Wirral Clinical Commissioning Group NHS | Wirral Community NHS Foundation Trust

Parkinson's Disease Clinical Guideline

Wirral University Teaching Hospital NHS Foundation Trust

Parkinson's Disease (PD) is a progressive neurological condition. It affects about 1:1000 people overall but about 1:100 of the elderly and up to 1:10 in nursing home residents. The disease affects around 120,000 people in the UK.

PD is progressive, disabling and distressing.

The National Institute for Clinical Excellence (NICE) released guidelines for the treatment and management of PD in June 2006. These are soon to be reviewed. The Wirral PD Planning Group have developed these guidelines to assist you in managing patients with this complex disease.

DIAGNOSIS STAGE: PARKINSON'S DISEASE GUIDELINES

PD Suspected

Features of PD are:-
- Slowness
- Stiffness
- Tremor (at rest, usually starts unilaterally)
- Loss of balance/Falls

Check Prescription for Antidopaminergics
e.g. Prochlorperazine (Stemetil), Metoclopramide, Haloperidol and other anti-psychotics

Refer Untreated to Specialist PD Clinic (NICE Guidelines 2006)
-New referrals should be seen within 6 weeks

<60 years	>60yrs
Neurologist/ Walton Centre	Physician or Neurologist specialising in PD WUTH (Dr M O' Neill / Consultant Neurologist)

Diagnosis of PD → No

Yes

Consider Referral to Parkinson's Disease Nurse Specialist (PDNS) *for regular access to additional support and advice:*
Telephone 0151 643 5330
Fax 0151 643 5440

Referral to Therapies:-
Physiotherapy – Sharon Chapman / Sue Mansfield
Speech and Language Therapy – Beth Bell
Dietetics – Catherine Cliff
Occupational Therapy
Aids and Adaptations
Access to 'Advice & Education groups' for newly diagnosed patients via Consultant or PDNS (Nuala Browning / Rachel Gregson)

Refer on to Multi-disciplinary teams for intervention as required

Monitor for disease progression and consider additional pharmacological and non-pharmacological interventions

MAINTENANCE AND COMPLEX STAGE: PARKINSON'S DISEASE GUIDELINES

MOTOR COMPLICATIONS
Freezing/festination
End of dose deterioration
On/Off phenomenon
Dyskinesias
Dystonia
Postural Instability

PSYCHOLOGICAL COMPLICATIONS
Anxiety levels
Depression
Apathy
Panic attacks
Paranoia
Psychosis
Dementia

NON-MOTOR COMPLICATIONS
Pain
Fatigue
Dysphagia
Autonomic Dysfunction i.e.
Sexual dysfunction,
Bowel & Bladder problems
Postural Hypotension
Sleep Disorders

Consider referral for:
Physio and OT
Speech/Language therapy
Dietician
Social services
Financial Support

Referral to PDNS (new referrals should be seen within 6 weeks or 2 weeks if complex - NICE 2006)

Refer to Specialising Consultant

Regular review and monitoring of patients

USEFUL CONTACTS

PDNS (Parkinson's Disease Nurse Specialist) Wirral CT, 1st floor Civic Medical Centre, Bebington	Tel: 643 5330 Fax: 643 5301
Parkinson's Information and Support Worker (Welfare Advice)	Tel: 03442253658
Parkinson's Disease UK Helpline	Tel: 0808 800 0303
Social Services (Central Advice and Duty Team)	Tel 606 2006
Age UK Wirral	Tel: 666 2220
Citizens Advice Bureau	Tel: 0844 477 2121
Wired and Wirral Carers	Tel: 670 0777

WEBSITES: NICE Guidelines - www.nice.org.uk
Parkinson's Disease Society - www.parkinsons.org.uk

REFERENCES

National Institute for Health & Clinical Excellence (NICE) Guideline 35: Parkinson's Disease in Primary and Secondary Care June 2006

Parkinson's Aware in Primary Care. A Guide for Primary Care Teams developed by: The Primary Care Taskforce for the PDS (UK) 1000

Guideline (version 8) Written by Wirral PD Planning Group. Approved by: Medicines Clinical Guidance Team: Sept 2016. Review date: Sept 2019

Drug therapy – for specialist initiation only

1st line Levodopa
e.g. Co-beneldopa, co-careldopa

- Relief of bradykinesia, rigidity, tremor and improvement of ADLS
- Low acquisition cost
- TDS administration
- Slow titration to therapeutic dose to avoid adverse effects
- Long term: can lead to motor fluctuations and dyskinesias
- Dispersible form available Co-beneldopa – quicker onset of action and easier to swallow.

1st line Dopamine agonists
e.g. ropinirole, pramipexole

- Long acting, once daily preparations available if tablet burden problematic
- Lower incidence of long term motor fluctuations and dyskinesias
- Less effective for bradykinesia and improving ADLs
- Adverse effects: hallucinations, low blood pressure, sudden onset of sleep, confusion in older patients and possible gambling / hypersexuality or punding
- Rotigotine patch may be used for patients intolerant of or unable to take other dopamine agonists or those with prominent nocturnal /early morning symptoms. Also indicated in patients that are nil by mouth or unable to swallow where appropriate. See Wirral clinical guideline – 'Parkinson's Disease Initial Medical and Surgical Management Checklist (rotigotine conversion table)'

1st line MAOBIs. Selegiline/rasagiline

- Once daily administration
- Possible disease modifying effect
- Adverse effects: confusion, postural hypotension (especially with selegiline)
- Mild efficacy
- Interactions with SSRIs / pethidine and nasal decongestants (pseudoephedrine)

Rasagiline may be used for patients intolerant of or unable to take other MAOBI's or where compliance is a concern

1st line Anticholinergics. Trihexyphenidyl (benzhexol)

- Used in young patients where tremor predominates
- Use Benzhexol and tirtrate slowly
- Adverse effects: dry mouth, urinary retention, constipation, blurred vision, impaired cognitive function
- Rarely indicated in older patients due to risk of confusion, orphenadrine may occasionally be used

Inadequate symptom control / unable to tolerate dopamine agonist:
- Replace with/add in levodopa

Later disease with motor fluctuations

Severe dyskinesias
consider amantadine:
- Relieves moderate dyskinesias
- Rapid response
- Effects mild and unsustained
- Confusion with higher doses

- Increase frequency of levodopa
- Add dopamine agonist to levodopa, may require dosage adjustment of levodopa
- Add entacapone (COMTI) to levodopa (can use combination product - Sastravi).If intolerant of entacapone then consider tolcapone (consultant only) Modest effect in most patients
Add MAOBI - selegiline/rasagiline
- Propranolol/metoprolol reduce postural and action tremor. Consider anticholinergic if appropriate (see above)
- Apomorphine. Persistent motor fluctuations unresponsive to above measures or where adverse effects from other dopamine treatments are unacceptable.
- Use Duodopa where severely handicapped by motor fluctuations, despite above – Tertiary Centre – WCNN.

Apomorphine is used for a number of indications:

1. **For patients with persistent motor fluctuations who are still responsive to dopaminergics, who have failed to respond sufficiently to maximum recommended doses or are intolerant of, or cannot take because of contraindications, other dopaminergic agents e.g. dopamine agonists, MAOBI and COMTI; AND who are prepared to consider an injectable preparation and have the necessary support to make that possible. This will follow an apomorphine trial to establish responsiveness and minimum effective dose (in most cases).**
2. **For patients who are unable to take oral medications - usually temporarily e.g. for surgery or in ITU etc but who are dopaminergic responsive.**
3. **For patients with neuroleptic malignant syndrome.**

Prescribing Information for Non-Motor Features of Parkinson's Disease

This guidance provides information on the drug choices that will minimise interactions and adverse effects in patients already receiving treatment for Parkinson's Disease (PD) Treatment for complex PD-related problems should be initiated in secondary care.

Problem	Recommendation	Cautions
Depression.The clinical features may overlap with motor features of PD	Best choice: SSRIs, particularly sertraline (NB increased risk of serotonin syndrome with all antidepressants and selegiline & rasagiline)	Avoid: Tricylics – poorly tolerated as they can worsen cognitive problems, constipation and autonomic dysfunction
Psychosis and hallucinations. Do not treat mild psychotic symptoms if patient and carer can tolerate them	Reduce medication first where possible starting with anticholinergics then TCADs, MAOBIs, Amantadine, Dopamine agonists, COMTI, Apomorphine and finally L-Dopa. Best choice: Quetiapine (start at 25mg – usual dose 75mg) If dementia present then start at a lower dose. Where hallucinations present with dementia then consider starting acetyl-cholinesterase inhibitor rivastigmine (Consultant in Movement Disorders use only, on going prescriptions to be provided from hospital)	Avoid: Haloperidol and all other antipsychotics (quetiapine & clozapine are the safest from the PD point of view). If clozapine is needed, a Psychiatry referral is necessary.
Anxiety and panic attacks	Best choice: Psychological management. Short term tranquillisers (lorazepam) only if essential.	Avoid antipsychotics. Benzodiazepines may antagonise levodopa
Moderate dementia and Lewy body dementia	Best choice: Rivastigmine (Specialist initiation only). May improve cognition, hallucinations & delusions but tremor may deteriorate.	Avoid in patients with heart block and epilepsy. Caution with asthma, and COPD and in patients with gastric or duodenal ulcers. Nausea and vomiting can be a problem
Sleep disturbance	Take a full sleep history – there are many causes of poor sleep in PD. Provide sleep hygiene and relaxation advice. Zopiclone can be used short-term if the problem is not due to a movement disorder / dopamine replacement treatment . In REM Sleep Disorder clonazepam can be used - 500micrograms to 2mg at night.	Refer back to specialist service if PD medication may need adjusting
Daytime hypersomnolence	This is common particularly with dopamine agonists – consider reduction of this. Modafinil may be considered – this is an unlicensed indication	Avoid in moderate to severe uncontrolled hypertension and ischaemic heart disease Modafinil can cause severe rashes.
Nocturnal akinesia	Refer back to specialist service as medication may need adjusting or modified release preparations or dopamine agonists may be appropriate	
Nausea and vomiting. Side effect of PD medication (however tolerance can develop)	Best choice: Domperidone or Cyclizine Rarely, use of ondansetron is justified (not with apomorphine)	Avoid: Metoclopramide, prochlorperazine and other phenothiazines (dopamine antagonists) Caution with high dose domperidone in elderly patients as risk of prolonged QT interval. Needs ECG before initiation.
Constipation	Best choice: more fibre in diet, increase mobility and fluid intake. Then a mild laxative such as macrogol.	Avoid strong laxatives that may cause faecal incontinence but can use senna, macrogol, suppositories and enemas if needed.

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Problem	Recommendation	Caution
Gastro-oesophageal reflux	Best choice: H2 blockers and PPIs	
Dysphagia	May require investigation: refer to Speech and Language. If severe weight loss, refer to dietetics service. Levodopa helps with dysphagia so co-beneldopa dispersible could be helpful.	Dopamine agonists do not help with dysphagia. NG or PEG feeding may be required.
Falls (Very common)	Conduct a full falls assessment (NICE CG21). Consider prescribing alendronic acid with calcium and vitamin D to reduce fracture risk where appropriate.	Be particularly aware of detection of postural hypotension and consider treatment for osteoporosis
Sialorrhoea	Hyoscine patches can be used but only if patient is not confused. The PD UK suggests sucking clove sticks. Atropine 1% eye drops twice daily in the mouth can be used (unlicensed indication).	Hyoscine and atropine can exacerbate urinary retention. Causes confusion, drowsiness and dizziness.
Urinary dysfunction	Refer patients with refractory or persistent bladder problems to a urologist as a comprehensive assessment is needed. Trospium is less likely to cause anticholinergic effects of confusion .	Anticholinergics should be used with caution as they cross the blood-brain barrier .
Erectile dysfunction	Phosphodiesterase inhibitors plus lots of support and advice. This is free for patients on NHS scripts.	
Orthostatic hypotension. Side effect of levodopa/dopamine replacement medications and feature of autonomic dysfunction in condition.	Increase fluids and sodium intake. Refer back to specialist service. Prescribe fludrocortisone (salt retaining steroid). Can use support tights. Midodrine is an unlicensed medication option where fludrocortisone is not unsuccessful.	Reduce or eliminate antihypertensive medication.
Sweating and flushing attacks	May respond to propranolol, starting with 10mg tds and increasing as necessary and if tolerated	Not to be given to patients with contraindications to beta-blockers

Drugs that interact with Parkinson's medication	Iron and pyridoxine interact with Levodopa. Give at different times of day. Benzodiazepines may antagonise the effects of levodopa. A high protein diet may affect levodopa absorption.
When to refer back to the specialist service	Poorly controlled disease. Specific PD related problems Adverse effects such as dysphagia, weight loss, severe hallucinations NB: When initiating changes in PD medication, the specialist service will prescribe the first two months supply
Other points of contact for medication advice	PD specialist nurses 0151 643 5330 (Monday – Friday 9-5pm) Medicines Management Team mlcsu.medsmanagementwirral@nhs.net (Monday - Friday 9-5pm)
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Parkinson's Disease – Clinical Guideline v8	Approved by Medicines Clinical Guidance Team: Sept 2016 Review Date: Sept 2019