Teaching Video NeuroImages: The underrecognized diphasic dyskinesia of Parkinson disease

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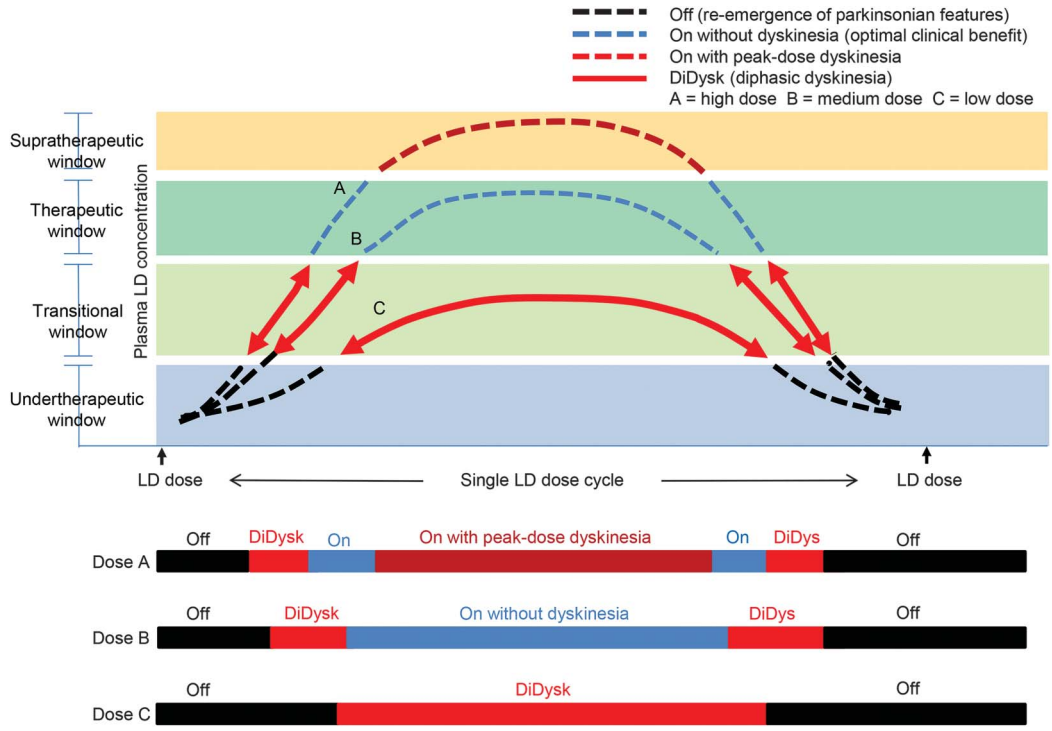
Figure Time course of diphasic dyskinesia according to 3 different theoretical plasma levodopa (LD) concentrations (A, B, and C)



At the lowest dose (C), diphasic dyskinesia becomes dominant between LD doses and may be clinically mistaken as peak dose. Pharmacotherapeutic strategies will differ in each scenario: LD dose should be reduced (or amantadine considered) in A but increased in C; LD dose interval may be shortened in B.

Dyskinesia is a common motor complication in levodopa-treated Parkinson disease (PD), associated with higher doses, greater disease severity, and longer disease duration.[1] Often assumed to be a peak-dose phenomenon, the diphasic (beginning-of-dose or end-of-dose) variant may be ignored, as exemplified by a patient with PD whose dyskinesia was initially interpreted as peak-dose (video at Neurology.org). Rapid improvement with apomorphine, a short-acting levodopa-equipotent dopamine agonist, confirmed its diphasic nature.[2] Recognition of dyskinesia subtype based on the relationship with levodopa dose cycles (figure) facilitates their differing management in PD: while dopaminergic stimulation needs reduction in peak-dose dyskinesia, it should be increased in diphasic.

Supplemental data at Neurology.org

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AUTHOR CONTRIBUTIONS

Dr. Verhagen Metman: acquisition of data, analysis and interpretation, critical revision of the manuscript for important intellectual content. Dr. Espay: Report analysis and interpretation, critical revision of the manuscript for important intellectual content.

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