

심인성 발기부전 환자에서 Norepinephrine과 Serotonin에 관한 연구*

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Norepinephrine and Serotonin in the Patients with Psychogenic Impotence*

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ABSTRACT

Various neurotransmitters have been proposed as possible mediators of penile erection. Especially, norepinephrine and serotonin might have a important role in sexual arousal and penile erection. And it could be hypothesized that the psychogenic impotence is associated with the depletion or imbalance of norepinephrine and serotonin from evidences, such as the symptomatic manifestation of depression and the antidepressant-induced sexual dysfunction. The authors investigate the association of norepinephrine and serotonin with psychogenic impotence.

The psychogenic impotent group(PIG) consisted of twenty-three patients with psychogenic impotence and the controlled group(CG) consisted of twenty-seven patients without psychogenic impotence. PIG had no organic cause accounting for their erectile dysfunction. The Beck Depression Inventory(BDI) and the State-Trait Anxiety Inventory(STAI) were applied to each subject to assess mood, state anxiety(SA) and trait anxiety(TA). Plasma norepinephrine level from systemic blood and 5-hydroxyindoleacetic acid(HIAA) levels from 24-hours urine were measured in each subject.

The mean score of BDI of PIG was significantly higher than that of CG($p=0.015$). PIG had a tendency of higher TA compared with CG($p=0.054$). And also SA was higher in PIG, but did not show significant difference($p=0.193$). The level of norepinephrine was significantly lower in patient with psychogenic impotence($p=0.000$). And the level of 24-hours urine 5-HIAA was lower in PIG but did not show significant difference($p=0.494$).

Although the authors did not exclude depressive disorders in PIG, the present findings suggest that psychogenic impotence might have higher depressive mood and trait anxiety, and be associated with the depletion of norepinephrine in systemic blood.

KEY WORDS : Psychogenic impotence · Depression · Anxiety · Norepinephrine · 5-HIAA.

서 론

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) (02) 818 - 6738,) (02) 852 - 1937

(neurovascular phenomenon)

(de Groat Booth 1980 ; Weiss 1972).

testosterone

acetylcholine, vasoactive intestinal polypeptide(VIP), substance P, norepinephrine, serotonin, histamine nitric oxide

(Kim 1991 ; Kirkeby 1989 ; Ottesen

1984).

norepinephrine

(Euler 1962 ; Shirai Sato 1975), serot -

onin (Frajese 1990). norepinephrine serotonin (Kaplan Sadock 1995). (SSRIs) (Kowalski 1985 ; Zajecka 1991). norepinephrine serotonin

24 Seegal (1986) (high pressure liquid chromatography ; Biorad, model 2800 solvent delivery system) norepinephrine 5-HIAA Statistical Package for Social Science - Personal Computer (SPSS - PC) t - test p<0.05

결 과

가 , norepinephrine serotonin (p=0.015), SA 44.2 38.67 (p=0.193), TA 45.20 38.87 (p=0.054)(1). norepinephrine 139. 59pg/ml 343.53pg/ml (p=0.000), 24 5-HIAA 5.43mg/day 8.42mg/day (p=0.494)(2).

대상 및 방법

1. 연구대상

(PIG) 23 가 27 (CG) 43.38(± 8.21) 38.33(± 10.53) (p=0.174).

2. 연구방법

가 (Schiavi 1995). BDI 가 Beck Depression Inventory(Beck 1961, BDI) (trait anxiety, TA) (state anxiety, SA) 가 Spielberger State and Trait Anxiety Inventory(Spielberg 1970, STAI)

norepinephrine serotonin 5-HIAA . No - 5-HIAA

고 찰

Table 1. Comparison of BDI and STAI between the psychogenic impotence group and the controlled group(mean ± SD)

	PIG(N=23)	CG(N=27)	p
BDI	16.53 ± 12.29	7.60 ± 6.37	0.015
SA	44.20 ± 15.26	38.67 ± 5.09	0.193
TA	45.00 ± 10.33	38.87 ± 5.69	0.054

PIG ; Psychogenic impotence group CG ; Controlled group BDI ; Beck's depression inventory SA ; State anxiety TA ; Trait anxiety p ; p value

Table 2. Comparison of Plasma norepinephrine levels and 24 hours urine 5-HIAA levels between the psychogenic impotence group and the controlled group(mean ± SD)

	PIG(N=23)	CG(N=27)	p
NE	138.59 ± 61.58	343.53 ± 121.59	0.000
HIAA	5.43 ± 2.12	8.42 ± 6.56	0.494

PIC ; Psychogenic impotence group CG ; Controlled group
 NE ; norepinephrine(pg/ml)
 HIAA ; 5-Hydroxyindoleacetic acid(mg/day) p ; p value

(Carroll 1980 ; Fabbri 1989).
 paverine prostaglandine E1(PGE1)
 (intracavernosal injection, ICI)가
 (Virag 1984).
 25 83% ICI (Brindley 1983 ;
 Buvat 1986), ICI
 tague Lakin(1992) ICI Mon -
 intracavernous PGE1
 . Aversa (1996) PG -
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 E1
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 Van der Borght (1995) ICI
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 (1990) norepinephrine ephrine serotonin
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Buvat (1987) catecholamine
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 norepinephrine 가
 Oh(1992) norepinephrine
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STAI, norepinephrine 5 - HIAA
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 중심 단어 : . . Norepinephr -
 ine · 5 - HIAA.

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