

## 외상성 뇌손상 후의 불안장애

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### Anxiety Disorders after Traumatic Brain Injury

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#### ABSTRACT

Traumatic brain injury(TBI) is generally considered to be a risk factor for psychiatric disorders, especially depression and anxiety disorder. Despite the anxiety disorders are frequent sequelae after traumatic brain injury, the patients have not been paid medical attention and treated by doctors properly. The factors of precipitating and sustaining the anxiety disorders after TBI are brain injury itself, and the patient's or caregiver's response to the disability after TBI.

To diagnose and treat them effectively, the knowledge about the mechanisms of and symptoms after TBI have to be needed. Psychiatrist should be a supportive and good listener to the patients who are complaining anxiety symptoms and differentiate whether the psychiatric symptoms are due to TBI or not. Because the TBI patients are very sensitive to drug side effects, doctors have to be familiar with the side effects as well as the mechanisms of action of the common psychotropics.

**KEY WORDS** : Traumatic brain injury · Anxiety disorder.

서 론

가

발병율과 특징

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18~60% 가 (Brooks 1986 ; Dikman 1986 ;  
Fann 1995 ; Schoenhuber Gentilini 1988 ; van Reekum  
1996),

**Table 1.** 외상성 뇌손상 후의 불안장애 발생률 및 증상개선율(Hibbard 등, 1998에서 발췌)

	TBI (%)	TBI (%)	(%)	(%)
	19	17	8	41
	15	14	3	36
	14	11	2	64
	9	8	4	0
	10	7	13	29
+		25		60

TBI : traumatic brain injury

0%

DSM

I

가

60%

1

가

가

19%

(Fann 1995).

15%, 14%

17%

14%, 11% (Hibbard 1998) (Bourdon 1992 ;

Kessler 1995) 8%, 3%, 2%

(8%) (7%) (4%, 13%)

가 ( 1).

Hibbard (1998)

17% 가

가 22%(Van Reekum 1996) 24%(Fann

1995) 가

(Fann 1

1995 ; Van Reekum 1996)

가 14%

3 (2.5%)

(Deb 1999) 120

11%

가

6%(Van Reekum

1996) 4%(Fann 1995)

가

가 25%

가

가

(free - floating)

(Le -

5 56%

(Van Reekum wis Rosenberg 1990).

76%

1996).

(apprehension),

가 (Lezak 1978),

가

가

가

1

11%(Jorge

resolution rate)

(Hibbard 1998, 1).

(1994) 1

25%(Hibbard 1998)

가 가 ( 64%)

(41%),

(36%),

(29%)

(DiCesare 1990).

가 , .

가

(Johnson Newton 1987).  
(29%) (Hibbard 1998).

2. 공황장애 Panic disorder

가 4. 외상후 스트레스 장애 Posttraumatic stress disorder

1 , (1)

(Deb 1999) 가

0.8% , (2)

9.0% 11%(Hibbard , (3)

1998), 17%(van Reekum 1996)

4% (Fann 1995) 1

가

가

( ) ( )

( , malingering)

가 (cop -

ing)

(Deb 1999).

가

가 ( )

3. 공포장애 Phobic disorder

1 120 1) 발병율과 발생요인

1 (0.8%)(Deb 1999) 7%(Hibbard ( ) 가

1998) 가 .

(motor vehicle) 가 가

(labyrinth) (Li - (Davidson Fairbank 1992),

shman 1968). Roberts(1979) 8~46%(Hibbard 1998 ; Malt Blikra

가 , 1993 ; Mayou 1993)

(Sbordone Liter 1995)

13.9%

(self - image) 1% (Harvey Bryant 1998).

5.



1990), 가 (Hibbard 1998). (perseveration) (ego-dystonic) (stein Ursano 1994) 가 (Lewis Rosenberg 1990), 10 (Breslau 1991)

(Kant 1996). (orbitofrontal) (cingulate gyrus) Levin 1990), (caudate nucleus) (Benkelfat 1990), (Grafman 1986)

(Hibbard 1998). (perseveration) (ego-dystonic) (stein Ursano 1994) 가 (Lewis Rosenberg 1990), 10 (Breslau 1991) (laterality)(Lishman 1968), (mecenphalic) (Levin Grossman 1978). (anosognosia)

(Lezak 1983).

### 진단과 치료

#### 1. 진단

가 가 가

#### 원인

- , (1)
- , (2)
- , (3)
- , (4)
- , (5)
- , (6)
- , (7) 가 가
- , (8) 가

(Thurber 1998).

#### 2. 치료

##### 1) 정신치료

(Hibbard 1998) (性) (Fann 1995) 가 가 (Fordyce 1983),



, buspirone, benzodiazepine  
 (Greenblatt 1983). lor - 가 traz -  
 azepam 가 , clonazepam odone benzodiazepine , ,  
 zepam lorazepam oxa - clonidine propranolol , (fl -  
 Alprazolam diazepam 가 im - ashback) carbamazepine ,  
 ipramine 가 (MAOI) lithium (Silver 1990).  
 oxetine flu -  
 spirone, propranolol, 가 (SSRI), bu -  
 . Clonazepam  
 BZD (4)  
 BZD ,  
 SSRI fluoxetine, paroxetine  
 buspirone  
 Clomipramine  
 , fluoxetine  
 Buspirone  
 buspirone benzodiazepine di - (5)  
 azepam 가 , alprazolam, , SSRI  
 , 가 ,  
 SSRI  
 (Straughan Conradie 1988) . SSRI FDA 가  
 paroxetine sertraline , SSRI  
 imipramine alprazolam 가  
 (Sheehan 1999). 가

가 , ,  
 . Propranolol 160mg

## 요 약

가 가 , , 가  
 (tardive dyskinesia) 가 가 (Haas  
 1987),  
 , prochlorper -  
 azine, metoclopramide 가

(3)

중심 단어 :

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참고문헌

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- Benkelfat C, Nordahl TE, Semple WE, King AC, Murphy DL, Cohen RM(1990)** : Local cerebral glucose metabolic rates in non-depressed patients with obsessive-compulsive disorder : patients treated with clomipramine. *Arch Gen Psychiatry* 47 : 840-848
- Bourdon KH, Rae DS, Locke BZ, Narrow WE, Regier DA(1992)** : Estimating the prevalence of mental disorders in U.S. adults from the Epidemiologic Catchment Area Survey. *Pub Health Rep* 107 : 663-668
- Breslau, N, Davis CC, Andreski P, Peterson E(1991)** : Traumatic events and posttraumatic stress disorder in an urban population of young adults. *Arch Gen Psychiatry* 48 : 216-222
- Brooks N, Campsie L, Symington C, Beattie A, McKinlay W(1986)** : The five year outcome of severe blunt head injury : a relative's view. *J Neurol Neurosurg Psychiatry* 46 : 336-344
- Bryant RA, Harvey AG(1998)** : Relationship between acute stress disorder and posttraumatic stress disorder following mild traumatic brain injury. *Am J Psychiatry* 155 : 625-629
- Bryant RA, Harvey AG(1999a)** : The influence of traumatic brain injury on acute stress disorder and posttraumatic stress disorder following motor vehicle accidents. *Brain Inj* 13 : 15-22
- Bryant RA, Harvey AG(1999b)** : Postconcussive symptoms and posttraumatic stress disorder after mild traumatic brain injury. *J Nerv Ment Dis* 187 : 302-5
- Davidson JRT, Fairbank JA(1992)** : The epidemiology of PTSD. In : *Posttraumatic stress disorder : DSM-IV*. Ed by Davidson JRT, Foa EB. Washington, DC, American Psychiatric Press pp 147- 172
- Deb S, Lyons I, Koutzoukis, Ali I, McCarthy G(1999)** : Rate of psychiatric illness 1 year after traumatic brain injury. *Am J Psychiatry* 156 : 374-8
- DiCesare A, Parente R, Anderson-Parente JK(1990)** : Personality change after traumatic brain injury : problems and solutions. *Cog Rehabil* 8 : 14-18
- Dikman S, McLean A, Temkin N(1986)** : Neuropsychological and psychological consequences of minor head injury. *J Neurol Neurosurg Psychiatry* 49 : 1227-1233
- Epstein RS, Ursano RJ(1994)** : Anxiety disorders. In : *Neuropsychiatry of Traumatic Brain Injury*, Ed by Silver SC, Yudofsky SC and Hales RE, Washington D.C. American Psychiatric Press, pp 285-311
- Fann JR, Katon WJ, Uomoto JM, Esselman PC(1995)** : Psychiatric disorders and functional disability in outpatients with traumatic brain injuries. *Am J Psychiatry* 152 : 1493-1499
- Fordyce DJ, Roueche JR, Prigatano GP(1983)** : Enhanced emotional reactions in chronic head trauma patients. *J Neurol Neurosurg Psychiatry* 46 : 620-624
- Grafman J, Vamce SC, Weingartner H, Salazar AM, Amin D(1986)** : The effects of lateralized frontal lesions on mood regulation. *Brain* 109 : 1127-1148
- Greenblatt DJ, Shader RL, Abernethy DR(1983)** : Drug therapy : current status of benzodiazepines. *N Engl J Med* 309 : 354-358
- Gronwall D(1986)** : Rehabilitation programs for patients with mild head injury : components, problems and evaluation. *J Head Trauma Rehabil* 1 (2) : 53-62
- Harvey AG, Bryant RA(1998)** : Acute stress disorder after mild traumatic brain injury. *J Nerv Ment Dis* 186 : 333-7
- Haas JF(1987)** : Ethical and legal aspects of psychotropic medications in brain injury. *J Head Trauma Rehabil* 2 (4) : 6-17
- Hibbard MR, Uysal S, Kepler K, Bogdany J, Silver J(1998)** : Axis I psychopathology in individuals with traumatic brain injury. *J Head Trauma Rehabil* 13 : 24-39
- Johnson DA, Newton A(1987)** : HIPSIG : a basis for social adjustment after head injury. *Br J Occupation Ther* 50 : 47-52
- Jorge RE, Robinson RG, Starkstein SE, Amdt SV(1994)** : Influence of major depression on 1-year outcome in patients with traumatic brain injury. *J Neurosurg* 81 : 726-733
- Kant R, Smith-Seemiller L, Duffy JD(1996)** : Obsessive-compulsive disorder after closed head injury ; review of literature and report of four cases. *Brain Inj* 10 : 55-63
- Kessler RC, Sonnega A, Bromet E, Hughes M, Nelson CB(1995)** : Posttraumatic stress disorder in the National Comorbidity Survey. *Arch Gen Psychiatry* 52 : 1048-1060
- Koren D, Arnon I, Klein E(1999)** : Acute stress response and posttraumatic stress disorder in traffic accident victims : a one-year prospective, follow-up study. *Am J Psychiatry* 156 : 367-373
- Levin HS, Grossman RE(1978)** : Behavioral sequelae of closed head injury. *Arch Neurol* 35 : 720 -727.
- Lewis L, Rosenberg SJ(1990)** : Psychoanalysis psychotherapy with brain-injured adult psychiatric patients. *J Nerv Ment Dis* 178 : 69-77
- Lezak MD(1978)** : Subtle sequelae of brain damage : perplexity, distractibility and fatigue. *A J Phys Med* 57 : 9-15
- Lezak MD(1983)** : Neuropsychological assessment. 2nd Edi. New York, Oxford Univ press, pp 60-61
- Lishman WA(1968)** : Brain damage in relation to psychiatric disability after head injury. *Br J Psychiatry* 114 : 373-410
- McMillan TM(1991)** : Posttraumatic stress disorder and severe head injury. *Br J Psychiatry* 159 : 431-433
- Malt UF, Blikra G(1993)** : Psychosocial consequences of road accidents. *Eur Psychiatry* 8 : 227-228
- Mattson AJ, Levin HS(1990)** : Frontal lobe dysfunction following closed head injury. *J Nerv Ment Dis* 178 : 282-311
- Mayou R, Bryand B, Duthie R(1993)** : Psychiatric consequences of road traffic accidents. *BMJ* 307 : 647-651
- Ohry A, Solomon Z, Rattock J(1996)** : Posttraumatic stress disorder in traumatic brain injury. *Brain Inj* 10 : 687-695
- Rattock J, Ross B(1993)** : Posttraumatic stress disorder in the traumatically head injured (abstract). *J Clin Exp Neuropsychol* 15 : 403
- Roberts AH(1979)** : Severe accidental head injury. London, Macmillan
- Sbordone RJ, Liter JC(1995)** : Mild traumatic brain injury does not produce posttraumatic stress disorder. *Brain Inj* 9 : 405-412
- Schoenhuber R, Gentilini M(1988)** : Anxiety and depression after

- mild head injury : a case control study. J Neurol Neurosurg Psychiatry 51 : 722-724*
- Sheehan DV(1999) :** *Current concepts in the treatment of panic disorder. J Clin Psychiatry 60 (suppl 18) : 16-21*
- Silver JM, D. Sanberg DP, Hales RE(1990) :** *New approaches in the pharmacotherapy of posttraumatic stress disorder. J Clin Psychiatry 5 (suppl) : 33-38*
- Straughan JL, Conradie EA(1988) :** *Buspirone-frontrunner of a new genre of anxiolytics. S Afr Med 75 : 441-444*
- Thurber CA(1998) :** *Anxiety and closed head injury in young people. Pediatr Rehabil 2 (4) : 149-55*
- Ursano RJ, Fullerton CS, Epstein RS, Crowley B, Kao TC, Vance KJ, Dougall AL, Baum A(1999) :** *Acute and chronic posttraumatic stress disorder in motor vehicle accident victims. Am J Psychiatry 156 : 589-595*
- van Zomeren AH, van Den Burg W(1985) :** *Residual complaints of patients two years after severe head injury. J Neurol Neurosurg Psychiatry 48 : 21-28*
- van Reekum R, Bolago I, Finlayson MAJ, Gamer S, Links PS (1996) :** *Psychiatric disorders after traumatic brain injury. Brain Inj 10 : 319-327*
- Warden DL, Labbate LA, Salazar AM, Nelson R, Sheley E, Staudenmeier J, Martin E (1997) :** *Posttraumatic stress disorder in patients with traumatic brain injury and amnesia for events? J Neuropsychiatry Clin Neurosci 9 : 18-22*