# Movement Disorders And The NICE Management of Parkinson's Disease Disease


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# Essential Tremor

- Check u and e , LFT, TFT, calcium
- 50 % of essential tremor reponds to medication
- propanolol, Primidone, pregabalin, gabapentin,clonazepam

# Which tremors to refer ?

- All new tremors not essential tremor
- Diagnostic uncertainty
- Essential tremor requiring further management
- Tremor with other neurological symptoms:ataxia,cerebellar signs, parkinsonism

# Parkinson's Disease

- bradykinesia
- rigidity
- tremor
- postural instability

# Parkinsonism

- Rigidity, bradykinesia, gait shuffling, tremor:
- Idiopathic parkinson’s disease
- Vascular Parkinsonism
- Normal pressure hydrocephalus
- Parkinson’s plus
- Iatrogenic

# Parkinson's Presentation

- tremor
- physical slowing
- reduced dexterity
- micrographia
- cramping
- Gait disturbance
- non-motor symptoms

# Parkinson’s Disease

- Early ‘Honeymoon period’
- Middle period -wearing off
- Late period -dyskinesia’s, fluctuations, cognitive impairment

# Drugs Used In Parkinson's Disease

- Co-careldopa/co-beneldopa
- CR preparation
- Dispersible preparation -rescue/morning
- Stalevo is co-careldopa plus entacapone

# Entacapone

- Catechol-O-methyltransferase(COMT) inhibitor. Prevents breakdown of levodopa in the brain and periphery

# Dopamine agonists

- Non-ergot(ropinirole,pramipexole,rotigotine)
- Ergot (bromocriptine,pergolide,cabergoline), Ergot drugs require monitoring

# Dopamine agonists

- advantages over levodopa- less dyskinesia, longer acting
- disadvantages over levodopa-  more risk of hallucinations, compulsive behaviour, postural hypotension, daytime sleepiness.Specific ergot side-effects.

# Monoamine oxidase inhibitors

- Selegiline 5 to 10mg PO,1.25 mg sublingual
- Rasagiline 1 mg od (?neuroprotective)
- Beware of Serotonin syndrome with SSRI and tricyclics: pyrexia,agitation,tremor,sweating,diarrhoea
- Tramadol, pethidine, methadone contraindicated

# Combining MAO inhibitors ( Rasagiline,Selegiline) with antidepressants a complex issue

- Rasagiline. NICE advise combination with ‘SSRI best avoided’. However Citalopram relatively safe. Manufacturer report no contraindication. If using tricyclics- Nortryptiline, Doxepin safest. These have a low serotoninergic activity.
- Study of 1500 patients -no cases of serotonin syndrome

- Selegiline- avoid antidepressants. SSRI should be avoided. Low serotoninergic tricyclics have sometimes been used but ‘not advised’

# Apomorphine

- Water soluble dopamine agonist
- Given as a rescue treatment in pen form
- Given as a continuous daytime infusion
- Advantages- help smooth motor fluctuations. Less hallucinogenic than other dopamine agonists

# What to initiate on diagnosis ?

- Depends on degree of motor impairment
- Levodopa - Most improvement in motor symptoms
- Dopamine agonists- Intermediate improvement in motor symptoms
- MAO inbitors- less improvement
- Most patients are best on a combination of levodopa and a dopamine agonist

# Further Nice Recommendations

- GP responsibilities-  Very little. Refer for most issues directly related to Parkinson's
- Refer to specialist for diagnosis untreated
- If motor fluctuations-manage according to specialist advise.
- If behavioral, psychotic or cognitive complications-obtain specialist advice

# How to contact Neurology for advice

- Patient or GP ： PD nurse specialist- Telephone
- Neurologist contact- written or telephone message to secretary(Barnsley or Sheffield Hallamshire)
- If above not available during emergency- contact the on-call neurology team at the Hallamshire,Sheffield

- Patients should have access to  physio, OT, SALT, dietician,
- Advise VIT D supplementation
- Palliative care referral and end of life planning when appropriate.

# non-motor symptoms

- mood
- sleep
- cognitive disorders
- impulse control disorders
- autonomic dysfunction
- presymptomatic symptoms

# presymptomatic non-motor symptoms

- anosmia
- sleep
- depression
- pain

# Insomnia Due to Parkinson's: Causes

- Lack of muscle and mental relaxation
- Stiffness, restlessness, and difficulty of moving into comfortable positions
- Tremor can be bothersome
- Medications wear off during the night

- Be aware that sleep issues are common and can have driving/work implication
- REM sleep behaviour disorder. Treat with clonazepam,melatonin
- Daytime sleepiness requires medication review, Modafinil
- Night time akinesia- consider medication review, CR levodopa, Rotigotine patch

# Cognitive Disorders in PD

- PD patients may present to you with cognitive disorders.
- You can review triggering factors and non PD medication and refer to neurology
- Neurology can consider cholinesterase inhibitors in mild to moderate PD dementia and referral to dementia pathway. Consider drugs in severe dementia and Memantine if cholinesterase inhibitors not tolerated.

# WHAT TO DO WITH THE PSYCHOTIC PARKINSON'S PATIENT

- Assess for obvious provoking factors-concurrent medical illness/infection/metabolic disturbance
- Refer to neurology
- Specialist can discontinue drugs - anticholinergics, amantadine, MOA inhibitors, dopamine agonists, levodopa
- Specialist can initiate quetiapine, clozapine
- Specialist can consider cholinesterase inhibitors

- Autonomic symptoms (including orthostatic hypotension, constipation, nausea, vomiting, heat intolerance, urinary frequency, urinary incontinence, urinary urgency, nocturia, sweating, hypersalivation, drooling, seborrhea, sexual dysfunction in men and women)

# treatment

- Anti-emetics
- postural hypotension -(stop antihypertensives) Midodrine, fludrocortisone, ephedrine
- urinary frequency- anticholinergics, Trospium less likely to provoke confusion
- constipation
- hypersalivation- glcopyrrolate, botulinum,hyoscine