An Approach to Patients with Movement Disorders

Joaquim Ferreira, MD, PhD
Laboratory of Clinical Pharmacology and Therapeutics
Faculty of Medicine
University of Lisbon
EDUCATIONAL TOOLS

- MDS video library

- **MDS-Owned Rating Scales**
  - [Global Assessment Scale for Wilson's Disease](#) | Scale
  - [Global Dystonia Scale](#) | Scale
  - [Modified Bradykinesia Rating Scale](#) | Scale
  - [Non-Motor Symptoms Scale (NMSS)](#) + (Includes NMSQ) | Scale
  - [Quality of Life Essential Tremor Questionnaire](#) | Score Sheet
  - [Rating Scale for Psychogenic Movement Disorders](#) | Scale
  - [Rush Dyskinesia Rating Scale](#) | Scale
  - [Rush Videobased Tic Rating Scale](#) | Scale
  - [UFMG Sydenham's Chorea Rating Scale (USCRS)](#) | Scale
  - [Unified Dyskinesia Rating Scale (UDysRS)](#) + *
  - [Unified Dystonia Rating Scale (UDRS)](#) | Scale
  - [Unified Multiple System Atrophy Rating Scale (UMSARS)](#) | Scale
  - [Unified Parkinson's Disease Rating Scale (MDS-UPDRS)](#) + * | Scale

- [UHDRS training videos](#)
- ...
• Definition:

A group of symptoms or syndromes characterized by involuntary or abnormal movements
MD APPROACH

• History
  – When (started...worsened...)
  – How (rest... movement...)
  – Where in the body
  – Why (trigger...facilitator...)
<table>
<thead>
<tr>
<th>1. Localization</th>
<th>5. Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. where in the body?</td>
<td>1. How can we treat?</td>
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<thead>
<tr>
<th>2. Phenomenology</th>
<th>6. Prognosis</th>
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<tbody>
<tr>
<td>1. what type of movements?</td>
<td>1. How will the disease progress?</td>
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<tr>
<th>3. Aetiology</th>
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<tbody>
<tr>
<td>1. what is the cause?</td>
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<th>4. Pathophysiology</th>
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<td>1. Which mechanisms are involved?</td>
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LOCALIZATION

• Focal
  – Muscles of one localized part of the body
• Segmental
  – Cranial / axial / scapula / arm / leg...
• Hemi-focal
  – Hemi body with or without head and neck
• Multifocal
  – >1 non adjacent focal body parts
• Generalized
  – Segmental + any other part of body
• Observe patient:
  – as he enters the room and while he is not being questioned
  – segment by segment (whenever possible)
LOCALIZATION

• Look for discrete symptoms
  – Slight tremor
  – Minor dystonic movement
  – ...

• Look for masking movements
  – Hand in the pocket for resting tremor
  – Hand behind back for chorea
  – ...
AETIOLOGY

• Physiological
  – Tremor, myoclonus

• Primary, idiopathic, essential

• Secondary, symptomatic, acquired

• Psychogenic
PHENOMENOLOGY

• Classification of movements
  – Voluntary
    • Intentionally initiated or evoked as a reaction to external stimulus
  – Automatic
    • Learned motor behaviours, performed without conscious activation (walking, cycling, speech)
  – Unvoluntary (Semi-automatic)
    • Initiated by internal stimulus (scratching due to itch), or by unpleasant feeling or compulsion (Restless legs, tics, Akathisia); can be voluntarily suppressed for a short duration
  – Involuntary
    • Involuntary initiation and progression, (although some voluntary modulation may occur)
• Classification of movement disorders

• Movement disorders occur when there is either
  – Too much movement (Hyperkinesias)
    or
  – Insufficient movement (Hypokinesias)
• Hyper / Hypokinesia
• Rhythmic / Non rhythmic
• Simple / Complex
  – Simple: tremor, myoclonus;
  – complex: tics, stereotypies
• Resting / Induced or increased with action / tasks (mental / motor)
• Spontaneous / Provoked
**PHENOMENOLOGY**

**Hyperkinesias**
- Akathisia
- Ballism
- Chorea
- Dystonia
- Myoclonus
- Restless legs
- Startle reflex
- Tics
- Tremor

**Hypokinesias**
- Akinesia / Bradykinesia / Hypokinesia
- Catatonia / Catalepsy
- Freezing
- Rigidity
- Stiff muscles
CHOREA
BALLISM
DYSTONIA
MYOCLONUS
WALKING IN

• Gait
• Wheelchair
• Facial expression
• Neck posture
• Upper-limb posture
• Handshake
• ...

...
WHEELCHAIR
FACIAL EXPRESSION
NECK POSTURE

Fig 1. An illustrative image of a patient with progressive supranuclear palsy with 5 years of disease duration and retrocollis. Note that the patient is already in wheelchairs.

Arq. Neuro-Psiquiatr. vol.68 no.6 São Paulo Dec. 2010

Postural deformities in Parkinson’s disease
Karen M Deherty, Bart P van de Warrenburg, Maria Cecilia Peralta, Laura Silveira-Morjuma, Jean-Philippe Azulay, Oscar S Gershonik, Bastiaan R Bloem
HAND POSTURE
HANDSHAKE
CLINICAL HISTORY

• First complain
  – Tremor, bradykinesia vs. cognition, axial signs

• Durations of symptoms
  – Not PD, PD vs essential tremor

• Family history

• Red flags for IPD
  – Memory/cognitive impairment
  – Falls
  – OH/dizziness
  – Urinary complains
  – Sexual dysfunction
  – Dysphagia
  – Dysarthria
• Eye movements
• Oromandibular movements
EYE MOVEMENTS
OROMANDIBULAR MOVEMENTS

- Tardive
- LD
- HD like
- MSA
CARDINAL SIGNS
PARKINSONISM

• Bradykinesia
• Tremor
• Rigidity
• Postural instability
BRADYKINESIA
TREMOR

- Head
- Chin
- Voice
- Upper limbs
- Lower limbs

- Stretch out the arms
  - Re-emergent tremor
  - Polyminimyoclonus
“Jerks”
RIGIDITY

• Cogwheel!
• Intensity 0 vs. 1
• Assimetry
GAIT

• Arm swing
  – Hall
  – Dystonia
• Turning
• Foot dystonia
• Orthostatic hypotension
FOOT DYSTONIA
• Edema
• Livedo reticularis
OTHER EVALUATIONS
OTHER EVALUATIONS
• Blood pressure
  – Orthostatic hypotension
  – Bradycardia
    • Acetylcholinesterase inhibitors
    • Propranolol
• Worst and best moments of the day
• Most troublesome problems
• Relation with LD intake
  – Early morning
  – After lunch
• Somnolence/driving
• Mood
  – Treat what is treatable!

• Family members / caregiver
  – Nocturnal sleep
  – Mood
  – Hallucinations/delusions
  – Shopping/eating/gambling/sex
SLEEP
STRATEGIES

• Home videos
  – smartphone

• Spend some hours at the hospital (“close” to the doctor)
NOT TO MISS

• Pharmacological history
• Drug-induced parkinsonism
NOT TO MISS