Apathy in Parkinson’s Disease

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I. What is apathy?

II. Where does apathy occur?

III. Are you sure it’s apathy?

IV. What can you do about it?
Apathy: Disorder of Motivation

• Different definitions with no consensus
• Absence of responsiveness to stimuli as demonstrated by a lack of self-initiated action (Stuss et al., 2000)
• It can be thought of involving simultaneous changes in 3 areas (Marin, 1991)
  – Behavior
  – Cognition
  – Emotion
Apathy: Disorder of Motivation
Decrements in Overt Behavior

• **Range from mild** (e.g. subtle inefficiencies in getting things done at work or at home

• **To Severe** (e.g. impairments in initiating or sustaining goal-directed behavior
  – Require prompting to perform personal and instrumental activities

Painting project six months later.
Apathy: Disorder of Motivation

Decrease in goal-related thought content

• "I have no plans"
• "I’m just not interested in much any more"
• "I have little desire to do anything today"
Apathy: Disorder of Motivation

Diminished emotional responsivity

- Shallow, abbreviated, or unchanging emotion in response to goal-related events
- For example:
  - Confronted with personal loss, health problems, financial misfortune, patient with apathy will be described as emotionally indifferent, placid, inappropriately euphoric, affectively shallow or flat
  - Favorable events elicit attenuated emotional response
Apathy in Medical Disorders

- Thyroid disease
- Drug or alcohol intoxication/withdrawal
- Lyme disease
- Testosterone deficiency
- Vitamin B12 deficiency
- Various debilitating conditions (cancer, congestive heart failure, liver failure)
Apathy in Neurological Disorders

- 91% Progressive Supranuclear Palsy (PSP)
- 90% Frontotemporal Dementia
- 61% Traumatic Brain Injury
- 58% Huntington’s Disease
- 55% Alzheimer’s Disease
- 45% Parkinson’s Disease
- 34% in Vascular Dementia
Apathy’s Adverse Outcomes

- Apathy negatively impacts
  - Cognition
  - Daily functioning
  - Treatment adherence
  - Quality of life
  - Caregivers’ well being
Apathy: Is it medications?

Polypharmacy

PM products (i.e. Benadryl aka diphenhydramine)

Urinary incontinence medications (not that effective and anticholinergic)
Apathy: Is it a sleep disorder?
Apathy: Is it depression?

Shared among apathy and depression

• Diminished interest
• Psychomotor slowing
• Fatigue/sleeping a lot
• Lack of insight

Unique to apathy

• Blunted affect
• Indifference
• Low social engagement
• Diminished initiation
• Poor persistence

Unique to depression

• Dysphoria (a profound state of unease or dissatisfaction
• Suicidal ideation
• Self-criticism
• Guilt
• Pessimism
• Hopelessness
• Sleep Disturbance
### Apathy: Is it Communication?

<table>
<thead>
<tr>
<th>Nonverbal</th>
<th>Verbal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced or “frozen” expression “masked-like”</td>
<td>Hypophonia (Quiet voice)</td>
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<tr>
<td>Reduced eye blink rate</td>
<td>Psychomotor Slowing (slow to respond)</td>
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<tr>
<td>Reduction in body language e.g. Limited, rigid gesturing not timed with verbal expression it is meant to accompany</td>
<td>Micrographia (small handwriting)</td>
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<tr>
<td>Bent posture can reduce eye contact</td>
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Apathy: Nonmotor Symptom of Parkinson’s Disease

AN ESSAY ON THE SHAKING PALSY.

CHAPTER I.
DEFINITION—HISTORY—ILLUSTRATIVE CASES.

SHAKING PALSY. (Paralysis Agitans.)
Involuntary tremulous motion, with lessened muscular power, in parts not in action and even when supported; with a propensity to bend the trunk forward, and to pass from a walking to a running pace; the senses and intellects being uninjured.
Typical Cognitive Profile in Parkinson’s Disease

<table>
<thead>
<tr>
<th>Category</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple attention</td>
<td>Spared</td>
</tr>
<tr>
<td>Executive Functioning</td>
<td>Impaired</td>
</tr>
<tr>
<td>Psychomotor Speed</td>
<td>Slowed</td>
</tr>
<tr>
<td>Language</td>
<td>Spared</td>
</tr>
<tr>
<td>Memory</td>
<td>Impaired free recall</td>
</tr>
<tr>
<td>Visuospatial</td>
<td>Impaired</td>
</tr>
</tbody>
</table>
Executive Functioning Impairment (93% of PD)

- Concentration
- Self-regulation/Maintenance of focus
- Mental flexibility: shift between stimuli
- Multi-tasking

- Apathy
- Initiation (can be mistaken for laziness, depression)

- Persistence/follow through
- Planning organizing, sequencing
- Inhibition (suppress reaction vs. act prematurely, no forethought)

- Problem Solving
- Effecting closure between tasks – proactive interference
Pathophysiology of Apathy

1. Dopamine in the CNS

- CNS dopaminergic pathways:
  - nigrostriatal pathway to corpus striatum
  - mesolimbic / mesocortical pathway
  - tuberohypophyseal pathway to the pituitary gland

Rang et al. (2012) Fig. 38.3
How Do You Manage Apathy?
Treatment of Apathy

Promote comfort and functional autonomy
• Comprehensive physical exam to rule out reversible causes such as medications, Vitamin B12 deficiency and contributing causes (e.g. sleep, depression)
• Aggressive treatment of general medical conditions (e.g. eye glasses, large print books, cerumen removal, hearing aids)

Attempt to increase reward potential of environment and enhance motivation
• Structured environment with routines designed with the following general goals
  – Increased socialization
  – Increased exercise
• Adaptive modification (e.g. visible clock and calendar)

Behavior Therapy
Promising but needing more study (music, art, pet)
Pharmacologic: usually based on comorbidities, limited studies
Enhancing Communication

• Choose times when the person’s meds are working to have important conversations.

• Pay attention to how you are speaking as well as what you are saying. Speak clearly with short sentences and be sensitive to tone of voice, for example, resist sounding impatient or frustrated.

• Give the person time to respond.

• Remain an engaged listener through non-verbal cues like nodding your head, touching the person’s arm or maintaining eye contact (if culturally appropriate).

• Encourage the person to speak loudly when giving their response.

• Ask the person how they are feeling or what they are thinking when their facial expression masks their responses.

• Use actions as well as words.

http://www.parkinson.ca/site/c.kgLNIWODKpF/b.6541687/k.A547/Effective_Communication_In_Parkinson8217s.htm
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Questions?

We must restrict questions to general information related to the talk. Please contact your physician or one of the resources noted in the talk for specific diagnostic and treatment questions.