

5-HT 수용체 길항제를 이용한 파킨슨 환자의 정신 증상의 치료*

고성범** · 박건우** · 이대희**†

Psychosis in Parkinson's Disease -Treatment with 5-HT Receptor Antagonist-‡

Seong-Beom Koh, M.D.,** Kun-Woo Park, M.D., Ph.D.,** Dae-Hie Lee, M.D., Ph.D.**†

ABSTRACT

Current treatment strategies for levodopa-induced psychosis in advanced Parkinson's disease have had limited success. Reduction or discontinuation of levodopa and coadministration with dopamine-blocking neuroleptics may attenuate the psychotic symptoms, but these strategies are associated with worsening of parkinsonian symptoms. Administration of 5-HT3 receptor antagonist ; ondansetron, a newer strategy to attenuate psychosis of Parkinson's disease without motor deterioration was introduced. A 41-year-old young-onset male, who was diagnosed as Parkinson's disease 7 years ago, was treated with levodopa therapy, and had levodopa-induced psychosis(delusion, hallucination, paranoid, insomnia). After trial of ondansetron, he showed improvement in the Brief Psychiatric Rating Scale(from 21 points to 9 points) in spite of increasing the dosage of levodopa. With ondansetron, we could increase the dosage of levodopa without psychotic complications(esp, hallucination), and he showed improvement in the motor fluctuation.

KEY WORDS : Levodopa-induced psychosis · 5-HT3 receptor antagonist · Ondansetron.

서론
 levodopa
 (Freidman 1995).
 (off period)
 levodopa
 가
 가 . Levodopa
 (dopamine receptor)
 (Freidman 1995),
 (serotonin)
 (serotonin rec-
 eptor antagonist)
 amed 1980 ; Hagan 1993).
 ondansetron

가 (Goetz Ste -
 bins 1993).
 가 . le -
 vodopa
 가 .
 clozapine
 .
 clozapine
 .
 (serotonin)
 (serotonin rec-
 eptor antagonist)
 amed 1980 ; Hagan 1993).
 ondansetron

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 Department of Neurology, College of Medicine, Korea University, Seoul, Korea
 † : , 136 - 705 5가 126 - 1
) (02) 920 - 5353,) (02) 923 - 5908

가 (Mini mental status examination) 25 (Unified parkinson disease rating scale ; UPDRS) 106

41 32 levodopa (Brief Psychiatric Rating Scale ; BPRS) 21

(festinating gait) (tremor) 가 1987 가

가 1989 가 levodopa 가 10 (drug holiday)

1 levodopa 2 (rigidity), (akinesia), (dystonia) levodopa (postural instability) 가 levodopa (motor fluctuation)

가 levodopa (drug holiday) levodopa levodopa

thioridazine levodopa 200mg (on time) (off time) (freezing episode) 가 40

(on time) (off time) levodopa

가 가

가 1995 10 levodopa 200mg 5-HT3 ondansetron on-

pergolide 2mg, cogentin 3mg, thioridazine 37.5mg 4mg 9 1 levodopa

dansetron 가 levodopa 8 3

levodopa levodopa 가

가

500 9 10

(freezing episode) (sensory cues) Ondansetron (visual hallucination) (auditory (co-

levodopa hallucination) (confusion)

가

ondansetron 8mg BPRS 9
 (insight) BPRS Levodopa
 9
 고 찰 가 가 (dopamine hypothe-
 sis) 가 (dopamine hypothesis)
 levodopa levodopa dopamine
 (supersensitized) (postsyn-
 aptic dopamine receptor) (antido-
 paminergic drugs) (antido-
 aminergic drug)
 가 (Factor 1994).
 가 가
 (atypical antipsychotics) (dopaminergic neuron) (serotoner-
 gic neuron) 가
 (serotonin receptor) (dopamine)
 ondansetron (serotonin)
 levodopa levodopa levodopa가 (Hagen 1993).
 levodopa가 (serotonin nerve terminal) 가
 (Golbe 1991). levodopa levodopa가 (aromatic amino acid decarbox-
 ylase) dopamine (Melamed 1980).
 levodopa (dopamine)
 levodopa (serotonin nerve terminal) (serotonin)
 levodopa levodopa (postsynaptic serotonin rec-
 eptor)
 pergolide (drug holiday) (drug holiday) 가
 (down-regulated) (serotonin receptor antagonist)
 가 가 (Zoldan 1995).
 가 (Freidman 1985). Ondansetron
 levodopa (antiemetics) 3
 (motor fluctuation) levodopa 가 3 (5-HT3 receptor)가 (ent-
 orhinal area) (limbic system)
 가 가 가
 가 Ondansetron (serotonin re-
 levodopa 200mg ceptor antagonist) (antido-
 BPRS paminergic antipsychotic drugs)
 21 levodopa 700mg 가 가

가
(dopamine - induced psychosis)
clozapine
결 론
levodopa
Levodopa
가 3 ondans -
etron 가
levodopa
ondansetron lev -
odopa
가

참고문헌

Factor SA, Brown D, Molho ES(1994) : Clozapine : a2-year open trial in Parkinson's disease patients with psychosis. *Neurology*

44 : 544-546
Freidman JH(1985) : 'Drug Holidays' in the Treatment of Parkinson's disease. *A Brief Review. Arch Intern Med* 145 : 913-915
Freidman JH(1995) : Management of Psychosis in Parkinson's disease. In Koller WC, Paulson G, ed. *Therapy of Parkinson's disease, 2nd ed., New York, Dekker, Inc.* : p521-532
Goetz CG, Stebbins GT(1993) : Risk factors for nursing home placement in advanced Parkinson's disease. *Neurology* 43 : 2227-2229
Golbe LI(1991) : Young-onset Parkinson's disease : a clinical review. *Neurology* 41 : 168-173
Hagan RM, Kilpatrick GJ, Tyler MB(1993) : Interactions between 5-HT3 receptors and cerebral dopamine function : implications for the treatment of schizophrenia and psychoactive substance abuse. *Psychopharmacology* 112 : S68-S75
Mendis T, Mohr E, Georage A, Rusk IN, Gray P, Grimes JD(1994) : Symptomatic relief from treatment-induced psychosis in Parkinson's disease : an open-label pilot study with remoxipride. *Mov-Dosord.* 9 (2) : 197-200
Melamed E, Hefti F, Wurtman RJ(1980) : L-dopa and L-5-hydroxytryptophan decarboxylase activities in rat striatum : effect of selective destructions of dopaminergic and serotonergic inputs. *J Neurochem* 34 : 1753-1756
Niall Quinn(1995) : Drug treatment of Parkinson's disease. *BMJ* 310 : 575-579
Overall JE, Gorham DR(1988) : The Brief Psychiatric Rating Scale. Recent developments in ascertainment and scaling. *Psychopharmacol Bull* 24 : 97-103
Zoldan J, Freidberg G, Livneh M, Melamed E(1995) : Psychosis in advanced Parkinson's disease : Treatment with ondansetron, a 5-HT3 receptor antagonist. *Neurology* 45 : 1305-1308