Parkinson’s disease

PARKINSON’S DISEASE
- Prevalence increases with age (starts 40s-60s)
- Seen in all ethnic groups, M:F about 1.5:1
- Second most common neurodegenerative disease
- Genetics’ role greater when younger onset
- CO poisoning, rural residence, pesticide or herbicide exposure, MPTP, encephalitis

CARDINAL FEATURES OF PARKINSON’S DISEASE
- TRAP (any combination)
  - Tremor
  - Rigidity
  - Akinesia/Bradykinesia
  - Postural instability
  - Onset usually asymmetric
  - Diagnosis clinical
TREMOR OF PARKINSON’S

- Rest, 3-6 Hz, pill-rolling
- Emotional stress may exacerbate
- Inhibition by movement or sleep
- Absent in ~20%

BRADYKINESIA

- Slowed voluntary movements
- Less arm swing when walking
- Reduced facial expression, less blinking
- Identify by rapid alternating movements during examination

OTHER FINDINGS

- Facial and scalp seborrhea
- Myerson’s sign
- Drooling
- Hypophonia, micrographia
- Gait: shuffling, less arm swing, flexed, trouble starting and stopping
- Cognitive decline
- Normal: strength, DTR, Babinski

GEROPSYCHIATRIC COMPLICATIONS IN PD

- Dementia
  - Late development, up to ~30%
  - If earlier, consider Lewy Body Dementia
- Depression – in up to ~40%
DIFFERENTIAL DIAGNOSIS

- Depression – facial expression, activity level
- Drug-induced – onset usually symmetric
- Essential tremor – possibly FH+
- Shy-Drager – parkinsonism + autonomic insufficiency + other signs
- PSP
- Lewy Body Dementia – parkinsonism, fluctuating cognition, psychosis

TREATMENT

- Successful levodopa trial makes diagnosis more likely
- Drug aim: restore DA/ACh balance in striatum
- No drugs convincingly slow progression
- Wait to start drugs until bothersome symptoms or functional impairments

DRUG TREATMENT

- Important to individualize
- Each patient’s tolerance for side effects?
- When is need for mobility greatest?

LEVODOPA

- Converted by body to DA
- Most effective drug
- Combined with carbidopa to inhibit breakdown outside the brain (less nausea, hypotension, arrhythmias)
- Sinemet (25/100) start one tid, increase gradually as needed
- Controlled-release can reduce fluctuations
LEVODOPA, cont’d

• Amino acids compete for absorption
• Take on empty stomach, or soda crackers
• Last meal of day has most protein
• Contraindications: psychosis, narrow-angle glaucoma, MAO-A inhibitors
• Doesn’t help: autonomic dysfunction, postural instability, dementia, speaking and swallowing

DOPAMINE AGONISTS

• Fewer dyskinesias than levodopa
• Approved as monotherapy, or as adjunct to levodopa
• Adjunctive therapy → reduce levodopa → fewer dyskinesias, motor fluctuations
• Many adverse effects; patients with cognitive impairment may tolerate levodopa better

LEVODOPA VS. DA AGONIST

• DA agonist
  – Perhaps worse motor performance
  – But less risk of motor complications
  – Greater odds of adverse drug effects

DA AGONISTS, cont’d

• Newer: pramipexole and ropinirole
• Older (ergot): bromocriptine and pergolide
• Slow dose titration to minimize adverse effects
• Fatigue, sleepiness, nausea, dyskinesias, confusion, edema, orthostatic changes, dizziness, flushing and diaphoresis
COMT INHIBITORS

- Inhibit Catechol O-Methyl Transferase
- Reduce breakdown of levodopa
- Smoother blood levels, reduced response fluctuations
- Tolcapone – rare fulminant liver failure, avoid in liver disease, monitor LFTs
- Entacapone – LFTs not necessary
- Watch for diarrhea; reduce Sinemet dose

SURGICAL TREATMENTS

- Ablation (eg, pallidotomy) or DBS
- IDEAL CANDIDATE: cognitively intact, responds to dopaminergic drugs but progressive motor symptoms, can withstand procedure
- Neurologist evaluation

OTHER TREATMENTS

- Physical Therapy – gait training, strength exercises, assistive devices
- Improves mood, strength, flexibility, mobility
- Front-wheel walkers typically best
- Occupational Therapy – techniques and devices for eating, bathing, etc.
- Speech Therapy – speaking, swallowing

Gero-Friendly Clinic Project

We would like to conduct a 1-hour readiness assessment at your clinic. You may invite any clinic staff who interact with your older adult patients, e.g., social workers, physicians, nurses, medical assistants and front office staff and whom you believe would lend a voice to this project. Each staff member will complete the assessment, answering questions about Gero-Friendly practices that are currently in place at your site of care. This process will allow you to determine your clinic’s level of Gero-Friendliness and help you determine which best practices your team is ready to adopt and implement. The assessment will be scheduled at a time that is convenient for your team. We are scheduling clinic sites May 1st – June 15th. Snacks will be provided!

Contact: Katheryn Howell, Gero-Friendly Clinic Project Director
818.837.377 #115 or email khowell@pif.org
Case Discussion

Q1: Your Name
Sarah Minura MD

Q2: Patient Age
79

Q3: Patient sex:
Male

Q4: Patient Diagnosis
79 year old man with a history of Parkinson's disease (diagnosed 4 years ago), medical history significant for D/EJ with chronic back pain, history of vitamin D deficiency, hyperlipidemia and hypothyroidism. The patient is brought in by his daughter due to concerns about increasing depression over the past few weeks and poor sleep. She describes that he has no interest in doing things that used to interest him, and constantly states that he feels as though he would be better off dead. He endorses feelings of hopelessness and worthlessness, no states that he feels guilty that he “is no family to anyone” and that he is “sitting in his bedroom all the time.” He states that he is “not fit and fat” and feels out of control, and is especially concerned about increasing sleeping difficulties. He states that he does not sleep at night and spends most of his time sitting in his bedroom. He has been told by his daughter that he is not the case and that his worries are unfounded. The patient has also been having odd behaviors at night for the past 2 years or so, including yelling out in his sleep and acting as though he is “acting out his dreams in his sleep,” which recently led to a fall-out of bed, and prompted his wife to move to a different bedroom. Medications include: Amantadine, Serzone, Synthroid and Vitamin D.

Q5: What is your clinical question?
1. What information would you like to know?
2. What medication would you consider to assist this patient?