Learning Objectives

After attending this group, you should be able to

- Recognize at least three Neuropsychiatric comorbidities of Parkinson Disease
- Understand how these symptoms impact daily life

Idiopathic Parkinson Disease

- Idiopathic Parkinson Disease (iPD) is an **chronic and progressive** neurodegenerative condition
- iPD is caused by the accumulation of **alpha-synuclein** causing loss of dopamine containing neurons
- Persons with iPD experience both motor and non-motor symptoms

Dopamine plays a critical role in the brain

- Motor control
- Memory, attention and executive function
- Emotional processing
- Pleasure, reward, “salience”
Consequences of untreated Neuropsychiatric Disorders

- Increased mortality and medical complications
- Reduced quality of life
- Reduced functional independence (for ADLs and iADLs) and cognition
- Reduced medication adherence
- Increased financial burden and cost
- Possibly increased disease progression

Recognizing Types of Depression

- There are many types of "depression"
- The majority of persons with iPD will have some depression
- Minor depression may not need antidepressants

Dysthymia v. Major Depression

**Major Depressive Disorder**
- 2+ weeks of 5+ symptoms including:
  - Depressed mood
  - Reduced interest or pleasure
  - Weight loss or gain / appetite change
  - Insomnia or excessive sleep
  - Observed restlessness / slowness
  - Decreased concentration, indecisiveness
  - Thoughts of dying or death with or without suicidal ideation

Symptoms impair social, occupational, ADL / iADL functioning

**Dysthymia**
- 2+ years of 2+ symptoms lasting most of the day including:
  - Poor appetite or overeating.
  - Insomnia or hypersomnia.
  - Low energy or fatigue.
  - Low self-esteem.
  - Poor concentration or difficulty making decisions.
  - Feelings of hopelessness.

 Symptoms impair social, occupational, ADL / iADL functioning.
Depression worsens physical disability

- 137 patients with iPD over 6 years (43 depressed, 94 not depressed)
- Persons with untreated, symptomatic depression had more disability than non-depressed persons (or treated depression)

Key Points about Depression

- Depressed individuals are less likely to perform ADLs, IADLs or participate in rehabilitation
- Ideally, depression should be treated concurrently or prior to rehabilitation to maximize benefit
- Persons with depression may feel in appropriately / excessively bleak about their future

Exercise and physical activity directly have antidepressant effects

Depression can be completely improved which may improve iPD symptoms

Generalized Anxiety

- Pervasive and excessive daily worrying (apprehension) about many events and activities
- Generalized anxiety may predate motor symptoms
- Anxiety may be difficult to control and look like physical symptoms
  - Restlessness or feeling on edge
  - Fatigue
  - Distractibility and poor concentration
  - Irritability
  - Muscle Tension
  - Difficulty falling or staying asleep

Panic Disorder

- Recurrent, unexpected panic attacks with a surge of intense fear or discomfort within minutes
- Ongoing concern about panic attacks and attempts to avoid them
- In iPD, may occur while wearing off

*Panic Attack Symptoms*
- Palpitations, pounding heart, or accelerated heart rate.
- Sweating.
- Trembling or shaking.
- Feelings of shortness of breath or smothering.
- Chills or heat sensations.
- Paresthesias (numbness or tingling sensations).
- Sweating.
- Derealization (feelings of unreality) or depersonalization (being detached from oneself).
- Fear of losing control or “going crazy.”
- Fear of dying.

Neuropsychiatric Comorbidities

ANXIETY

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- Fear of losing control or “going crazy.”
- Fear of dying.
Anxiety is harder to treat than depression and often chronic without medication

- The same medication used to treat depression can improve anxiety. Benzodiazepines should be avoided due to risk of falls
- Pay attention to triggers and OFF / ON state

Non-pharmacological treatment including psychotherapy, cognitive behavioral therapy and relaxation techniques

Apathy – Prevalence and Relevance

- Apathy may be seen in 20-36% of patients with iPD
- Dopamine agonists may improve apathy in early stages of iPD but it may re-emerge later
- Associated with more motor symptoms, cognitive problems, reduced treatment response / activities of daily living and quality of life

Apathy may be difficult to distinguish from depression

Recognizing Apathy in PD

3+ symptoms lasting for more than one month and impacting functioning

- Reduced initiative and decreased self-driven ideas
- Decreased curiosity or spontaneity
- Difficulty finishing activities
- Avoidance of cognitively complex activities
- Flat affect or indifference (like masked facies)
- Lack of affectionate behavior
- Lack of concern about personal problems
Management of Apathy
- Dopamine agonists, stimulants and certain antidepressants have been used for apathy
- Nonpharmacological interventions
  - Scheduled activities (social and physical)
  - Establish clear and achievable goals
  - Conditional rewards when goal completed
  - Recruit social supports

Psychosis is not uncommon in iPD
- Psychosis in iPD occurs <10% untreated patients
- Dopamine replacement therapy seems to increase lifetime risk up to 60%
- Psychotic symptoms may be variable and subtle
  - Non-distressing “complex” visual hallucinations are most common
  - But also simple visual hallucinations, auditory, olfactory or tactile hallucinations

Types of psychosis and related symptoms in iPD
- Hallucinations – perceptions or experiences without external stimuli
- Illusions – a transformation or misperception of reality
- Delusions – fixed, unchanging beliefs despite evidence to the contrary
- Thought disorganization – change in pattern of thoughts or speech
- Parasomnias – RBD, hypnagogic, hypnopompic

How to help someone experiencing psychosis
**Do**
- Listen nonjudgmentally
- Unconditional positive regard
- Speak slowly and simply
- Positive & Encourage
- Contact Physician

**Do NOT**
- Panic or overreact
- Buy into or use the hallucinations
- Focus on medication, treatment or diagnosis
- Threaten

Management of Psychotic Symptoms
- If sudden, consider acute delirium
- Supportive Therapies
  - Address vision and hearing impairment
  - Correct Sleep-Wake Cycle
- Re-evaluate medication causes and simplify regimen
- Consider reducing dopamine replacement therapy
- Trial of an antipsychotic medication
ICDs are behaviors that are performed repetitively, excessively and compulsively which interfere with functioning. ICDs have been associated with dopamine agonists and levodopa. IPD specific disorders include: punding, hobbyism, walk-abouts and hoarding. Rates of ICDs vary from 3-20%.

DDS is a disorder with an addictive pattern of taking extra dopamine than necessary to control symptoms. Essential to recognize and identify symptoms. Ongoing monitoring and consider reduction of dopamine replacement therapy. CBT and relaxation techniques may also be effective in these disorders.

Dysexecutive symptoms include difficulties with:
- Planning tasks or preparing for future problems
- Recognizing mistakes and how to fix them
- Efficient short-term memory and remembering quickly
- Shifting or sustaining attention especially multitasking
- Verbal fluency and vocabulary (word-finding, pauses)
- Motivation and initiative.
iPD leads to frontal and subcortical cognitive problems

• Additional cognitive symptoms can include:
  – Learning new skills (physical and mental)
  – Adapting and coping to new situations or problems
  – Regulating mood and excessive emotionality
  – Mimicking gestures or using tools (praxis)
  – Visuospatial navigation and depth perception (especially while driving)

Cognitive Symptoms in PD Exist on a spectrum of severity

Tips to manage cognitive issues

• Environmental modifications
  – Reduce clutter and distractions
  – Well lit, quiet environments

• Task modification
  – Breakdown complex tasks into approachable pieces
  – Utilize lists and visual cues
  – Timers and reminders

Tips to manage cognitive issues

• Some deficits may improve during ON states
• Reduce complexity of verbal language and instructions
• Pay attention to nonverbal language
• Utilize automation when possible

CONCLUSION & KEY POINTS

• Depression, anxiety, apathy, impulse control disorders and psychosis are common comorbidities of Parkinson Disease
• Neuropsychiatric comorbidities may be seen earlier and cause more disability than motor symptoms of PD
• Support “executive” abilities to improve cognitive dysfunction
Thank you!

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