

우울증과 전두엽*

채정호** · 이경욱** · 양완석** · 박원명**† · 전태연** · 김광수**

Depression and the Frontal Lobe*

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ABSTRACT

Objectives : Abnormalities in the frontal lobe have been consistently suggested in the pathophysiology of depression. The purpose of this review is to discuss the relationship between the frontal lobe and depression.

Methods : Recent researches on the frontal lobe in depression were reviewed and abnormalities in this region were considered within the context of modern functional neuroanatomy.

Results : This paper reviewed evidence strongly implicating the frontal lobe as a key brain structure in depression.

Conclusion : Taken together, these abnormalities in the function of the frontal lobe implicate interconnected neural circuits in depression and offer suggestions for the themes of future research and treatment. Further research is needed to investigate the association between emotion and the brain in the paradigm of "affective neuroscience".

KEY WORDS : Depression · Frontal lobe · Neuroanatomy · Functional neuroimaging · Affective neuroscience.

서 론

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1)

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3)

10)가

275

11)

4)

가

2. 감정 유발 실험

5)

30 (Computed Tomography : CT), (Magnetic Resonance Imaging : MRI)

(Single Photon Emission Computed Tomography : SPECT), (Positron Emission Tomography : PET)

MRI (functional MRI : fMRI)

tex)(

(anterior cingulate cortex) (BA)²⁴⁾

[Brodman area : BA] (BA 25)

가가

3)

(BA 32)

가

12)

가

가

6)

3. 인지기능장애

가

본 론

3)13)

가 가

가

1. 이차성 우울증

14)

4. 구조적 두뇌 영상 및 조직학

1970

Ongur¹⁵⁾

가 24%

7-9)

가

Rajkowska¹⁶⁾

(orbitofrontal cortex) 가
 12~15% , 가 16~ 가
 30% . Wu ²⁶⁾ 가
 22~37%가 가
 6~27%가 .
 (內臟), ,
 7% , ¹⁷⁾ 48%, ¹⁸⁾ , ,
 32% ¹⁹⁾ , ,
 가 ,
²⁷⁾

5. 기능적 두뇌 영상

²⁸⁾²⁹⁾ 가 가
 가 ²⁰⁾ 가 ³⁰⁾ (low
 resolution electromagnetic tomography : LORETA)
 가 ²¹⁾ 가
²²⁾ ³¹⁾ Brody ³²⁾ 가
 BA 32 , BA 24 ' BA
 가 , 32 ' ,
 가 BA 24 BA 32
²³⁾ 13 ³¹⁾ ,
 Paroxetine 6 가 , ,
²⁴⁾ 가 ,
 가 , ⁶⁾¹⁸⁾ 가
 가 Brody ³³⁾ 가 가
 Ebert ²⁵⁾ SP- ,
 ECT 가

가

가 가 ,

가 , , 가

가 , , 가

가 가 .³⁾ 가

가 ,

가가 가 Brody

가 가 34) 33)

가 Davidson 1)

가 가 “ 가

가 가

가가 21)

가

가

가

(amygdala) 가 23)24)

가 (Transcranial Magnetic Stimulation : TMS)

가 36) TMS

가 3)

가 가 TMS

가 14) 가 37) 가

가 35) rTMS가 가

38)39)

가 TMS

가 40)

가 (working TMS가

memory) 23) 3)

가

6. 새로운 항우울치료법에 의한 영향

Fluoxetine, Paroxetine

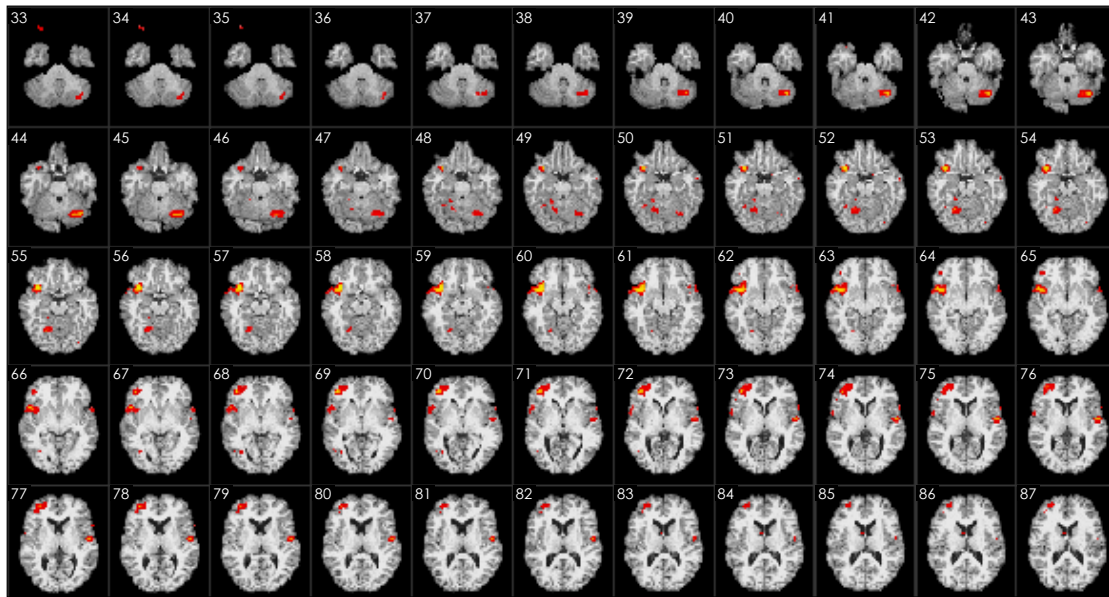


Fig. 1. Vagus nerve stimulation(VNS)-induced regional activity in the prefrontal regions using functional magnetic resonance imaging (fMRI) in a subject with depression at the time of the acute initial start of VNS treatment.

10 가 .
 (Vagus Nerve Sti-
 mulation : VNS)
 가 가 ,
 VNS Texas 46)
 Cyberonics ,
 NeuroCybernetic Prosthesis “ ”
 (NCP®) System VNS
 41) 가 ,
 43)44) VNS 가
 fMRI “ ”
 45) 가 TMS
 VNS가 가
 (1). “ - ”
 가 가
 고 찰

TMS

중심 단어 :

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