Dementia & Movement Disorders

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Types of Dementia

- Alzheimers disease (60%)
- Vascular (6-25%)
- Lewy Body Disease (10-15%)
- Fronto-temporal dementia (5%)
- Others
- Mixed!
Types of Movement Disorders

- Parkinsonism
- Chorea
- Tremor
- Dyskinesia
- Dystonia
- Myoclonus
- Gait Disorder
- Restless Legs Syndrome
Types of Movement Disorders

- Parkinsonism - PD, LBD, PD+, drugs, strokes
- Chorea - Huntington’s Disease, drugs
- Tremor – PD, ET, drugs
- Dyskinesia – PD, drugs
- Dystonia - PD
- Myoclonus - CJD
- Gait Disorder – PD, strokes
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Huntington’s Disease

- Genetic: autosomal dominant (chromosome 4p)
- Chorea, psychiatric problems, dementia
- Usual onset in 30s
- May be late onset
- May be sporadic
Assessing Dementia

Aims:

- Distinguish early dementia from non-organic causes e.g. depression
- Distinguish dementia subtypes
- Diagnose unusual and potentially reversible causes of dementia
Interview for memory

Interview informant alone:
- What was the first symptom?
- How has it evolved?
- What impact is there on everyday life?
- Are there specific behavioural changes?
  e.g. affection? aloofness?
Lewy Body Dementia

- Dementia
- Fluctuating cognition / delirium
- Visual hallucinations
- Spontaneous parkinsonism
- Other possible features:
  - repeated falls
  - syncope
  - neuroleptic hypersensitivity
  - systematised delusions
  - hallucinations in other modalities
- Less likely if stroke or other illness
Parkinson’s Disease
Classic Motor Symptoms of PD

- Rigidity
- Hypokinesia
- Tremor
- Postural Problems
My Clinic

- Falls
- Constipation
- Confusion
- Hypokinesia
-offers various conditions like:
  - Rigidity
  - Apathy
  - Hallucination
- R.L.S.
- R.B.D.
- Depression
- Pain
- Fatigue
- Depression
- Apathy
- Hypokinesia
- Constipation
- Fatigue
- Hallucinations
- Depression
- R.B.D.
- Rigidity
- Urinary Problems
- Anxiety
- Hypokinesia
- Fatigue
- Apathy
- Constipation
- Depression
- R.B.D.
Types of parkinsonism

- Parkinson’s Disease
- Diffuse Lewy Body Disease
- Parkinson’s Plus Syndromes
- Drug induced parkinsonism
- Vascular parkinsonism
- Structural damage
- Other tremors
Drug-Induced Parkinsonism

- Crucial to rule out, since most cases are reversible
- Careful medication history—list drug names
- Common offending drug types
  - Antipsychotics
  - Antiemetics

- Treatment: Stop offending medication + follow up
Vascular Parkinsonism

- Abrupt onset, usually unilateral
- Step-wise or no progression
- Other signs—hemiparesis, aphasia, hyperreflexia
- Upright posture
- Marche a petit pas
- Strokes on neuroimaging helpful in confirming diagnosis
- May respond to L-dopa
Is it PD?

- Prominent tremor
- Asymmetry
- Good response to L-dopa

Less likely if
- Symmetrical rigidity, little tremor, legs>arms
- Prominent gait disorder, early falls
- Early dementia, autonomic dysfunction
- Poor response to L-dopa
Non-motor Symptoms of Parkinson’s Disease

- Olfactory Dysfunction
- Visual
- Language
- Sleep Disorders (RBD)
- Restless Legs Syndrome
- Mood Disorders / Depression / Anxiety
- Cognitive Impairment / Dementia / Psychosis
- Addictive Behaviour
- Dysautonomia
- Pain
Cognitive Deficits in PD

- ↓ executive function
- Slowness in thinking (bradyphrenia)
- Attention – impaired reaction time, distracted
- Visuospatial
- Memory - ↓ working memory
  - ↓ retrieval (word finding) - improved by cueing – rather than recognition
  - ↓ temporal sequencing
  - poor learning strategies
- Language – impaired verbal fluency, word generation
Dementia in PD

- Prevalence of 40% - up to 70%
- Incidence 4-6 x greater than controls
- Types:
  - Dysexecutive
  - Generalised Limbic (↓ memory – storage>retrieval)
Risk factors for Dementia in PD

- Age
- Akinetic-rigid disease
- Atypical symptoms
Psychosis in PD

- 6%–40%
- Perceptual disorders
  - Sense of a presence
  - Illusions - pattern
  - Hallucinations (visual, auditory and tactile)

- Paranoid delusions
  - often pathologic jealousy (e.g., spouse having sexual encounters with another person) - causes distress and reduces quality of life.
Psychosis

- Risk Factors
  - Advanced age
  - Prolonged disease duration & severity
  - Cognitive impairment
  - Depression
  - Sleep disorders
  - Probably in part dopaminergic induced
Visual Hallucinations in PD

- 90% of psychotic PD have VH
- Usually well formed
- People or animals
- Usually recurrent
- Stable over time and place
- Not usually threatening
- Insight usually present – except if Ci
- Intermittent – last seconds or minutes
- High association with dream phenomena
Slippery Slope

- Reduced Deep Sleep
- Day Time Sleepiness
- Illusions
- Vivid Dreams
- Hallucinations
- Delusions
- Delirium
Sequelae of Dementia in PD

- Increased morbidity
- Increased burden of disease
- Decreased tolerability to drugs
- Decreased survival
Management

Motor Control

Psychosis Control
Medications for Parkinson’s Disease

- L-dopa (+ dopa decarboxylase inhibitor)
- Dopamine agonists (e.g. bromocriptine, cabergoline, pramipexole, ropinirole, rotigotine)
- COMT inhibitors (entacapone)
- Anticholinergics (benzhexol)
- MAO-B inhibitors (selegiline)
- Amantadine
Adverse effects of PD medications

- Delirium
- Psychosis – visual hallucinations
- Hypotension
- Motor fluctuations
Management

- Reversible causes
- Eliminate Psychoactive Drugs
  - benzodiazepines / TCAD / anticholinergics
- Treat co-morbid psychiatric illness
- Non-Pharmacological Treatment – Carers:
  - Don’t argue
  - Direct attention away
  - “let’s check again – it may be a shadow”
- Eliminate P.D. medications
- Anticholinesterase e.g. rivastigmine
- Antipsychotics – clozapine / quetiapine
Reduce from the top

- Anticholinergics
- Tricyclics
- Selegeline
- Amantadine
- Other antidepressants
- Dopamine Agonists
- C.O.M.T.
- Apomorphine
- L-DOPA
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Parkinson’s Disease Dementia vs Lewy Body Dementia

- Temporal
- 12 month rule
- DLB = Dementia before or concurrent with parkinsonism

D.L.B.  P.D.D.

12/12

PARKINSONISM
Lewy Body Dementia matters because medical treatment with antipsychotics or dopaminergics may be dangerous.
Quality of Life in PD

- Motor disability (17%)
- Fatigue
- Impaired cognitive function
- Depression
- Pain
- Social isolation
- Explanation of disease at time of diagnosis