Welcome!

7th Annual UCSD Symposium

Overcoming Parkinson’s Disease
Introduction and Diagnosis of PD

Irene Litvan, M.D.
Tasch Endowed Professor
Director, UCSD Parkinson & Other Movement Disorder Center
Overcoming Parkinson’s Disease
Morning – The Natural History of Parkinson Disease

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<th>Program</th>
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<td>Check-in Opens</td>
<td>9:00 a.m.</td>
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<tr>
<td>Welcome and Introduction</td>
<td>9:30 – 9:50 a.m.</td>
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<td>Earliest Sign of Possible Parkinson’s Disease</td>
<td>9:50 – 10:10 a.m.</td>
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<td>Motor Symptoms of Parkinson’s Disease</td>
<td>10:10 - 10:30 a.m.</td>
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<td>Early Cognitive Symptoms</td>
<td>10:30 – 10:50 a.m.</td>
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<td>Panel Questions and Answers</td>
<td>10:50 – 11:20 a.m.</td>
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<td>Parkinson’s Disease and Other Movements Disorder Attack</td>
<td>11:20 – 11:30 a.m.</td>
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<td>and Brain Film</td>
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<td>Lunch Break and Expo.</td>
<td>11:30 – 12:30 p.m.</td>
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## Overcoming Parkinson’s Disease

### Afternoon – Personalized Management of Parkinson’s

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<tr>
<td>Medical Management of Motor Symptoms</td>
<td>12:30 – 12:50 p.m.</td>
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<td>The Psychological Journey of Parkinson’s Disease</td>
<td>12:50 – 1:10 p.m.</td>
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<td>Management of Sleep and Other</td>
<td>1:10 – 1:30 p.m.</td>
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<td>Panel Questions and Answers</td>
<td>1:30 – 2:00 p.m.</td>
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<td>Afternoon Break</td>
<td>2:00 – 2:20 p.m.</td>
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<td>Physical and Occupational Therapy: Improve Mobility, Maximize Life</td>
<td>2:20 – 2:40 p.m.</td>
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<td>How and Why DBS</td>
<td>2:40 – 3:00 p.m.</td>
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<td>Emerging Therapies</td>
<td>3:00– 3:30 p.m.</td>
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<tr>
<td>Panel Questions and Answers</td>
<td>3:20 – 3:50 p.m.</td>
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<td>Closing Remarks</td>
<td>3:50 – 4:00 p.m.</td>
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Outline:

• Our team
• What is Parkinsonism
• What is PD
UC San Diego Health

Who we are and what we do

Interdisciplinary Team

- Irene Litvan, MD (Director)
- Stephanie Lessig, MD
- Fatta Nahab, M.D.
- Brenton Wright, MD
- Jody Corey-Bloom, MD (Director, Huntington Disease Center of Exc.)
- David Barba, MD (Director, Functional Neurosurgery Program)
- Vince Filoteo, PhD (Director, Neuropsychology Program)
- Kathy Huynh, Movement Disorders RN
- Lisa Damron, NPF Center Coordinator
- Adriana Gonzalez, Social Worker
- Kim Bond, OT
- Carter McElroy, PT
- Robin Elam, Research Coordinator
- Cris Lam, Research Coordinator
- Patty Torres, Research coordinator
- Salma Debar, Regulatory Research Coordinator
- Veronica Lopez, Research Coordinator
UC San Diego Health

Our Clinical Team

Clinical Coordinator

Lisa Damron

Social Worker

Adriana Gonzalez, MSW

Rehab Program

Kim Bond, OTR, CLT, ATP
Carter McElroy, MPT
Andrea Coverdale, DPT
Jonathan DeVera, ST
Julie Walker, PT, DPT

UCSD Research Collaborators:
• Alzheimer Disease Research Center, School of Bioengineers, Psychiatry, Pathology, Neuroradiology, etc

Non-UCSD Collaborators
• UCSF, UCLA, UCI, National Institutes of Health, Michael J Fox Foundation, Parkinson Study Group
• Columbia University Hospital, University of Pennsylvania, Massachusetts General Hospital, etc
What we do

- Clinical Care
- Clinical Trials
- Clinical & Basic Research
- Community Outreach & Education
Clinical Program

CLINICAL EXCELLENCE

• State-of-the-art approach to clinical care including a multidisciplinary interdisciplinary movement disorders team designated Parkinson Foundation Center of Excellence
• Dedicated NP specialized in movements disorders—Kathy Huyhn
• Comprehensive DBS program
• Neuroimaging movement disorder program
• Pediatric movement disorders program
What we offer

Clinical Care

• Provide personalized and evidence-based medical and rehabilitative services to our patients and caregivers

• Provide state-of-the-art diagnostic and care
  • Pharmacologic
  • Botox treatment for dystonia, drooling, eyelid apraxia
  • Surgical interventions (Deep brain stimulation)
  • Rehab services
  • Psychologic care
  • Social worker Services
  • Urological Services
  • ENT services
Standardized care and service

- Physicians medical records
- Neuropsychological evaluations
- Neurosurgical evaluations
- Rehabilitation evaluations (PT/ST/OT)
- Urological evaluations
- MRI
- VELOS Database
Research

- Search for cause/s of cell death in neurodegenerative diseases with parkinsonism or dementia
- Continue search for Rx to slow down, prevent and possibly even cure these diseases
- Develop and evaluate current & emerging Rx
- Search for markers for diagnosis (i.e., Parkinson Progression Markers Initiative)
- Improve access to health care and research
Why we stand out?

- State-of-the-art diagnosis and evidenced based management
- Multidisciplinary and interdisciplinary approach
- Only Pediatric Movement Center in SD and one of the few in the US
- Clinical trials and innovative translational research studies (bench to bedside)
- Outreach Program
How can our program help you

- Early diagnosis, early referral
- Appropriate management
- Prevent complications
- Decrease morbidity/mortality from complications
- Prognosis
- Include you in clinical research trials
- Educate you on the diseases
- Personalize your care
What is Parkinsonism?

1. Slowness/low amplitude
   - Lack of associated arm movements
   - Small stepped gait
1. Slowness/low amplitude

2. Rigidity

- Tremor
- Stooped posture
- Masklike facies
- Arms flexed at elbows and wrists
- Hips and knees slightly flexed
- Short shuffling steps
3. Tremor at rest
4. Postural instability
There are several Parkinsonian disorders

- Secondary to specific causes:
  - Vascular Parkinsonism
  - Drug-induced Parkinsonism
- Neurodegenerative Diseases
  - Parkinson disease
  - Multiple system atrophy
  - Dementia with Lewy Bodies
  - Progressive Supranuclear Palsy
  - Corticobasal Degeneration
  - Frontotemporal Dementias with Parkinsonism
Definition of Parkinsonism

- Slowness &
- Tremor
- &/or
- Stiffness
What is wrong in PD patients’ brains?

In Medical School we were taught:
Loss of dopaminergic neurons
• 50% neuron loss in the substantia nigra (SN) at dx
• 80% striatal dopamine is lost dx

Synuclein pathology in gut

4 to ≥ 13 Years
Prodromal PD

- Lack of smell
- Constipation
- Sleep Problems (i.e., acting out dreams)
- Depression
MDS 2017 PD Dx Supportive Criteria

1. Dramatic response to dopaminergic therapy
2. Rest tremor
3. L-dopa induced dyskinesia
4. Olfactory loss or cardiac sympathetic denervation on MIBG
Non-Motor Problems of PD

- Lack of smell
- Constipation
- Sleep Problems (i.e., acting out dreams)
- Depression
- Anxiety
- Cognitive impairment
- Abrupt drop of blood pressure when standing
### PD Stages

**Preclinical**
- Abnormal Imaging
- Other Biomarkers?
- Genetic Factors?

**Prodromal**
- +
- Hyposmia
- iRBD
- Constipation
- Depression

**PD Early**
- +
- Slowness
- Stiffness
- Tremor

**PD Advanced**
- +
- Dyskinesia
- Cognitive Problems
- Autonomic Problems
Motor symptoms fluctuate: Dyskinesias
Fluctuations of Non-Motor Symptoms

- Anxiety (66%)
- Drenching sweats (64%)
- Slowness of thinking (58%)
- Fatigue (56%)
- Irritability (52%)

- 1/3 of patients indicate that non-motor fluctuations are more disabling than motor fluctuations

ARE IMPORTANT!
Need to exclude:
Drug Induced Parkinsonism

Dopamine blockers
Neuroleptics
Antiemetics

Medications that lower E}

β-methyldopa)
One or more PDs?

• Sporadic vs. familial

• Familial PD may have a different underlying brain pathology

• With tremor vs without tremor

• With dementia vs without dementia
Early & accurate diagnosis is important:

• Appropriate management
• Prognosis
• Participation in clinical research
Conclusion

1. There are several Parkinsonism, PD is one of them

2. PD starts in the gut & olfactory bulb-not in the substantia nigra, spreads following neuronal pathways explaining initial Non-Motor symptoms

3. Changed in how PD is defined—Prodromal PD

4. The way to diagnose PD has also changed
Thank you!

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Movement Disorder Center