

Distal upper limb tremor during walking in Parkinson's disease

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Introduction: Distal upper limb tremor during walking (TW) is frequently observed in Parkinson's disease (PD). To date, it is unknown whether TW reflects rest tremor facilitated by walking or is a different form of tremor [1-2].

Objective: To characterize the occurrence and the clinical features of TW compared to other PD tremors (i.e., rest, re-emergent, and postural tremor).

Methods: Fifty-one PD patients with rest tremor were evaluated off- and on-treatment. Patients underwent a clinical examination and were videorecorded for tremor assessment during rest, posture holding, and walking. Tremor occurrence, body distribution, severity and latency of tremor onset were assessed with and without dopaminergic treatment.

Results: In PD patients with rest tremor, we observed that TW was present in 79% of cases. TW body distribution and severity were similar to those of rest and re-emergent tremor, but different from postural tremor. TW was present on the most bradykinetic and rigid side. TW latency, observed in 85% of patients, was on average 5.8 sec. Dopaminergic treatment induced a significant improvement of TW, rest and re-emergent tremor severity, but left TW latency unaffected.

Conclusions: TW is a clinical variant of rest tremor occurring during automatic movements. The association with bradykinesia and rigidity distribution suggests that TW may be due to abnormal "stability" resulting from a reduced symmetry in arm swing amplitude [3-4].

References:

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