

화병과 주요우울증 환자의 신경인지기능

윤영환* · 이소희*[†] · 최종혁*

Neurocognitive Function in Patients with Hwa-byung and with Major Depressive Disorder

Young Hwan Yun, M.D.,* So Hee Lee, M.D.,*[†] Jong Hyuck Choi, M.D.*

ABSTRACT

Objectives : Hwa - byung has been studied clinically for several years and introduced as Korean Culture - Bound Syndrome. However, the definition and the diagnostic method are not yet clarified, and there has not been any sufficient comparative study on this disease entity. This study was conducted to determine the clinical symptoms and the profile of the neurocognitive functions in Hwa - byung(HB) and Major Depressive Disorder(MDD), and We wish to identify any critical factors that differentiate the disorders.

Methods : A total of 102 participants were examined, including 34 participants with MDD, 34 with HB, and 34 healthy controls. The MDD and HB patients were recruited from among inpatients and outpatients at the National Medical Center for the period from May to December of 2004. As a major diagnostic tool of MDD, diagnostic reference of DSM - IV - TR was used and as HB's diagnostic tool, We used computerized neurocognitive function test. Psychiatric symptomatology was evaluated by the Beck Depression Inventory(BDI), and Symptom Checklist - 90 - Revision(SCL - 90 - R). Oneway ANOVA, Scheffe post - hoc test and Chi - Squire Tests were used for statistical analysis.

Results : The participants in three groups did not differ in terms of age, sex, and education. Assessment of BDI indicated that the MDD group had significantly higher total score than the HB group. MDD and HB groups showed significantly higher total scores on the SCL - 90 - R in comparison to the controls. The MDD group was found to have significantly more symptoms of depression than the HB group, based on the depression subscale of the SCL - 90 - R. The computerized neurocognitive function test suggest several results 1) Within the memory domain, it was found that one of the two memory tests in MDD and HB groups were significantly impaired in comparison to the control group. 2) Within the attention domain, it was found that only the MDD group was significantly impaired in comparison to the control group. 3) Within the higher cortical function domain, it was found that significant impairment exist in MDD group and HB group compared to the control group; the severity of impairment was found to be more profound in the MDD group than in the HB group.

Conclusion : These results suggest that both HB group and MDD group have significantly decreased neuro-

Department of Psychiatry, National Medical Center, Seoul, Korea

[†]교신저자 : , 100 - 799 674 18 - 79
) (02) 2260 - 7311,) (02) 2268 - 5028 E - mail) psyhee@hanmail.net

cognitive function than the control group, and neurocognitive function of the HB group is better than that of the MDD group.

KEY WORDS : Hwa - byung · Major depressive disorder · Neurocognitive function.

서 론

Diagnostic and Statistical manual of Mental disorders Fourth edition Text Revision(DSM - IV - TR)

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연구대상 및 방법

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Scheffe

결 과

1. 사회인구학적 특성의 비교

가 (1).
BDI 가 , ,
SCL - 90 - R 가 . SCL - 90 - R Total
가 Depression Subscale 가

2. Computerized neurocognitive function test의 결과

1) 기억력 검사 (Digit span)

가 (3).

2) 주의력 검사 (visual continuous performance test)

Table 1. Demographic characteristics of subjects

| Variable | MDD ¹⁾ | HB ²⁾ | Control | Significance | | Scheffe ³⁾ |
|------------------|-------------------|------------------|----------------|--------------|-------|-----------------------|
| | Mean(S.D.) | Mean(S.D.) | Mean(S.D.) | t | p | |
| Age | 51.35(± 12.8) | 46.24(± 14.7) | 48.29(± 13.7) | 1.186 | 0.310 | 1=2<3 |
| Education | 10.79(± 3.76) | 10.76(± 3.49) | 10.97(± 3.59) | 0.032 | 0.968 | 1=2<3 |

1) Major depressive disorder 2) Hwa-byung
3) Post-hoc test(1 : Major depressive disorder 2 : Hwa-byung 3 : Control)

Table 2. Clinical characteristics of subjects

| Variables | MDD ¹⁾ | HB ²⁾ | Control | Significance | | Scheffe ³⁾ |
|----------------------------|-------------------|------------------|----------------|--------------|------|-----------------------|
| | Mean(S.D.) | Mean(S.D.) | Mean(S.D.) | t | p | |
| BDI | 31.65(± 6.09) | 19.68(± 5.37) | 3.82(± 1.04) | 291.392 | <.01 | 3<2<1 |
| Total SCL-90-R | 506.6(± 96.7) | 493.1(± 102.2) | 380.6(± 18.4) | 24.201 | <.01 | 3<2, 1 |
| Somatization | 52.65(± 54.2) | 54.24(± 14.4) | 41.09(± 5.23) | 14.321 | <.01 | 3<1, 2 |
| Obsessive-Compulsive | 56.79(± 12.8) | 54.88(± 12.7) | 43.15(± 5.24) | 15.766 | <.01 | 3<2, 1 |
| Interpersonal Sensitivity | 56.15(± 13.8) | 51.06(± 11.2) | 42.21(± 3.76) | 15.261 | <.01 | 3<2, 1 |
| SCL-90-R Depression | 70.91(± 9.75) | 60.65(± 13.7) | 40.85(± 2.98) | 81.305 | <.01 | 3<2<1 |
| Anxiety | 58.94(± 13.8) | 59.53(± 14.6) | 43.26(± 3.12) | 20.823 | <.01 | 3<1, 2 |
| Hostility | 53.50(± 12.4) | 53.26(± 13.2) | 41.07(± 2.27) | 15.416 | <.01 | 3<2, 1 |
| Phobic Anxiety | 53.15(± 13.0) | 54.03(± 14.3) | 42.79(± 2.38) | 10.423 | <.01 | 3<1, 2 |
| Paranoid Ideation | 51.00(± 10.5) | 52.44(± 11.5) | 42.35(± 3.22) | 11.892 | <.01 | 3<1, 2 |
| Psychoticism | 53.59(± 11.6) | 53.06(± 14.2) | 43.88(± 2.85) | 8.781 | <.01 | 3<2, 1 |

1) Major depressive disorder 2) Hwa-byung
3) Post-hoc test(1 : Major depressive disorder 2 : Hwa-byung 3 : Control)

Table 3. Comparison of memory measure among groups

| Measure | | MDD ¹⁾ | HB ²⁾ | Control | Significance | | Scheffe ³⁾ |
|--------------------------------|----------|-------------------|------------------|---------------|--------------|------|-----------------------|
| | | Mean(S.D.) | Mean(S.D.) | Mean(S.D.) | t | p | |
| Digital span test (no.) | Forward | 5.03(± 1.26) | 5.56(± 1.44) | 7.03(± 0.87) | 24.702 | <.01 | 3, 2<1 |
| | Backward | 3.21(± 1.00) | 4.09(± 1.40) | 5.76(± 0.81) | 20.834 | <.01 | 3<2<1 |

1) Major depressive disorder 2) Hwa-byung
3) Post-hoc test(1 : Major depressive disorder 2 : Hwa-byung 3 : Control)

Table 4. Comparison of attention measure among groups

| Measure | MDD ¹⁾ | HB ²⁾ | Control | Significance | | Scheffe ³⁾ | |
|--------------------------------------|-----------------------|------------------|--------------|--------------|--------|-----------------------|--------|
| | Mean(S.D.) | Mean(S.D.) | Mean(S.D.) | t | p | | |
| Trail making test | Type A Time(sec) | 45.24(±31.9) | 37.41(±23.3) | 24.35(±7.67) | 6.982 | <.01 | 3<1 |
| | Type A error(no.) | 3.74(±7.22) | 3.12(±6.44) | 1.56(±1.94) | 1.317 | >.05 | 3=2=1 |
| | Type B Time(sec) | 102.9(±78.3) | 76.18(±59.7) | 42.12(±14.0) | 9.583 | <.01 | 3<1 |
| | Type B error(no.) | 7.41(±9.73) | 4.24(±6.71) | 1.76(±2.32) | 5.629 | <.01 | 3<1 |
| Visual continuous performance | Correct response(no.) | 114.1(±31.1) | 126.1(±21.6) | 133.7(±1.44) | 6.872 | <.01 | 3<1 |
| | Omission error(no.) | 20.88(±31.2) | 8.88(±21.6) | 1.56(±1.63) | 6.705 | <.01 | 3<1 |
| | Commission error(no.) | 9.50(±13.95) | 5.79(±8.48) | 1.74(±1.65) | 5.712 | <.01 | 3<1 |
| | Reaction time(msec) | 0.507(±1.11) | 0.441(±0.06) | 0.405(±0.13) | 13.959 | <.01 | 3, 2<1 |

1) Major depressive disorder 2) Hwa-byung
 3) Post-hoc test(1 : Major depressive disorder 2 : Hwa-byung 3 : Control)

Table 5. Comparison of higher cortical function measure among groups

| Measure | MDD ¹⁾ | HB ²⁾ | Control | Significance | | Scheffe ³⁾ | |
|------------------------------------|------------------------|------------------|-------------|--------------|--------|-----------------------|-------|
| | Mean(S.D.) | Mean(S.D.) | Mean(S.D.) | t | p | | |
| Wisconsin card sorting test | Categories completed | 2.15(±2.06) | 4.09(±2.06) | 5.91(±0.28) | 42.048 | <.01 | 3<2<1 |
| | Perseverative error | 12.0(±15.8) | 13.4(±11.6) | 10.6(±7.98) | 0.424 | >.05 | 3=2=1 |
| | Nonperseverative error | 9.41(±13.8) | 8.56(±8.41) | 6.15(±4.14) | 1.049 | >.05 | 3=2=1 |

1) Major depressive disorder 2) Hwa-byung
 3) Post-hoc test(1 : Major depressive disorder 2 : Hwa-byung 3 : Control)

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29) (short - memory) (long - term explicit memory) (consolidation)

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(caudate)
Hippocampal T1 relaxation time
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18) (dorsal prefrontal cortex) (anterior cingulate)
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20) 가
(anterior cingulate)
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(higher cortical function)
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33)
(amygdala), (locus coeruleus)

23) 가³⁴⁾

24) back) 35) (feed-back)

25) 가

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