A 69-year-old man presented with a continuous right upper extremity resting tremor with a 3-Hz frequency (video on the Neurology® Web site at www.neurology.org). The tremor developed gradually, 4 months after a left midbrain stroke. MRI showed an infarct in the left medioventral midbrain (figure 1). 

\[ \text{[123I]-2β-carbomethoxy-3β-(4-iodophenyl)-N-(3-fluoropropyl)-nortropane (}[123I]\text{FP-CIT} \] SPECT revealed marked left dopaminergic denervation (figure 2). At follow-up, the drug-resistant tremor had progressed to a predominantly postural and kinetic tremor.

Holmes tremor is an irregular rest, kinetic, or postural tremor with a frequency below 4.5 Hz. It is caused by a combined disruption of dopaminergic nigrostriatal, and cerebellothalamic tracts. A delay of up to 2 years between the lesion and tremor onset is typical. Case reports suggest that pharmacologic or neurosurgical intervention may help.

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REFERENCES


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