“Weighing” In on an Unusual Tremor

Teaching Video NeuroImages

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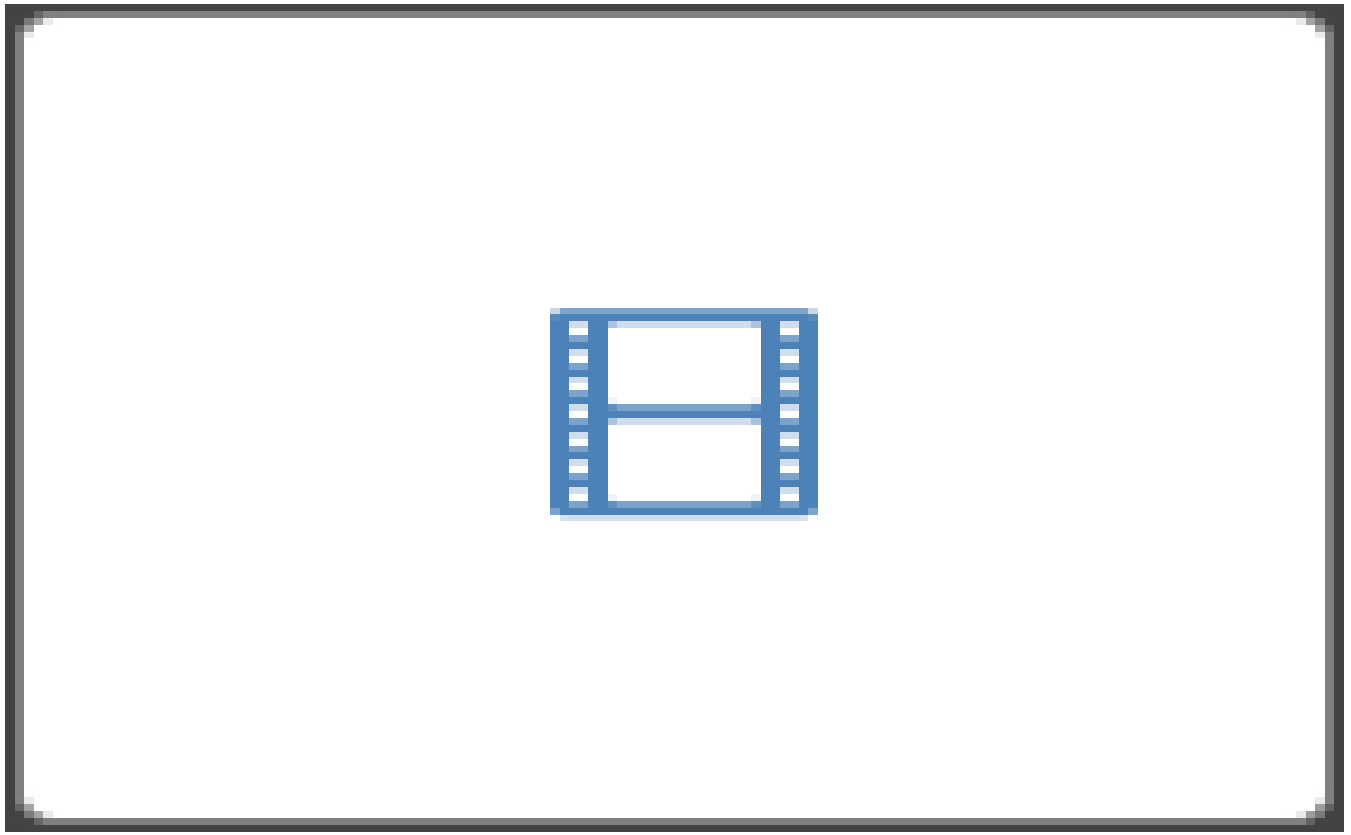
Vignette

- A 73-year-old right-handed gentleman with hypertension, hypercholesterolemia, renal insufficiency, and cyclothymic disorder presented with a 1-year history of rapid tremor in his right hand, which was first noticed exclusively when carrying his briefcase. The tremor subsided when clenching his fist. Medications included lamotrigine and bupropion.
- Neurologic exam showed a very low amplitude bilateral kinetic tremor, L>R, and a more striking 6 Hz, moderate amplitude flexion-extension right hand tremor involving his wrist and metacarpophalangeal joints that emerges when holding a bag (see Video). The tremor disappears when he opens his hand or clenches his fist, and a heavier load increases its amplitude.
- Surface EMG recording (see Figure) of the tremor showed a 6 Hz tremor in the right Flexor Carpi Radialis and Extensor Carpi Radialis muscles while holding a bag (weight ~2.3 kg), with the hand in a “semi-opened” position. There was synchronous activation of agonist-antagonist muscles, which was specific to carrying weight in the right arm.

Video



Figure

“Weighing” In on an Unusual Tremor

- The phenomenology is classic for a weight-holding or “shopping bag tremor” first described in 1995.[1]
- It is difficult to classify based on the current consensus statement for tremor classification.[2]
- It could be considered a variant of isometric tremor, essential tremor, or task-specific tremor with different underlying etiologies.
- It is typically an asymmetric, progressive kinetic tremor that appears exclusively (or is more evident) when holding a weight in contrast to classical essential tremor, which reduces in amplitude under weight-bearing.