Pain and Fatigue in Parkinson's disease

Odinachi Oguh M.D

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Clinical Manifestation of Cognition in PD

PD is a neurodegenerative process that includes motor and non- motor symptoms

Motor Symptoms

- Tremor
- Bradykinesia
- Rigidity
- Postural instability

Nonmotor Symptoms

- Autonomic symptoms
- Bladder control
- Orthostatic hypotension
- Erectile dysfunction
- Sleep disorders
- Behavioral
- Anxiety
- Depression
- Hallucinations
- Cognitive impairment
- Pain
- Fatigue

PAIN

PAIN

- PD patients can have more than one type of pain

Type of pain	Clinical Features
Musculoskeletal	Pain around joints , related to rigidity , skeletal deformities Frozen Shoulder precede PD symptoms
Dystonic	Early morning dystonia , Off dystonia , peak dose and diphasic dystonia
Radicular and Neuropathic	Sensation of needles or pins , localized in a root or nerve territory
Central or Primary	Neuropathic sensations , poorly localized Pin related to an internal organ “visceral pain”
Akathisia	Sense of generalized inner restlessness , urge to move

Etiologic classification of principal pain syndromes in Parkinson's disease and their practical management

Primary pain

Central pain

- Dopaminergic therapy (levodopa, dopamine agonists)
- Anti-inflammatory agents, opioids, antiepileptics, tricyclic antidepressants, and atypical neuroleptics

- Secondary pain

Musculoskeletal pain

- Musculoskeletal examination, eventually rheumatological/orthopedic evaluation
- Physical therapy and occupational therapy
- Medical therapy: dopaminergic therapy (for parkinsonian rigidity and akinesia); anti-inflammatory and analgesic drugs (for rheumatological and orthopedic conditions).
- Surgical therapy: orthopedic joint surgery if indicated

- Radicular/neuropathic pain
  - Neurological examination, eventually electrophysiological and imaging investigations
  - Physical and occupational therapy
  - Medical therapy: antidepressants, anticonvulsants, opioids analgesic, nonsteroidal anti-inflammatory drugs, also in combination
  - Surgical therapy: decompressive surgery if indicated

- Dystonia-related pain
  - Evaluation of painful dystonia and its relationship to dopaminergic medication: provide more continuous dopaminergic stimulation
  - Additional medical therapy: Anticholinergics, amantadine, injections of botulinum toxin, baclofen
- Pain related to akathisia
  - Dopaminergic therapy (levodopa, dopamine agonists), opioids, clozapine
- Pain related to restless legs syndrome
  - Lifestyle changes and activities: decreased use of caffeine, alcohol, and tobacco.
  - Eventual supplements to correct deficiencies in iron, folate, and magnesium
  - A program of moderate exercise and massaging the legs
  - Dopaminergic therapy (dopamine agonists, levodopa); benzodiazepines, opioids, anticonvulsants

Types of Pain	Management options
Musculoskeletal pain	PT, OT , NSAIDS, NARCOTICS , ABLATIVE surgeries deferred to pain management
Dystonia	Optimizing Levodopa if fluctuation is related to pain , Baclofen , anticholinergics, BOTOX , REHAB
Radicular and Neuropathic	Nerve Blocks deferred to pain management
Central or Primary	Pharmacological options , Nerve blocks defer to pain management
Akathisia	RLS – pharmacological therapies such as Dopaminergic medications such as Mirapex ,Requip , Neupro , Neurontin , Horizant

Fatigue

Look in the slide notes below for topics to consider talking about

Fatigue

- Fatigue is common in PD
- Fatigue in PD tends to develop early in the disease, usually in the first few years, if it is going to develop at all.
- It may appear before the onset of motor symptoms, and typically does not go away. It is not correlated with the severity of other symptoms—a person with only mild motor symptoms may have significant fatigue, and a person with significant motor symptoms may experience little fatigue.

DEFINATION

- Physical fatigue: feeling deeply tired or weary; may worsen with “off” fluctuations.
- Mental fatigue: mental tiredness that makes it difficult to concentrate.
- The extreme exhaustion that comes with fatigue can lead people to reduce hours at work or retire, or avoid social activities, Fatigue can affect the quality of life.

Etiology

Intrinsic to the disease

Extrinsic factors

- Depression
- Sleep disorders
- Cognitive dysfunction

MANAGEMENT

- Screening and early identification of fatigue
- Search for contributing factors that are treatable (e.g., lack of sleep, excessive stress, depression, anxiety, orthostatic hypotension)
- Non-pharmacological therapy: Physical exercise
- Pharmacological therapy:
  - a. Methylphenidate (Level C)
  - b. Antiparkinsonian medications: dopaminergic agents
  - c. Antidepressant treatment
  - d. Modafinil

Other treatments

- Eat well.
- Stay hydrated.
- Exercise. Walk, do Tai Chi, dance, cycle, swim, do yoga or chair yoga — whatever you enjoy. Fatigue may make it hard to start exercising, but it may make you feel more energetic afterward. If you find it difficult to get going, consider exercising with another person or a group.
- Keep a regular sleep schedule. If you have difficulty sleeping because of tremor or stiffness, trouble rolling over or needing to use the bathroom, talk to your doctor about these issues.
- Take a short nap (10 to 30 minutes) after lunch. Avoid frequent naps or napping after 3:00 p.m.
- Stay socially connected.
- Pace yourself: plan your day so that you are active at times when you feel most energetic and have a chance to rest when you need to.
- Do something fun: visit with an upbeat friend or pursue a hobby.
- At work, take regular short breaks.

QUESTIONS