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Home telemonitoring orthostatic hypotension in patients with Parkinson's disease: a new insight for a possibile telemedine service for degenerative diseases

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Introduction: In Parkinson's disease, orthostatic hypotension (OH) is a common but underappreciated symptom (PD). Information and communication technologies (ICT) have been essential in the management of chronic diseases like PD, especially during the COVID-19 epidemic, not only for assessing motor impairment but also for monitoring vital signs.

Objective: A real-life remote home monitoring system and procedure were to be proposed in this pilot project for PD patients with OH.

Methods: Vital metrics were collected by wireless devices and communicated to an ICT platform, which gave the healthcare provider data and smart notifications through an interactive web interface. Five-day monitoring was performed on eight patients with idiopathic PD and OH. Data were gathered and examined regarding OH episodes, therapeutic approaches, the effect on daily activities, and patient satisfaction.

Results: The suggested remedy made it possible to recognize episodes and then take appropriate medical action. 35 instances, mostly in the postprandial and afternoon records, were asymptomatic. Systolic and diastolic blood pressure were markedly lower during symptomatic episodes, while pressure declines were markedly greater when symptoms were present. High values for patient satisfaction and usefulness were seen.

Conclusions: The proposed home-monitoring system and methodology has shown to be effective in managing PD patients with OH during the COVID-19 pandemic by offering meaningful information and enabling quick responses.