PD & Medications: What’s New?

Vanessa Hinson, MD, PhD
Medical University of South Carolina
Parkinson’s Foundation Center of Excellence
Our Mission

The Parkinson’s Foundation makes life better for people with Parkinson’s disease by improving care and advancing research toward a cure. In everything we do, we build on the energy, experience and passion of our global Parkinson’s community.

We have everything you need to live better with Parkinson’s.

Our Goals

To help our global community live better with Parkinson’s, we pursue three goals:

- Improve care for everyone with Parkinson’s
- Advance research toward a cure
- Empower and educate our global community
Thank You!

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**SLIDES**
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Poll: Getting to Know You

What best describes your connection to Parkinson’s disease (PD)?

- Person with PD
- Spouse/Partner
- Parent has/had PD
- Other family of person with PD
- Healthcare Professional
- Physician/Clinician
- Scientist/Researcher
- Nurse/Nurse Practitioner
- Other
Meet Your Presenter

Vanessa K. Hinson, MD, PhD
Director, Movement Disorders Program
Medical University of South Carolina
Parkinson’s Foundation Center of Excellence

PD & Medication: What’s New?

Vanessa K. Hinson, MD, PhD
Professor of Neurology
Director, Parkinson’s Foundation Center of Excellence
Chief of Neurology, Ralph H Johnson VA
Medical University of South Carolina
PD is not a single disease

PD syndrome
Variety of shades
Common themes
But many differences
Approach to treatment needs to be customized
PD syndrome influences treatment decisions

Benign tremor predominant
Akinetic rigid with gait failure
Early dyskinesias
Prominent dysautonomia
Early dementia
Early psychosis

- Provider treatment choice based on “phenotype” of PD
- Person with PD treatment preference/choice

>200 years of progress

DEFINITION OF GENETIC CONTRIBUTION TO PD
CUSTOMIZED TREATMENTS BASED ON GENETIC TEST RESULTS
Treatment strategies: The old players

Levodopa versus alternatives

Alternatives to levodopa:
– Dopamine agonists
– MAO B inhibitors
– Amantadine, trihexyphenidyl
– Surgical approaches (DBS)

– Benefits: better symptom control, enhanced quality of life, reduction of mortality

“Conventional” treatment strategies
Shortcomings

Side effects
Motor fluctuations: On/Off time
Sleepiness
Dizziness
Constipation
Cognitive impairment
Hallucinations
Surgical risk
No meds for non-motor symptoms
New treatments addressing some of these challenges

Off time
Dyskinesias
Psychosis
Orthostatic hypotension
Sialorrhea
Surgical approach

Levodopa IR/ER
Levodopa inhaler
Levodopa intestinal gel
Safinamide
Opicapone
Apomorphine sublingual film
Istradefylline
Amantadine ER
Pimavanserin
Droxidopa
IncobotulinumtoxinA
Focused ultrasound

You et al, Cell and Tissue Research 2018
New meds to help off time

- new levodopa delivery systems
- add-ons to levodopa
- rescue medications

“Rytary”
carbidopa/levodopa extended-release capsules

Rytary
- FDA approved 2015

- Capsules containing time release beads
- Designed to kick in quicker and last longer
- Helpful for people with off time
- A reduction of dose frequency is often possible
- Crossing over from “regular” Sinemet requires careful calculation. Not interchangeable.
“Duopa” pump
Levodopa intestinal gel

- Very effective for off periods
- Alternative to DBS
- Levodopa bypasses stomach, directly delivered into the gut for absorption
- Medication port

- Connect pump first thing in the morning
- Give morning dose
- Then maintenance dose
- May use as needed extra doses
- Disconnect pump at night

New add-ons to levodopa

Safinimide (Xadago)----once daily MAO B inhibitor (like rasagiline)

Opicapone (Ongentys)----once daily COMT inhibitor (like entacapone)

Istradeffylne (Nourianz)----once daily adenosine a2a antagonist

All may potentially worsen dyskinesias
New add-ons to levodopa

Amantadine extended release (Gocovri)

- Once daily dose at bedtime
- Approved as add-on to levodopa to treat off periods AND as treatment for dyskinesias

Rescue medications for off time

**Levodopa inhalation powder (Inbrija)**
- Similar to asthma inhaler
- Use up to 5X/day for off
- Takes 10-20 min to kick in
- Cough may be limiting

**Sublingual apomorphine (Kynmobi)**
- Under the tongue film
- Use up to 5X/day for off
- May cause nausea and dizziness
- May require taking anti nausea pill along with it
- Has to be titrated in doctor’s office
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Treating dyskinesias
Amantadine extended-release (Gocovri)

- Only FDA approved drug for dyskinesias
- Take daily at bedtime
- Treatment principles for dyskinesias: Reduce offending drugs. If not possible, consider generic Amantadine or Gocovri.

Prevalence of PD dyskinesia

7 to 12 months: 8%
2 years: 26%
4 to 6 years: -40%
10 years: -90%
**New treatments addressing some of these challenges**

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Treatments</th>
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<tbody>
<tr>
<td>Off time</td>
<td>Levodopa IR/ER</td>
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**New treatment for PD psychosis**

**Pimavenserin (Nuplazid)**

PD psychosis: common complication of PD  
Can be result of acute medical illness, PD meds, PD dementia  
Hallucinations transition from benign visual to threatening  
Most common reason of PD nursing home admissions

**Pimavenserin**: First in class FDA approval (quetiapine, clozapine used off label), usually well tolerated, does not lower BP, but: takes 4-6 weeks to take action.
New treatments addressing some of these challenges

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New treatment for orthostatic hypotension
Droxidopa (Northera)

Common in PD (40-60%), can be intrinsic to PD or due to PD medications

Check BP sitting and 3 min standing

Frequent cause of falls
Orthostatic hypotension
Management

Adjust meds
– If possible lower or eliminate dopamine agonists, quetiapine, artane, amantadine, and hypertension meds

Non-medical measures
– Increase hydration, gatorade, salt intake, elevate head of bed

Consider drugs aimed at elevating BP
– Midodrine, fludrocortisone (not FDA approved for PD)
– Droxidopa: metabolized to norepinephrine, peripheral vasoconstriction, can elevate BP when laying down, do not take close to bedtime!

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**Sialorrhea**

**New treatment for drooling**

**Xeomin injections**

Drooling in PD due to decrease in swallow frequency

Injections with Xeomin (now FDA approved), or Myobloc can decrease saliva production

Relief for about 3-4 months

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**Focused Ultrasound for tremor predominant PD**
Focused Ultrasound for tremor predominant PD

- **Ultrasound** burns a lesion in the part of your brain that causes tremor. Thousands of ultrasound waves come together in one place smaller than a millimeter. This creates enough heat to cause a lesion.

- **Process**: You lay on a table that can slide in and out of an MRI machine. Numbing medicine applied to scalp, head frame placed. Water-filled helmet contains more than 1000 ultrasound transmitters.

- **Imaging control**: Surgeon can view your brain and control the ultrasound waves from a computer.

- **Length of procedure**: Up to three hours. You will be able to go home that day or the next day.

**Advantages**

- no incision
- advantage for patients on blood thinners
- minimal downtime after procedure
- effect is immediate
- no adjustments necessary

**Disadvantages**

- can only operate on one side of the brain
- lesion is irreversible
- no adjustments can be made as PD advances
- side effects include trouble with walking and balance
**Terrific advances, but……**

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*Future of PD meds: customize treatment according to genotype, develop disease modifying treatments*

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**Disclosures**

Nothing to disclose
Expert Briefings 2021-2022

Wednesday, September 1
The Parkinson's Journey: Understanding Progression
Anne McLenahan, MD, MSc
Lance Wilson, CRSS, LSW, CSWHC, ASW-G

Wednesday, October 6
PD & Medication: What's New
Vanessa Hinson, MD, PhD

Wednesday, December 1
The Skinny on Skin and Bone Health in Parkinson's
Kenneth W. Lyles, MD
Nicki Niemann, MD

Wednesday, February 2
Sights, Sounds and Parkinson’s
Ali G. Hamedani, MD, MHS

Wednesday, March 2
Conversations About Complementary Therapies and PD
Natalie Díaz, MD

Wednesday, April 6
Can We Put the Brakes on PD Progression?
Joash Lazarus, MD

Register at Parkinson.org/ExpertBriefings

Resources and Support

Aware in Care
The Aware in Care Parkinson's hospital kit protects, prepares and empowers people with Parkinson's before, during and after a hospital visit. Parkinson.org/AwareInCare

PD Library
Extensive collection of books, fact sheets, videos, podcasts and more. Parkinson.org/PDLibrary

PD GENERation
National initiative that offers genetic testing for relevant Parkinson's-related genes and counseling at no cost. Parkinson.org/PDGeneration

Podcast: Substantial Matters
Parkinson's experts highlight treatments and techniques to help you live well now and explore current research to bring you a better tomorrow. Parkinson.org/Podcast

PD Health @ Home
Weekly events designed for you. Engage and join us virtually for, Mindfulness Mondays, Wellness Wednesdays and Fitness Fridays. Parkinson.org/PDHealth
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