PARKINSON'S DISEASE FOR THE GEROPSYCHIATRIST

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OUTLINE

- What is Parkinson's disease?
- Levodopa, boy is it complicated
- Other classes of motor medications
- Psychosis in PD
- Depression and Anxiety- my thoughts (and yours)

WHAT IS PARKINSON'S DISEASE

- Defined as:

Bradykinesia

+ one of the following:

- Tremor

-Rigidity

(Postural instability as a late feature)

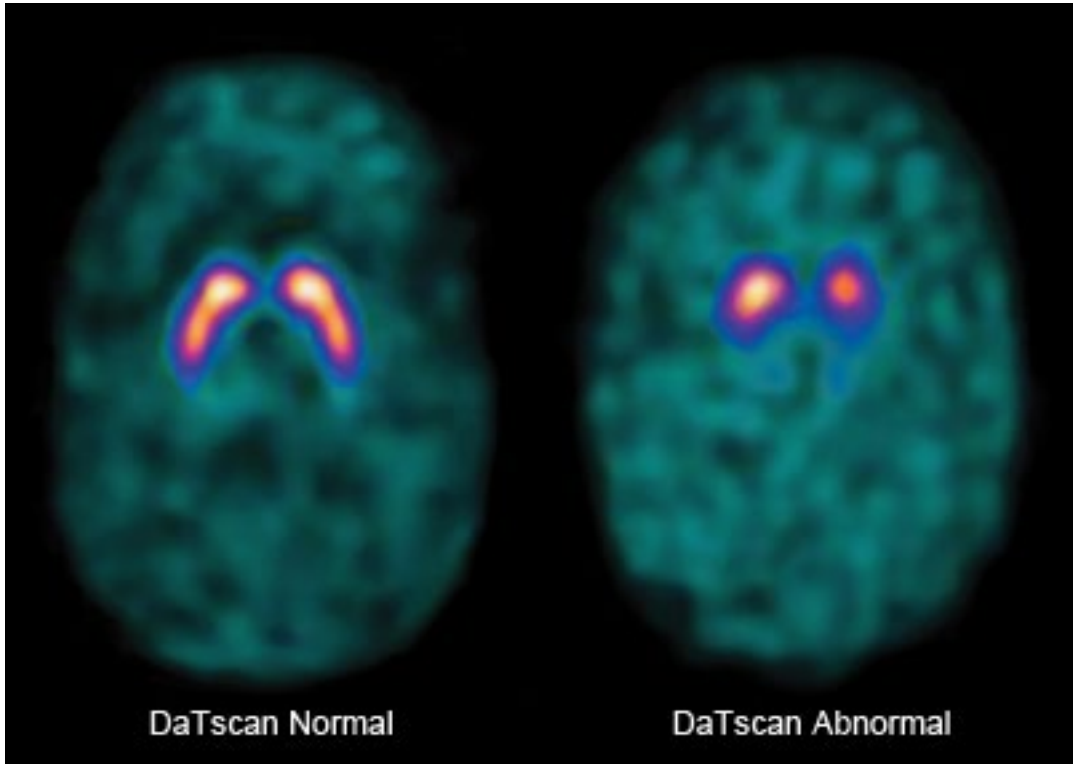
"PARKINSON'S PLUS"

- Dementia with Lewy Bodies: Hallucinations present PRIOR to initiation of levodopa; hypersensitivity to medications; Fluctuations in awareness
- Progressive Supranuclear Palsy: Characterized by vertical eye movement palsy (primarily down); axial rigidity; early falls
- Multiple System Atrophy: Dysautonomia (particularly orthostasis) as a predominant feature

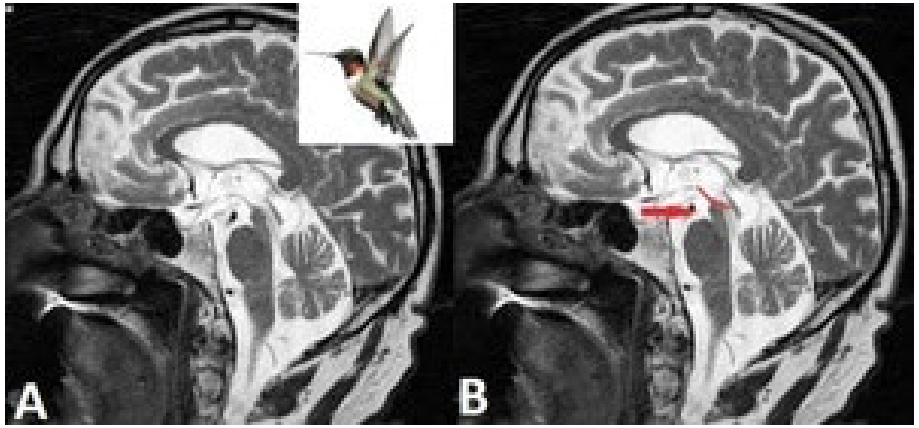
- Normal Pressure Hydrocephalous: Triad of Gait difficulties ("Magnetic"), Cognitive impairment, Urinary incontinence
- Medication-induced Parkinsonism: Classic dopamine blocking agents (anti-psychotics and anti-emetics)

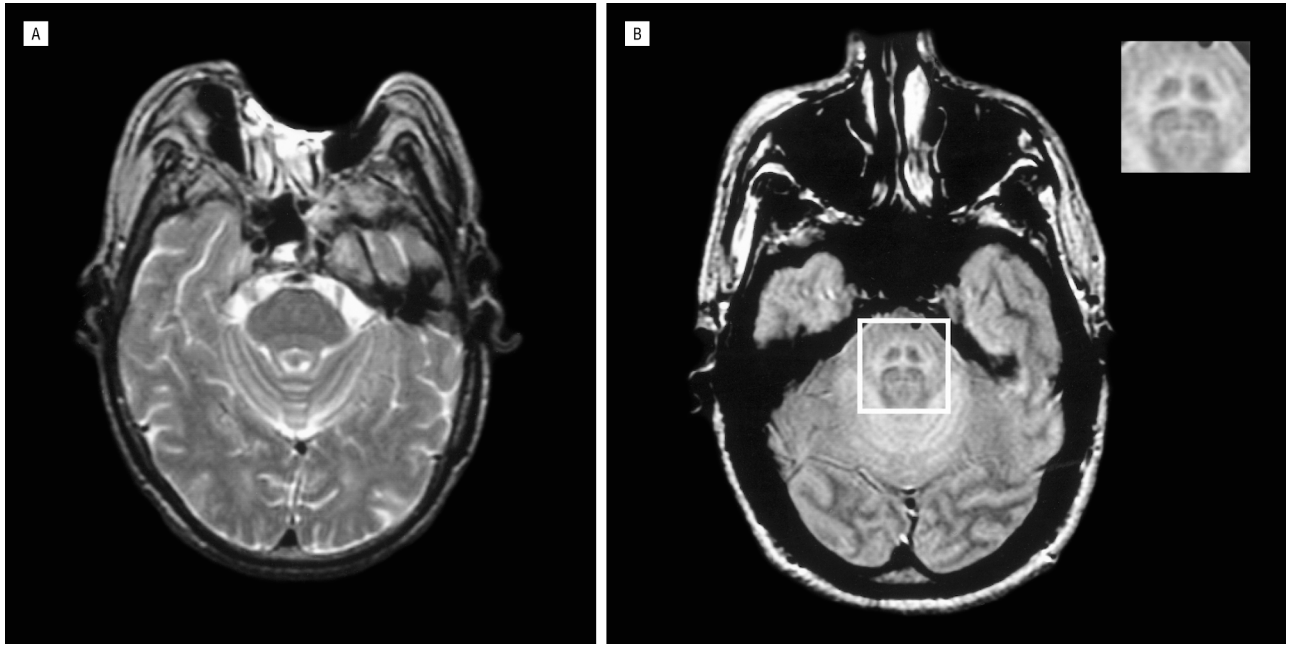
HOW CAN YOU TELL?

- DAT scan- maybe
- MRI brain- maybe
- Otherwise clinical



HUMMINGBIRD (PSP) AND HOT CROSS BUN (MSA)





SUBTYPES OF PD

- Tremor-dominant
- 2/3 of patients
- Progress slower
- Do better with medications
- Less cognitive impairment (dementia)

- No tremor (Akinetic-Rigid, or PIGD= Postural Instability with Gait Difficulties)
- 1/3 of patients
- Tend to be older
- Earlier falls
- More dementia

NON-MOTOR FEATURES BEYOND COGNITION

- Sleep

- RBD (REM behavior disorder) as a precursor

- Depression/Anxiety

- Autonomic features

- Lack of smell and constipation as a precursor

LEVODOPA, BOY IS IT COMPLICATED

- Sinemet= carbidopa/levodopa (recommend 1:4 ratio)

- Immediate side effects
- Nausea
- (Orthostasis)
- (Hallucinations)

- Long-term side effects
- Wearing-off
- Dyskinesias
- Malabsorption
- Hallucinations
- Orthostasis

TREATMENT OF IMMEDIATE COMPLICATIONS

- Nausea
  - Carbidopa alone (Lodosyn)
  - Trimethobenzamide (Tigan)

- Orthostasis
  - Fludrocortisone
  - Midodrine
  - Droxidopa (Northera)
  - Pyridostigmine (Mestinon)
  - Fluoxetine (Prozac)

TREATMENT OF LONG-TERM COMPLICATIONS

- Dose adjustment (amount, timing)
- Use of other medication classes to reduce or prolong effects of levodopa)
- Amatadine for dyskinesias

LEVODOPA FORMULATIONS

- Regular ("immediate") release
- CR ("controlled release")

- Rytary
- Duopa

OTHER CLASSES OF MOTOR MEDICATIONS

- Anticholinergics- for tremor only
  - Trihexyphenidyl (Artane)
  - Benztropine (Cogentin)
- Dopamine agonists- for tremor>rigidity>bradykinesia
  - Ropinirole (Requip)
  - Pramipexole (Mirapex)
  - Rotigotine (Neupro patch)
- MAO-B inhibitors- modest for tremor>rigidity>bradykinesia
  - Selegiline (Eldepryl)
  - Rasagiline (Azilect)

- COMT inhibitors (Entacopone/Comtan)- to prolong levodopa

ANTICHOLINERGICS

- Confusion
- Hallucinations
- Etc…(visual changes, constipation, urinary retention)

DOPAMINE AGONISTS:

- Impulse Control Disorders (ICDs)- 6-10%
  - Gambling (men)
  - Shopping (women)
  - Overeating
  - Punding
- Excessive sedation (driving accidents reported)
- Leg swelling

MAO-B INHIBITORS

- Notice the "B"
- Doses are low enough to remain "B" specific (no MAO-A interactions, no wine and cheese problem)
- Theoretically ok with select serotonergic and noradrenergic medications (i.e., SSRIs and antidepressants)

COMT- INHIBITORS

- Act only to prolong exogenously given levodopa
- Change urine/sweat color to bright yellow/orange

PSYCHOSIS IN PD

- Increasing dopamine stimulates not only nigrostriatal but mesolimbic pathways, leading to hallucinations and delusions
- Hallucinations typically visual
- Delusions typically persecutory or of spousal infidelity

PIMAVANSERIN (NUPLAZID)

- Only approved medication for PD psychosis- 2016
- Inverse agonist and antagonist of 5-HT2A receptors
- Single dose= 34mg daily (unless there is renal failure)
- Side effects fairly minimal, non-specific
- Does take 4-6 weeks for efficacy

- CNN report of associated increased incidence of mortality
- (Rebuttal)

OTHER MEDICATIONS FOR PSYCHOSIS

- Quetiapine (Seroquel)
- Generally very low dose (6.25-100mg)
- Helpful for nighttime symptoms

- Clozapine (Clozaril)
- Little used due to monitoring requirements

WHAT ABOUT

- Olanzapine
- Aripiprazole

DEPRESSION AND ANXIETY- MY THOUGHTS

- No specific treatments of PD-related depression/anxiety
- Generally take into account all symptoms to choose
- For example, if apathy/depression, something more activating such as buproprion
- Venlafaxine, Fluoxetine if BP is an issue
- If anxiety is a large component, paroxetine possibly
- Escitalopram due to side effect profile
- Gabapentin- because why not

WHAT ABOUT IMPULSIVITY?

- Aripiprazole?
- Valproic Acid?