Parkinson’s Disease

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Outline and objectives

- Epidemiology
- Diagnosis-key features
- Management options

- Awareness of spectrum of presentation and warning features

Epidemiology

- Incidence 4-21/100000/year
- Increases with age X10 for over 70's
- Prevalence 20-300/100000 (100-170 UK)
- Life time risk (birth) 4.4%M, 3.7%F
- More common in men 1.3:1
- 2-3% of population over 65

Parkinsonism

1. Tremor at rest
2. Bradykinesia
3. Rigidity
4. Loss of postural reflexes
5. Flexed posture
6. Freezing (motor blocks)

Definite: At least two of these features must be present, one of them being 1 or 2

Probable: Feature 1 or 2 alone is present

Possible: At least two of features 3 to 6 must be present

Parkinson's Disease

Inclusion criteria	Exclusion criteria	Supportive criteria
Bradykinesia (slowness of initiation of voluntary movement with progressive reduction in speed and amplitude of repetitive actions) And at least one of the following: Muscular rigidity 4-6 Hz rest tremor Postural instability not caused by primary visual, vestibular, cerebellar, or proprioceptive dysfunction	History of repeated strokes with stepwise progression of parkinsonian features. History of repeated head injury History of definite encephalitis Oculogyric crises Neuroleptic treatment at onset of symptoms More than one affected relative Sustained remission Strictly unilateral features after 3 years Supranuclear gaze palsy Cerebellar signs Early severe autonomic involvement Early severe dementia with disturbances of memory, language, and praxis Babinski sign Presence of cerebral tumor or communicating hydrocephalus on CT scan Negative response to large doses of levodopa (if malabsorption excluded) MPTP exposure	(Three or more required for diagnosis of definite PD) Unilateral onset Rest tremor present Progressive disorder Persistent asymmetry affecting side of onset most Excellent response (70–100%) to levodopa Severe levodopa-induced chorea Levodopa response for 5 yr or more Clinical course of 10 yr or more

Diagnosis

- Primarily clinical
- Neuroimaging CT MRI SPECT Transcranial ultrasound PET
- Olfactory assessment
- Arginine infusion tests
- L dopa/apomorphine trials

Scans in PD

Parkinson’s?

- Diagnosis is first key part of management
- NICE guidance “ referral before therapy to ensure accurate diagnosis to a specialist”

- MacMahon Stages- diagnosis, maintenance,complex and palliative

Motor symptoms

- Tremor
- Rigidity
- Slow movement
- Gait and balance
- Normal power, reflexes and plantars
- Often what the doctor worries about
- Mostly responds to dopamine therapy

Non motor symptoms

- Cognitive-memory, processing
- Mood, anxiety, panic attacks
- Sleep disturbance, restless legs
- Pain, dyspnoea
- Bladder, bowel, swallow, sexual
- Sense of smell, dribbling, sweating, skin
- Visual disturbances
- What impacts on patients/carers QoL
- May respond (partially) to dopamine therapy

treatment

treatment

- Levodopa
- Dopamine agonist
- MAO inhibitor

- COMT inhibitor

- When and what?

Pre clinical screening

- Anosmia
- Constipation
- Depression
- REM sleep behaviour disorder

- Often present for many years before any motor symptoms

Red flags

- Pyramidal signs
- Early falls or autonomic problems
- Early cognitive problems, hallucinations
- Failure to progress
- Symmetrical disease
- Poor drug response
- Cerebellar or eye signs

summary

- Be aware of motor and non motor features
- Think about red flag symptoms and signs
- Clinical diagnosis- review if atypical
- Tailored treatment- 3 initial choices for monotherapy
- Involve the specialists/ team
- Not everything that “shakes” is PD
- Not all PD “shakes”