Safinamide add-on to levodopa therapy leads to complete disappearance of levodopa-induced dyskinesias in mid-stage Parkinson's disease: a case report

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BACKGROUND AND METHODS

Safinamide is a monoamine-oxidase-inhibitor approved for the treatment of end-of-dose motor fluctuations (MF) in patients with Parkinson's disease (PD). To date, the potential role of safinamide on levodopa-induced-diskynesias (LID) remains poorly explored. Thus, our manuscript aimed to evaluate the effect of safinamide on LID in a PD patient. A 65-year-old woman with a seven-year history of PD complicated by truncal LID and end-of-dose MF was assessed. At baseline clinical evaluation, MDS-UPDRS-III and Unified-Diskynesias-Rating-Scale-III-IV (UDysRS-III-IV) were administered hourly over a 12-hour observation period. Subsequently Safinamide was initiated at a dose of 100 mg/day as an add-on to her levodopa/benserazide daily regimen (200/50 mg every four hours). After three-months, follow-up evaluation was conducted employing the same assessment protocol.

RESULTS

At baseline, prior to administration of the first levodopa morning dose, the clinical severity was measured as MDS-UPDRS-III=41; UDysRS-III=0; UDysRS-IV=0. For each inter-dose period MDS-UPDRS-III scores decreased two hours after levodopa administration (mean=24.3) although troublesome trunk dyskinesias were observed (mean UDysRS-III=16.3; mean UDysRS=IV=13.5). At the fourth hour of each interval, MDS-UPDRS-III increased (mean=33.6) while dyskinesias significantly reduced (mean UDysRS-III=7; mean UDysRS-IV=8). After three months of safinamide, MDS-UPDRS-III scores were comparable to baseline (MDS-UPDRS-ME-III before the first morning dose=40; mean MDS-UPDRS-ME-III two hours after each dose=21.6). By contrast, the ones at four hours poast each dose were lower (mean UPDRS-ME-III=24), with complete resolution of dyskinesias in every interval (mean UDysRS-III=2.3; mean UDysRS-IV=0

DISCUSSION

Our findings corroborate the established role of safinamide and suggest a potential therapeutic effect on truncal dyskinesias.

Video -Part I. *Before the introduction of 100 mg of safinamide. Evidence of levodopa-induced dyskinesias of the trunk in PD patient two hours after 200/50 mg of levodopa/ benserazide administration.*
Video -Part II. *Three months after the introduction of 100 mg of safinamide in add-on to levodopa. Disappearance of levodopa-induced dykinesias of the trunk in PD patient s after 200/50 mg of levodopa/ benserazide administration.*

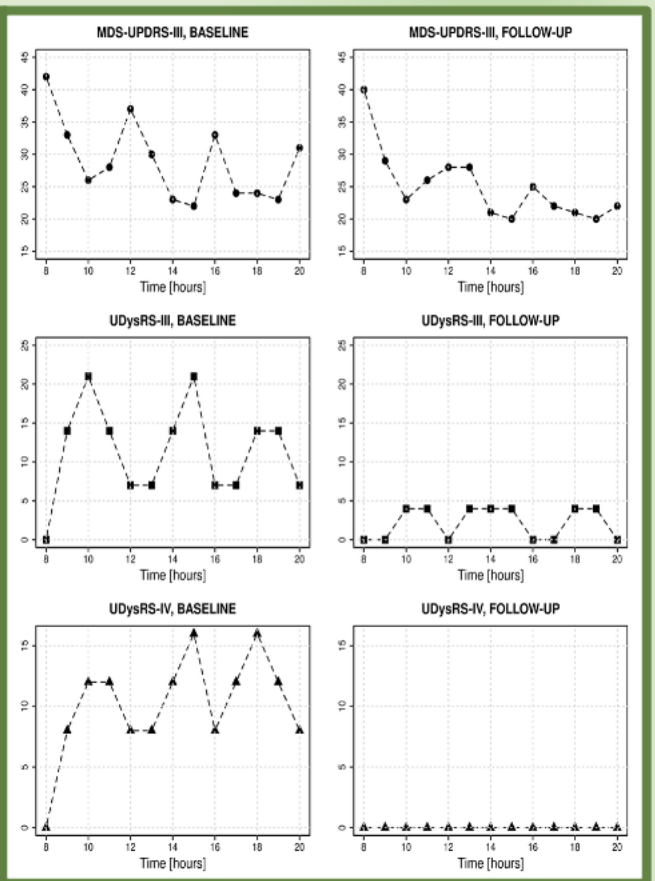

Figure 1. The figure illustrates the trend of reference scale scores recorded during the 12-hour assessment at both baseline (**1a**) and follow-up (**1b**) evaluations.

	Experience symptoms			Symptoms that improve after the next dose		
WOQ-19	Total score	Non-motor symptoms	Motor symptoms	Total score	Non-motor symptoms	Motor symptoms
Baseline	11	6	5	8	5	3
Follow-up	6	3	3	3	2	1

Table 1. Wearing-off Questionnaire 19 (WOQ-19) domains experienced by the patient before and after 3 months of Safinamide treatment

References
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