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Title: SHORT TERM EFFECT OF L-DOPA ON MICTURITION DISTURBANCE IN DE NOVO PARKINSON'S DISEASE PATIENTS

Aims of Study:

The exact effects of L-dopa on micturition have not yet been ascertained even though L-dopa is the main therapy for patients with Parkinson's disease (PD). *Methods:* We evaluated the short term effect of L-dopa on micturition disturbances in 5 de novo PD patients. We administered a detailed questionnaire on urinary symptoms and assessed urodynamic function before and 1 hour after the administration of 100 mg of L-dopa/carbidopa.

Results:

Before taking 100 mg of L-dopa/carbidopa, urinary urgency was noted in 5 patients, urge incontinence in 1, and voiding difficulty in 1. After the L-dopa administration, exacerbation of urinary urgency and urge incontinence were noted in all patients who had it before, whereas improvement of voiding difficulty was noted in one patient who had it before. Before taking 100 mg of L-dopa/carbidopa, detrusor hyperreflexia was noted in 4 patients, and none had low compliance bladder or detrusor-sphincter dyssynergia. After the L-dopa administration, detrusor hyperreflexia appeared in a patient and exacerbated (decreased bladder volume threshold for detrusor hyperreflexia, and increased maximum detrusor pressure of detrusor hyperreflexia) in all 4 patients with detrusor hyperreflexia. Maximum bladder capacity, residual urine volume and maximum flow rate decreased in all patients. Maximum value of the Watts Factor, AG number and static maximum urethral closure pressure increased in all.

Conclusion:

In the de novo PD patients, L-dopa exaggerated detrusor hyperreflexia and decreased bladder capacity in the filling phase, and in the voiding phase L-dopa augmented detrusor contractility as well as urethral obstruction and improved voiding efficiency (increased maximum flow and decreased residual urine volume). These findings may reflect central and peripheral actions of L-dopa or its metabolites.