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Psychiatry and Addictions Case Conference

UW Medicine | Psychiatry and Behavioral Sciences

# PARKINSON'S DISEASE AND MENTAL HEALTH


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## UW SCHOOL OF MEDICINE


UW Medicine
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Integrated Care Training Program
UW Psychiatry & Behavioral Sciences

project ECHO

# GENERAL DISCLOSURES

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# GENERAL DISCLOSURES

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# SPEAKER DISCLOSURES

✓ No conflicts of interest

# PLANNER DISCLOSURES

The following series planners have no relevant conflicts of interest to disclose:

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"A more melancholy object I never beheld. The patient, naturally a handsome, middle-sized, sanguine man, of a cheerful disposition, and an active mind, appeared much emaciated, stooping, and dejected."

James Parkinson, Royal College of Surgeons
“An Essay on the Shaking Palsy”
London, 1817

Illustration of Parkinson's disease by William Richard Gowers, first published in *A Manual of Diseases of the Nervous System* (1886)

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# OBJECTIVES

1. Understand relative frequency of psychiatric syndromes in Parkinson's Disease
2. Understand options for treatment of PD related psychosis
3. Understand options for treatment of PD related depression.

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# ROAD MAP

1. Case Vignette
2. Overview and Epidemiology
3. Psychiatric Disorders
4. Treatment

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# A 64 YO WOMAN PRESENTS…

- Lives alone, executive assistant for university
- Dx with Parkinson's Disease 5 years ago
- Meds include:
  - Sinemet 50-200 tid
  - ropinirole 6mg tid
  - amantadine 137mg qhs

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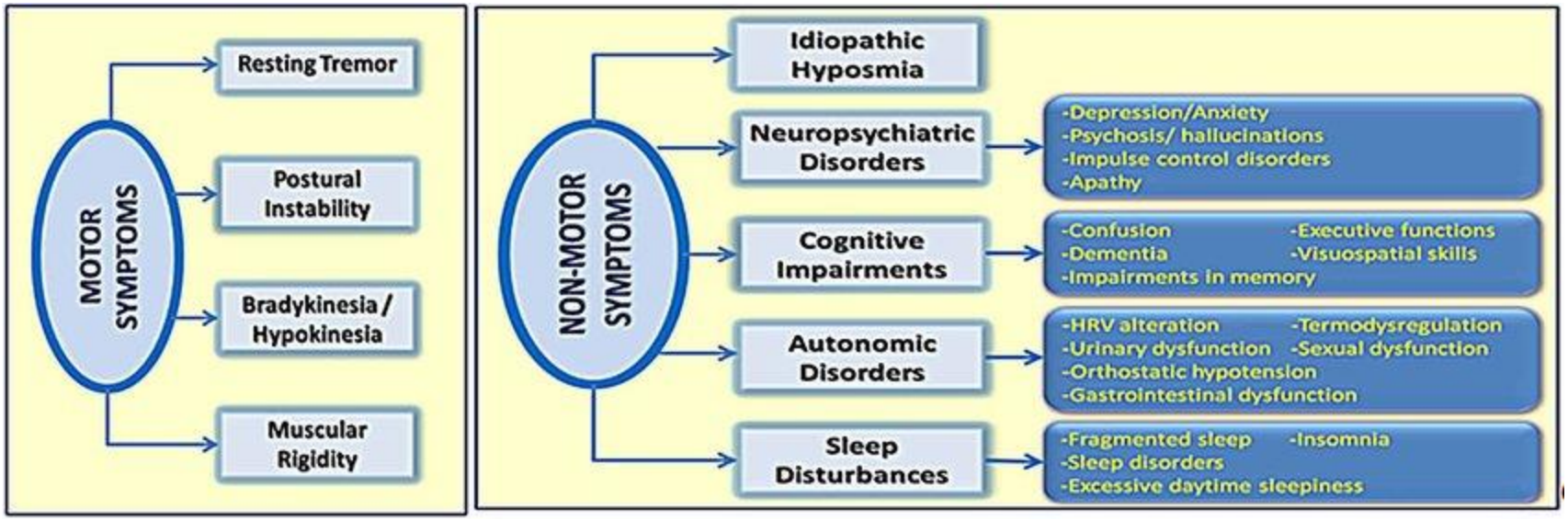
# A 64 YO WOMAN PRESENTS…

- anxiety and stress in her workplace
- coworkers working together to “push me out”
- upstairs neighbors are drug dealers
- surveilling her through cameras
- “chemical smells” from condo

# "QUINTESSENTIAL" NEUROPSYCHIATRIC DISORDER

Second most common neurodegenerative d/o

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# QUESTION

Which category of psychiatric disorders is most common in PD?

a. Mood Disorders
b. Psychosis
c. Anxiety Disorders
d. Sleep Disorders

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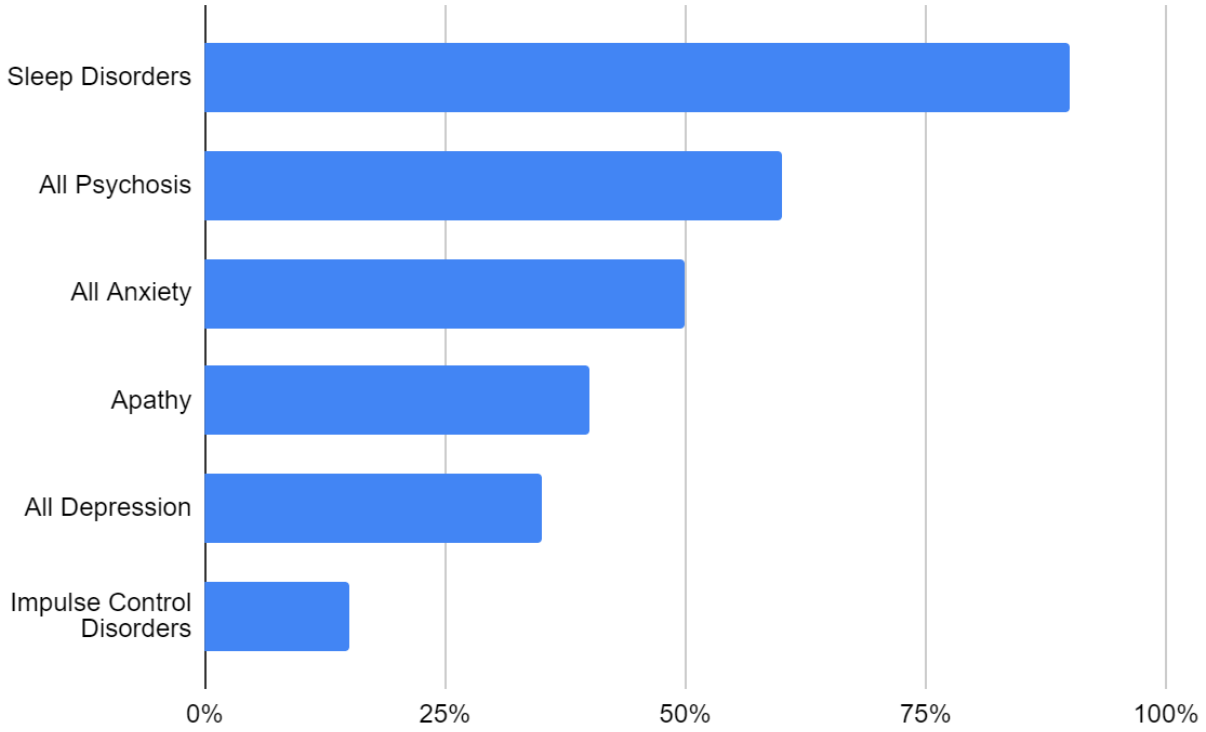
# PSYCHIATRIC DISORDERS IN PD

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# ROAD MAP

1. Case Vignette
2. Overview and Epidemiology
3. **Psychiatric Disorders**
4. Treatment

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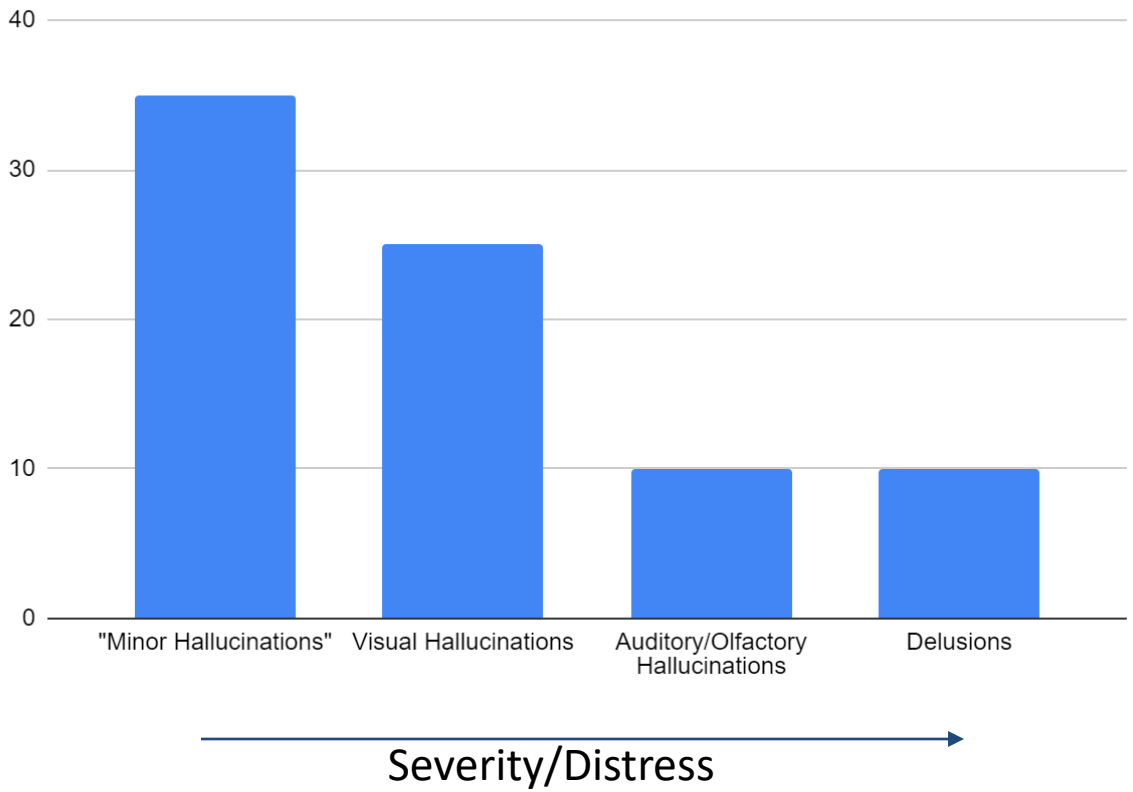
# SLEEP DISORDERS ARE UBIQUITOUS

- 75-90% patients report sleep disruptions
  - Insomnia
  - Hypersomnia/excessive daytime sleepiness
- REM Sleep Behavior Disorder
  - Typically precedes diagnosis of PD
  - Failure of REM paralysis → act out vivid dreams
  - Distressing, possibly dangerous to bed partners

# BROAD RANGE OF PSYCHOTIC SX

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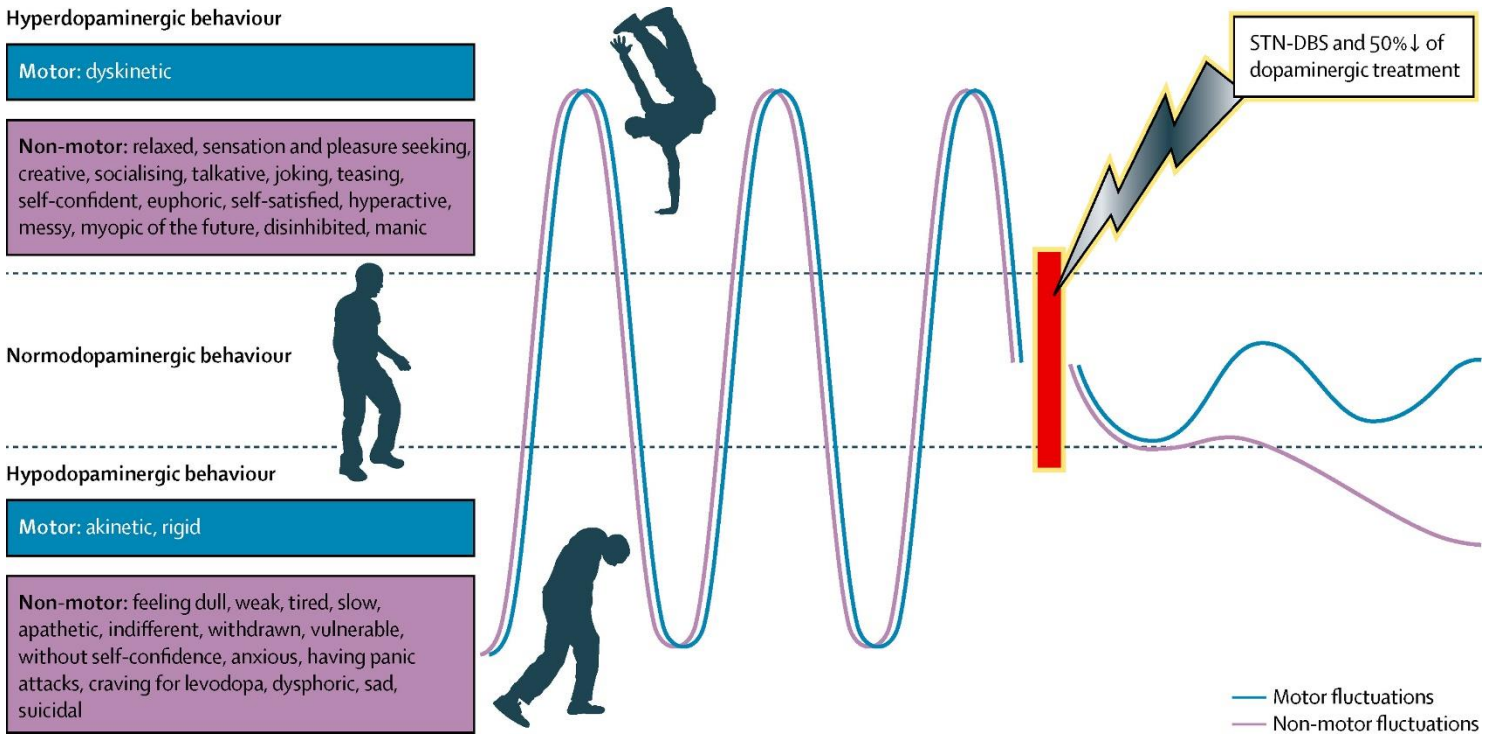
# RISK FACTORS FOR PSYCHOSIS

1. Use of dopaminergic agents (dosage not clear assoc)
2. Presence of Dementia
3. Presence of sleep disorders (REM Behavior Disorder)
4. Age
5. Disease Progression

# ANXIETY IS COMMON BUT UNDER-STUDIED

- Often discrete anxiety/panic attacks
- Also presents as social phobia and GAD

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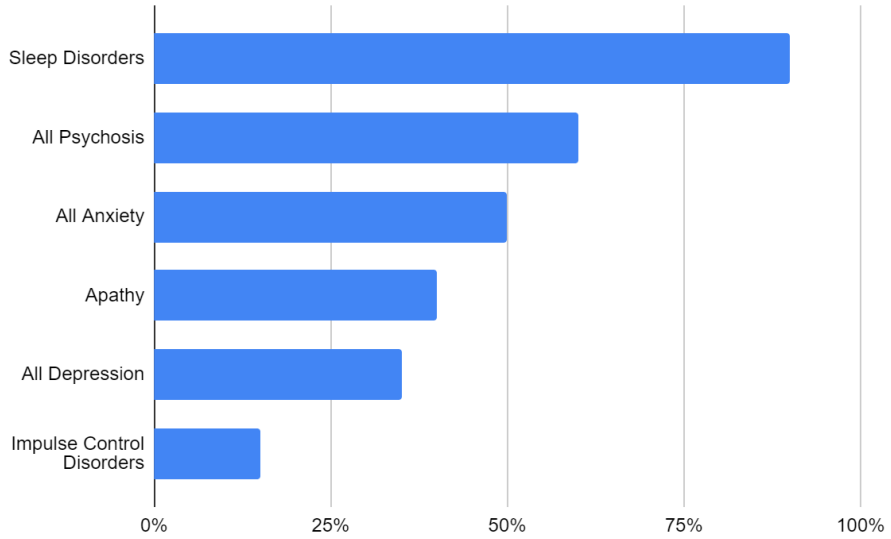
# APATHY ≠ DEPRESSION

- Marked loss of motivation
- not attributable to emotional distress, intellectual impairment, or altered consciousness

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# QUESTION

What particular challenges might there be in detecting depression in a patient with Parkinson's Disease?

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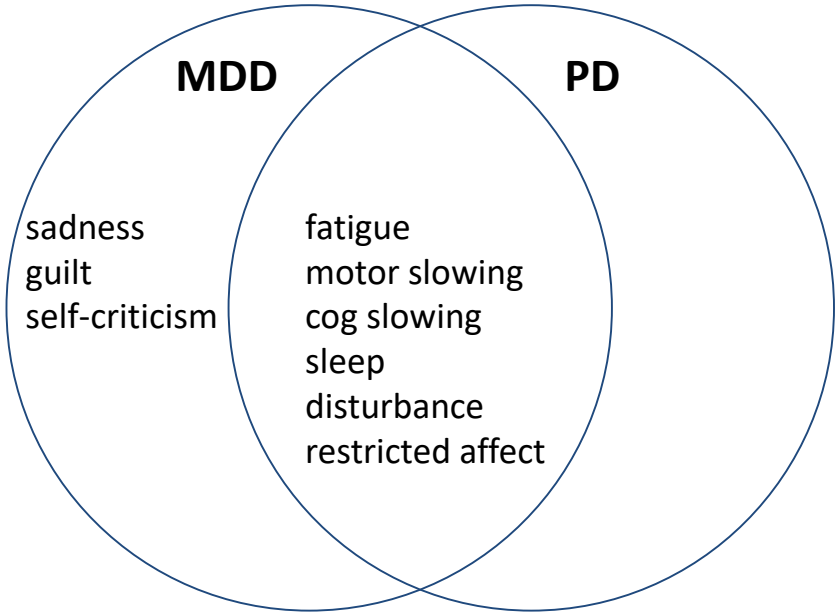
# DETECTING DEPRESSION IS COMPLEX




Instead of PHQ-9, consider

- Geriatric Depression Scale
- Beck Depression Inventory

~25% PD patients on antidepressant at any given time

# IMPULSE CONTROL DISORDERS ARE UNDER-DIAGNOSED

- E.g. compulsive gambling, sexual behavior, trichotillomania, eating, etc
- ~14% annual, cumulative 5 year incidence 46% in one study.
- *Unlikely to self-report.*

Risk Factors

- dopamine agonists
- hx of SUD/gambling, male, early PD onset

# ? PATTERN TO PSYCHIATRIC SYMPTOMS

One study in Norway performed hierarchical cluster analysis on 139 PD patients, finding 5 “clusters”

| | |
|---|---|
| 42% | Mild depression, few other sx |
| 29% | Mostly Psychotic sx |
| 14% | Sleep disturbance, few other sx |
| 8% | Severe depression & anxiety |
| 7% | Multiple severe sx across categories |

# ROAD MAP

1. Case Vignette
2. Overview and Epidemiology
3. Psychiatric Disorders
4. **Treatment**

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# BACK TO CLINICAL VIGNETTE...

- 64 yo woman with PD, psychotic symptoms that are impairing/distressing
- On 3 PD meds (managed by Neurology)
  - Sinemet 50-200 tid
  - ropinirole 6mg tid
  - amantadine 137mg qhs

Ideas for management?

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# MANAGEMENT OF PD PSYCHOSIS

One Approach

1. R/o delirium
2. Reduce or d/c other meds (antichol, BZDs, opiates, etc)
3. Reduce or d/c PD meds (amantadine, dopamine agonists, MAOB inhibitors, L-dopa)
4. Consider anti-psychotic

Is treatment necessary?

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# ANTI-PSYCHOTICS FOR PD PSYCHOSIS

- Quetiapine
  - Frequently used though insufficient evidence
  - 3 DBPCT found no benefit for psychosis, no worsening of motor sx
- Olanzapine
  - several studies show no benefit + worse motor sx
- Clozapine
  - multiple studies show improvement in psychosis, no effect on motor sx
  - sedation and orthostatic hypotension are major s/e
  - low doses (eg 6.25-50mg daily)

# PIMAVANSERIN IS FDA APPROVED

- 5HT2A inverse agonist
- No activity at dopaminergic, muscarinic, adrenergic, histaminergic receptors
- Mean increase 7.3ms in QTc
- Few adverse effects, + FDA warning for increased mortality
- 34mg daily, no titration needed

# QUESTION

Bupropion has the best evidence for treatment of MDD in Parkinson's Disease.

a. True
b. False

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# MANAGEMENT OF DEPRESSION IN PD

SSRIs

- Citalopram & sertraline best evidence (also + studies for paroxetine, fluoxetine)
- Overall improvement but few remissions

Other ADs

- positive studies for venlafaxine
- Bupropion: few positive case reports but no controlled studies
- Positive meta-analysis for desipramine and nortriptyline

MAO-I:

- rasagiline and selegiline (irreversible selective MAO-B inhibitors) used for motor sx
- Selegiline esp may improve both depression and motor function.
- Review of 4500 patients on selegiline (≤10mg) and other AD found 0.24% reported sx of SS

# MANAGEMENT OF DEPRESSION IN PD

CBT

- Only 2 small RCTs, both positive

ECT

- Review of case reports, chart reviews, and case-control studies
  - 93% some improvement in depressive symptoms
  - 83% some improvement in motor symptoms

rTMS

- Placebo-controlled studies did not find significant effect

# MANAGEMENT OF OTHER DISORDERS

**Anxiety**

- No high quality RCTs
- Rec SSRI or buspirone

**Apathy**

- Some evidence for:
  - Piribedil (dopamine agonist)
  - Rivastigmine (cholinesterase inhibitor)
- Negative study for bupropion
- Behavioral Activation
  - regular routines
  - socialization

# MANAGEMENT OF OTHER DISORDERS

**Impulse Control Disorders**

- High quality negative study for naltrexone
- Low quality positive study for CBT
- Behaviors often resolve with d/c of dopamine agonist

# CLINICAL VIGNETTE CONCLUSION

- Coordinated with Neurology to:
  - Stop amantadine
  - Reduce dose of ropinirole
- Started quetiapine, titrate to 25mg qam + 75mg qhs
- Paranoia and olfactory hallucinations resolved over ~4 months

# REFERENCES


1. Weintraub D & Burn D. (2010). Parkinson's Disease: The Quintessential Neuropsychiatric Disorder. Movement Disorders, 26(5)
2. Rovini, Erika & Esposito, Dario & Maremmani, Carlo & Bongioanni, Paolo & Cavallo, Filippo. (2015). Empowering Patients in Self-Management of Parkinson's Disease through Cooperative ICT Systems. 10.4018/978-1-4666-9530-6.ch010.
3. Molina Ruiz RM, Evans AH, Velakoulis D, Looi JCI. (2016). Neuropsychiatric Manifestations of Parkinson's Disease. Australasian Psychiatry, 24(6).
4. Han JWet al. (2018). Psychiatric Manifestations in Patients with Parkinson's Disease. Journal of Korean Medical Science, 19;33(47).
5. Castrioto A, Lhommee E, Moro E, Krack P. (2014). Mood and behavioural effects of subthalamic stimulation in Parkinson's disease. The Lancet, 13(3).
6. Bronnick K, Aarsland D, Larsen JP. (2005). Neuropsychiatric disturbances in Parkinson's disease clusters in five groups with different prevalence of dementia. Acta Psychiatra Scandinavia. 112.
7. Koo BB et al. (2018). Demoralization in Parkinson disease. Neurology, 90(18).
8. Ryan M, Eatmon CV, Slevin JT. (2019). Drug Treatment Strategies for depression in Parkinson disease. Expert Opinion on Pharmacotherapy. 20(11).
9. Friedman JH. (2018) Pharmacological Interventions for psychosis in Parkinson's disease patients. Expert Opinion on Pharmacotherapy, 19(5).
10. Bozymski KM et al. (2017). Pimavanserin: A Novel Antipsychotic for Parkinson's Disease Psychosis. Annals of Pharmacotherapy, 51(6).


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