

Parkinson's Disease

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ARS Question

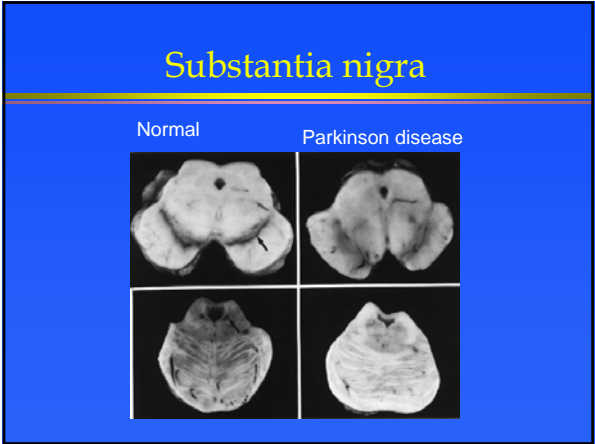
A 56 y.o. man presents with trouble walking, small hand writing, and a resting tremor.

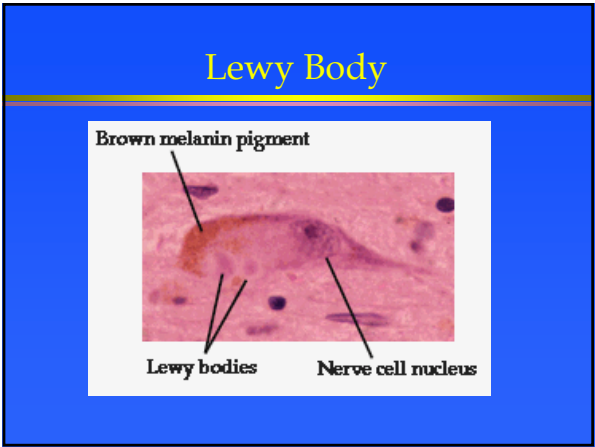
You make a presumptive diagnosis and suggest:

- A. Sinemet trial
- B. Head MRI
- C. Propranolol for essential tremor
- D. Stroke work-up
- E. SSRI for anxiety

Parkinson's Disease

- Loss of dopaminergic neurons in the substantia nigra
- Lewy bodies
- Differentiate from broader classification of parkinsonism
- Mean age of onset 55yo





Parkinsonism

<ul style="list-style-type: none">• Parkinson's Disease• Neuroleptic side effect• Post-encephalitic• Toxins (Mn, CO, MPTP)• Dementia• Wilson's disease• Basal ganglia calcifications	<ul style="list-style-type: none">• Parkinson-plus syndromes<ul style="list-style-type: none">» Progressive supranuclear palsy» Corticobasoganglionic degeneration» Shy-Drager syndrome» Olivopontocerebellar atrophy» Diffuse Lewy body disease
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Parkinson-plus Syndrome

- Gait problem is early feature
- Rare tremor
- No (or poor) response to Sinemet
- PSP
 - » Vertical gaze palsy
- CBGD
 - » Asymmetric rigidity
 - » Alien limb
 - » Cortical sensory
- SDS
 - » Autonomic
- OPCA
 - » Cerebellar
- DLBD
 - » Dementia
 - » Hallucinations

PD: Clinical

- Slow progressive course
- 4 cardinal features
 - » Resting tremor
 - » Bradykinesia
 - » Rigidity (cogwheel)
 - » Postural reflex impairment
- Other: dementia, depression, autonomic

Facial Masking



Posture



PD: Levodopa

- Sinemet = carbidopa/levodopa
- Most potent drug for PD
- Preferred treatment age > 75
- Side effects
 - » GI
 - » Dyskinesias
 - » Dementia, hallucinations
 - » Orthostatic hypotension
- Start 25/100 QD, increase q 3d up 3 tid as needed

PD: Dopamine Agonist

- Act directly on dopamine receptors
- Synergy with levodopa
- Longer T_{1/2}
- Reduced dyskinesias
- Same side effects as levodopa
- Initial treatment age < 65
- 3rd generation options(Mirapex, Ropinirole)

PD: Anticholinergics

- Helpful in tremor
- Adverse effects are common
- Trihexyphenidyl 1mg qd up to 12mg div tid

PD: Amantadine

- Dopaminergic and anticholinergic
- Adverse effects

PD: MAO-B Inhibitors

- Rasagiline and Selegiline
- Reduction of motor fluctuations
- May have neuroprotective effects
 - » Consider in early onset disease

PD: COMT inhibitors

- Block COMT metabolism of levodopa
- Dopaminergic SEs
 - » Reduce levodopa by 30%
- Entacapone (Comtan)
- Combination drug
 - » Carbidopa/levodopa/entacapone

Treatment Flow Chart

