

우울증 환자의 주간기분변동과 수면 양상

Diurnal Variation and Sleep Pattern in Depressive Patients

박영민¹ · 김 린¹ · 서광윤¹ · 조숙행¹ · 강승걸¹ · 윤호경¹Young-Min Park,¹ Leen Kim,¹ Kwang-Yoon Suh,¹Sook-Haeng Joe,¹ Seung-Gul Kang,¹ Ho-Kyung Yoon¹

ABSTRACT

Object: Diurnal variation is included in the diagnostic criteria of the major depressive disorder, melancholic specifier. But there has been controversy over whether diurnal variation is an unique depressive symptoms or a symptom related to a change of sleep patterns, or that of another mechanism, when the previous studies are reviewed. We investigated the existence of diurnal variation according to the subtype of depression and whether diurnal variation is characteristic of melancholic depression or not. We also compared sleep variables according to the existence of diurnal variation.

Method: We examined diurnal variation, sleep patterns, severity of depression using the Visual Analogue Mood Scale, Pittsburgh Sleep Quality Index, and Hamilton Depression Rating Scale. Patients recorded their mood state on the Visual Analogue Mood Scale twice a day, morning and evening, for diurnal variation. We divided depressive patients into two groups, - diurnal variation group and nondiurnal variation group, - and compared the mood and sleep variables using SPSS.

Results: The frequency of diurnal variation is not significantly different among the subtypes of depression. Significant differences between the diurnal variation group and the nondiurnal variation group existed in middle insomnia and sleep time ($p < 0.05$). In melancholic type, a significant difference between the diurnal variation group and the nondiurnal variation group was noticed in PSQI total, sleep latency, sleep disturbances, daytime dysfunction as well as middle insomnia and sleep time ($p < 0.05$).

Conclusions: Diurnal variation existed in other types of depression as well as melancholic type. The results showed that diurnal variation was not a specific symptom of melancholic type, and existence of diurnal variation might be related to sleep patterns. *Sleep Medicine and Psychophysiology* 2001 ; 8(1) : 30-36

Key words: Melancholia · Diurnal variation · Sleep.

(6 - 8).

서 론

Henderson Gillespie(6)

(cl-

assical characteristics) (1 - 3), Graw (9)

DSM - ,

(4,5).

Hall (10)

.....

1

Department of Neuropsychiatry, Korea University College of Medicine, Seoul, Korea

Corresponding author: Leen Kim, Department of Neuropsychiatry, Korea University Seoul Anam Hospital, Anam-Dong, Sungbuk-Ku, Seoul 136-705, Korea (11)

Tel: 02) 920-5355, Fax: 02) 927-2836 가 . Tolle

E-mail: Leen54@chollian.net (12)

(stable symptom)

가 가 1 DSM -
가 가 가 Hamilton Depression Rating
4.2% 36.1% 가 Scale(HDRS, item - 21), Pittsburgh Sleep Quality
(13). Index(PSQI)
Visual Analogue Mood Scale(VAMS)
7 8 , 7 8
가 VAMS 100 mm ,
(14). ,
가 0 , 100 가 ,
가 Gilles (15) ,
가 가 REM
VAMS cutoff point가
Gilles (16). 가 10 VAMS
10 , - 10 ,
(reverse diurnal variation) ,
가 - 10 +10 ,
가
DSM - HDRS , PSQI

SPSS(statistical package for social sci-
ence for window) version 10.0 chi - square
test, T - test

연구대상 및 방법

결 과

1. 연구대상
2000 11 2001 5
DSM -
28 ,
16 ,
7 , 62
가
2. 연구방법
2 3

1. 인구학적 특성
62 16 (25.8%), 48
(74.2%) 16 80
44.76 ± 16.83 10
8 (12.9%), 20 가 6 (9.7%), 30 18 (29%), 40
6 (9.7%), 50 24 (38.7%) 50
가 18
49.22 ± 18.98, 44
42.93 ± 15.73
(1).

2. 결 과

62 가 (3).
 18 29% , 10 55.6% 가 , 3 16.7% , 2 11.1% , 3 16.7% .
 28 10 36% , 가 11 2(), 4(), item 6()
 3 27.3% , 7 3 HRS item
 42.9% , 16 5 (0.9 ± 0.88 vs 1.56 ± 0.62), PSQI
 2 14.3% (2).
 chi - square test
 (2).
 T - test
 HRS item 2(), item 4(), 6(), 8(), 14(),
 PSQI , item 1(), 2(), 4(), 5(), 6(), 7()
 (3).
 HRS item 5 (;
 1.00 ± 0.77 vs ; 1.48 ± 0.73), PSQI

item 3 (1.83 ± 1.10 vs 2.39 ± 0.84)
 가 가
 (3).
 (N=10) (N=
 18)
 HRS , item 2(), item 4(), 6
 (), 8(), 14(), PSQI item
 2(), 4(), item 6()
 HRS item
 5 (0.9 ± 0.88 vs 1.56 ± 0.62), PSQI

Table 1. Subject characteristics

	Diurnal variation group (n=18)	Nondiurnal variation group (n=44)
Age (Yr)	49.22 ± 18.98	42.93 ± 15.74
Sex (M/F)	4/14	12/32

Table 2. Frequency of diurnal variation and nondiurnal variation

Diagnosis	Diurnal variation	Nondiurnal variation	Total	p-value (² , df)
Melancholic type	10 (36%)	18 (64%)	28 (100%)	p= .335 (3.395, 3)
Depressive disorder NOS	2 (14.3%)	14 (85.7%)	16 (100%)	
Dysthymic disorder	3 (27.3%)	8 (72.7%)	11 (100%)	
Major depressive disorder	3 (42.9%)	4 (47.1%)	7 (100%)	
Total	18 (29.0%)	44 (71.0%)	62 (100%)	

Table 3. Variables of diurnal variation group (n=18) and nondiurnal variation group (n=44)

Variables	DV group	NDV group	t	df	p-value
	Mean ± Std.deviation				
HRDS total	26.89 ± 6.23	26.14 ± 5.76	.456	60	.650
Guilty feeling	1.17 ± 1.04	1.50 ± 0.79	- 1.368	60	.176
Initial insomnia	1.44 ± 0.62	1.43 ± 0.79	.061	60	.952
Middle insomnia	1.00 ± 0.77	1.48 ± 0.73	- 2.301	60	.025*
Terminal insomnia	1.00 ± 0.77	1.36 ± 0.92	- 1.598	37.624	.144
Libido	0.28 ± 0.57	0.23 ± 0.48	.357	60	.722
Psychomotor change	1.00 ± 0.73	1.25 ± 0.67	- 1.571	60	.121
PSQI total	13.44 ± 2.96	13.75 ± 4.14	- .327	44.073	.746
Sleep quality	2.28 ± 0.46	2.32 ± 0.77	- .254	51.501	.801
Sleep latency	2.50 ± 0.62	2.41 ± 0.76	.451	60	.654
Sleep time	1.83 ± 1.10	2.39 ± 0.84	- 2.145	60	.036*
Sleep efficiency	1.56 ± 1.10	1.75 ± 1.38	- .586	39.679	.562
Sleep disturbances	1.22 ± 0.43	1.43 ± 0.55	- 1.611	40.120	.115
Sleep medication	2.00 ± 1.24	1.39 ± 1.35	1.662	60	.102
Daytime dysfunction	2.06 ± 0.64	2.16 ± 0.75	- .516	60	.608

DV : diurnal variation

NDV : nondiurnal variation

HRS : Hamilton depression rating scale

PSQI : Pittsburgh sleep quality scale

Std. deviation : standard deviation

* : p < 0.05

** : p < 0.01

Table 4. Variables of diurnal variation group (n=10) and nondiurnal variation group (n=18) in melancholic depression

Variables	DV group	NDV group	t	df	p-value
	Mean ± Std.deviation				
HRDS total	28.20 ± 7.00	30.39 ± 4.41	- 1.019	26	.318
Guilty feeling	1.40 ± 0.52	1.94 ± 0.94	- 1.690	26	.106
Initial insomonia	1.20 ± 0.63	1.50 ± 0.51	- 1.363	26	.185
Middle insomonia	0.90 ± 0.88	1.56 ± 0.62	- 2.320	26	.028*
Terminal insomnia	0.90 ± 0.88	1.39 ± 0.92	- 1.373	26	.181
Psychomotor change	1.40 ± 0.52	1.56 ± 0.620	- .676	26	.505
Libido	0.30 ± 0.48	0.17 ± 0.38	.804	26	.429
PSQI total	11.60 ± 1.90	14.44 ± 2.91	- 2.765	26	.010*
Sleep quality	2.00 ± 0.00	2.33 ± 0.49	- 2.915	17.0	.010*
Sleep latency	2.40 ± 0.52	2.44 ± 0.51	- .220	26	.828
Sleep time	1.20 ± 1.03	2.50 ± 0.51	- 3.731	11.537	.003**
Sleep efficiency	1.20 ± 1.32	1.67 ± 1.41	- .857	26	.399
Sleep disturbances	1.10 ± 0.32	1.50 ± 0.51	- 2.545	25.611	.017*
Sleep medication	1.80 ± 1.32	1.83 ± 1.38	- .062	26	.951
Daytime dysfunction	1.90 ± 0.32	2.39 ± 0.70	- 2.540	25.349	.018*

DV : diurnal variation NDV : nondiurnal variation HDRS : Hamilton depression rating scale
 PSQI : Pittsburgh sleep quality scale Std. deviation : standard deviation
 * : p < 0.05 ** : p < 0.01

(11.6 ± 1.90 vs 14.44 ± 2.91), item 1) 12 25
 (2.0 vs 2.33 ± 0.49), item 3 (1.2 ± 1.03 vs
 2.50 ± 0.51), item 5 (1.10 ± 0.32 vs 1.50 ±
 0.51), item 7 (1.9 ± 0.31 vs 2.39 ± 0.70)
 가
 Beck Depression Inventory 6 (21)
 Stieglitz
 (18) 2 가 1
 가 (retrospective report)
 . 1
 , 가가 가
 (17,18). (21).
 가
 (17). Visual Analogue Mood Scale(22)
 가
 가 (12). (23).
 가 VAMS
 (19). 가
 21 Fahndrich Haug(17)
 , (24)
 VAMS 가
 . Kuhs
 (20) (2 PSQI , , ,

가 (25). HDRS 1 HDRS

가 (25,26). 가

(2), (3).

가 HDRS PSQI 가

Middelhoff(27) (N=10) (N=17)

(better (PSQI , item 1, 3, 5, 7) 가

mood in the morning)

(better mood in the evening) 가 가

90%가

가 PSQI

(better mood in the morning) 97%가 Middelhoff

가 'melancholic morning low'

Waldmann(28)

57%가

, 89% 가

가 가

(27,28),

Graw (9) 가

60% . Kita- 가

nishi (29) 가

(, ,)

(32).

Middelhoff

Waldmann , Von Knorring (30) 가

. Kitanishi (29)

. Carpenter (31) 가

Hamilton

가 가 가

- vigor and affect. *Psychiatr Res* 1988;27:89-99
24. Wefelmeyer T, Kuhs H. Diurnal mood variation in melancholic patients and healthy controls. *Psychopathology* 1996;29:184-192
 25. Busse DJ, Reynolds CF, Monk TH, Berman SR, Kupfer DJ. The pittsburgh sleep quality index: A new instrument for psychiatric practice and research. *Psychiatry Res* 1989;28 (2):193-213
 26. Carpenter JS, Andrykowski MA. Psychometric evaluation of the pittsburgh sleep quality index. *J Psychosom Res* 1998;45:5-13
 27. Middelhoff HD. Tagesrhythmische schwankungen bei endogen depressiven im symptomfreien intervall und wahrend der phase. *Arch Psychiat Nervenkr* 1967;209:315-339
 28. Waldmann H. Dietagesschwankung in der depression alsrhythmisches phanomen. *Fortschr Neurol Psychiat* 1972;40:83-104
 29. Kitanishi K, Graw P, Hole G. Klinisch-experimentelle untersuchungen zur tagesschwankung bei depressiven patienten. *Schweiz Arch Neurol Neurochir Psychiatr* 1982;130:245-258
 30. Knorr von L, Perris C, Strandman E. Diurnal variations in intensity of symptoms in patients of different diagnostic groups. *Arch Psychiatr Nervenkr* 1977;224:295-312
 31. Carpenter LL, Kupfer DJ, Frank E. Is diurnal variation a meaningful symptom in unipolar depression? *J Affect Disorders* 1986;11:255-264
 32. Czeisler CA, Johnson MP, Duffy JF, Brown EN, Ronda JS, Kronauer RE. Exposure to bright light and darkness to treat physiologic maladaptation to night work. *N Engl J Med* 1990;322:1253-1259