991).

, 가

가

가

가

가

가

가

spectrum

가

가

““

가 가” “ ”  
 ,  
 가  
 가 (SeCA depression)

co-rtisol 가, cortisol flattening, DST  
 CRF , 5HIAA  
 가  
 DST, TRH  
 MHPG  
 APOE epsilon 4 allele, (Tempe-  
 rament Character Inventory : TCI) (heart  
 rate variability : HRV)

중심 단어 : SeCA  
 Dexamethasone

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