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Answer: Parkinson disease tremor

The videos showed involuntary low frequency resting tremors (4-6Hz, compared to essential tremor 8-10Hz) of the left foot and hand of a patient with Parkinson Disease (PD). The tremors became more prominent when the patient was distracted.

PD is a neurodegenerative disease named after James Parkinson, the English doctor who published the first detailed description in *An Essay on the Shaking Palsy* in 1817. The classical manifestations of PD are cog-wheel rigidity (stiffness), bradykinesia (slowness or paucity of movement), and resting tremor. [1] In the early stages, ~ 70% will experience a slight tremor in the hand or foot on one side of the body, or less commonly in the jaw or face. A typical onset is tremor in one finger. The tremor consists of a shaking or oscillating movement, and usually appears when a person's muscles are relaxed, or at rest, hence the term "resting tremor." The tremor affecting the hand is classically described as 'pill rolling'. The tremor usually ceases when a person begins an action. Some people with PD have noticed that they can stop a hand tremor by keeping the hand in motion or in a flexed grip. The tremor of PD can be exacerbated by stress or excitement, sometimes attracting unwanted notice. The tremor often spreads to the other side of the body as the disease progresses, but usually remains most apparent on the initially affected side. Although tremor is the most noticeable outward sign of the disease, not all people with PD will develop tremor.

The prevalence of PD in western population has been reported at 0.4%, increasing to 4% among those aged beyond 80 years old (compared to 2-4% for essential tremor). [2, 3] Development of PD has been linked to the interaction between sporadic inheritance (e.g. SNCA, LRRK2, Parkin) and the environment. [4] Pathophysiologically, PD tremor is linked to dopaminergic depletion in the substantia nigra with alpha-Synuclein proteinacious inclusions body (Lewy Bodies).

The treatment remains symptomatically, predominantly for motor symptoms. As of present, there is no disease modifying treatment which can halt disease progression. Based on current recommendation, the first line treatment include - levodopa, dopamine agonist, or monoamine oxidase B inhibitors. Motor symptoms can be treated with deep drain stimulation. Surgeries (pallidotomy and thalamotomy) which interfere with the neural mechanism of the PD however are associated with serious adverse effects. [1, 3]

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