PHARMACOLOGICAL MANAGEMENT (CONTD)

PHARMACOLOGICAL MANAGEMENT OF MOTOR COMPLICATIONS

There are three main strategies when managing motor complications:

- manipulation of oral/topical drug therapy
- more invasive drug treatments (such as apomorphine infusion or intraduodenal levodopa)
- neurosurgery, most commonly deep brain stimulation.

A	**MAO-B inhibitors may be considered for the treatment of motor complications in patients with advanced Parkinson's disease.**
A	**Dopamine agonists** *(oral or transdermal)* **may be considered for the management of motor complications in patients with advanced Parkinson's disease. The non-ergot agonists** *(ropinirole, pramipexole, and rotigotine)* **are preferable to the ergot agonists.**
A	**Intermittent subcutaneous apomorphine may be considered for the reduction in 'off' time in patients with advanced Parkinson's disease.**
D	**Subcutaneous apomorphine infusions may be considered for the management of severe motor complications, but should only be provided in units with sufficient experience and resources.**
A	**Catechol-o-methyl transferase inhibitors may be considered for the reduction in 'off' time in patients with advanced Parkinson's disease who have motor fluctuations.**
☑	Patients who have impaired quality of life due to motor fluctuations, and who are not responding to alterations in their oral medication should be considered for their suitability for other therapies, such as apomorphine, intraduodenal levodopa, or surgery.

MANAGEMENT OF DAYTIME SLEEPINESS

☑	Management of excessive daytime sleepiness should centre on finding a reversible cause such as depression, poor sleep hygiene, and drugs associated with altered sleep pattern.
A	**Modafinil and melatonin are not recommended for the management of excessive daytime sleepiness associated with Parkinson's disease.**

ORAL SUPPLEMENTS

A	**Tocopherol is not recommended for neuroprotection in patients with early Parkinson's disease.**

GAIT DISORDERS

B	**Injection of botulinum toxin into the calf muscles of people with Parkinson's disease who have significant gait freezing is not recommended.**

PHARMACOLOGICAL TREATMENT OF MENTAL HEALTH DISORDERS

☑	In patients with Parkinson's disease and cognitive impairment treatable causes of dementia should be investigated and, if present, treated.
☑	The exclusion of any other non-parkinsonian drugs which act on the central nervous system, withdrawal of anticholinergic medication, amantadine, selegiline and dopamine agonists should be considered.
☑	Before considering use of antipsychotic medications, other treatable causes of psychosis should be excluded.
A	**Patients with psychosis in Parkinson's disease should be considered for treatment with low-dose clozapine and undergo weekly monitoring for the first 18 weeks of treatment followed by fortnightly monitoring for the first year and then monthly thereafter.**
B	**Where weekly monitoring of blood is not possible on a consistent basis, low-dose quetiapine should be considered as an alternative antipsychotic for the treatment of patients with psychosis in Parkinson's disease.**

SOURCES OF FURTHER INFORMATION

Carers Scotland
The Cottage, 21 Pearce Street,
Glasgow G51 3UT
Phone: 0141 445 3070
Website: www.carerscotland.org
E-mail: info@carerscotland.org

National Tremor Foundation
Harold Wood Hospital, Gubbins Lane.
Romford, Essex RM3 0BE
Tel: (freephone) 0800 3288046 • Tel: 01708 386 399
Website: www.tremor.org.uk

NHS 24
Tel: 08454 24 24 24
Website: nhs24.com

Parkinson's Disease Society (Scottish Office)
Forsyth House, Lomond Court,
Castle Business Park
Stirling FK9 4TU
Tel: 01786 433811 • Helpline: 0808 800 0303
E-mail: pds.scotland@parkinsons.org.uk
Website: www.parkinsons.org.uk/scotland

Younger Parkinson's Network
Tel: 01656 663 284
E-mail: alunmorgan@btinternet.com
Website: www.yap-web.net

SIGN
Scottish Intercollegiate Guidelines Network
Part of NHS Quality Improvement Scotland

NHS Quality Improvement Scotland

113 Diagnosis and pharmacological management of Parkinson's disease

Quick Reference Guide

January 2010

DIAGNOSIS

The diagnosis of Parkinson's disease depends on the presence of a specific set of symptoms and signs (bradykinesia plus one of the following, rigidity, rest tremor or postural instability), the absence of atypical features, a slowly progressive course, and a response to drug therapy.

CLINICAL DIAGNOSIS COMPARED WITH PATHOLOGICAL CONFIRMATION

C	**Clinicians should be aware of the poor specificity of a clinical diagnosis of Parkinson's disease in the early stages of the disease, and consider this uncertainty when giving information to the patient and when planning management.**
☑	Patients should be offered long term, regular follow up to review the diagnosis of Parkinson's disease. This should include a review of the ongoing benefits in those started on dopamine replacement therapy.
D	**Formal research criteria should not be used in isolation for diagnosing Parkinson's disease in a clinical setting but clinicians should take them into account when making a clinical diagnosis.**

WHO SHOULD MAKE THE DIAGNOSIS?

A GP with an average list size of about 1,500 will see only one new case of PD every 3.3 years which makes it difficult to develop and maintain expertise.

C	**Patients with suspected Parkinson's disease should be referred untreated to a hospital clinician with sufficient expertise in movement disorders to make the diagnosis.**

DIAGNOSING DEPRESSION

C	▪ **Self-rating or clinician-rated scales may be used to screen for depression in patients with Parkinson's disease.** ▪ **When clinician-rated assessment is possible, the Hamilton Depression Rating Scale or the Montgomery-Asberg Depression Rating Scale should be used to establish the severity of depressive symptoms.**
☑	Diagnosis of depression should not be made on the basis of rating scale score alone.
☑	Relatives or carers who know the patient well should be invited to provide supplementary information to assist the diagnosis, particularly in the context of cognitive impairment.

DIAGNOSTIC TOOLS

	RECOMMENDED TOOLS	INDICATION
B	**^{123}I-FP-CIT SPECT**	Where there is uncertainty between Parkinson's disease and non-degenerative parkinsonism/tremor disorders.
D	**CT or MRI**	To identify the presence of a structural lesion or lesions which may cause or contribute to parkinsonism/gait disorder/tremor.
D	**MRI**	To identify: ▪ the degree and extent of cerebrovascular disease to differentiate idiopathic Parkinson's disease from vascular parkinsonism ▪ the degree and distribution of brain atrophy, in patients with features suggesting a Parkinson's plus disorder
	TOOLS WHICH ARE *NOT* RECOMMENDED	
C	**Routine structural imaging**	Diagnosis of idiopathic Parkinson's disease.
D	**Routine functional imaging**	Differential diagnosis of Parkinson's disease and Parkinson's plus disorders
☑	**PET scanning**	The diagnostic work-up of parkinsonian syndromes.
C	**Transcranial ultrasound**	Differential diagnosis of Parkinson's disease and associated conditions
A	**Olfactory testing**	Diagnosis of Parkinson's disease

ACUTE DOPAMINERGIC TESTING AND CHRONIC LEVODOPA RESPONSE

A	▪ **Acute challenge testing is not recommended in the diagnosis of Parkinson's disease.** ▪ **Patients with suspected Parkinson's disease should be considered for a trial of chronic levodopa treatment.**
☑	Levodopa, as part of a challenge test, should be titrated slowly with clinical monitoring, until patients respond, become intolerant, or achieve a daily dose of 1,000 mg/day without response.

PHARMACOLOGICAL MANAGEMENT

DRUG EFFICACY IN EARLY DISEASE

Levodopa

A	**Patients with early Parkinson's disease and motor symptoms may be considered for treatment with levodopa in combination with a dopa decarboxylase inhibitor.**
☑	The lowest effective dose of levodopa should be used to minimise the incidence of adverse effects.
☑	Surveillance for dopamine dysregulation syndrome should be undertaken in patients receiving levodopa or intermittent apomorphine.

Dopamine agonists

A	**Patients with early Parkinson's disease and motor symptoms may be considered for treatment with oral/transdermal dopamine agonists.**
B	**Ergot derived dopamine agonists should not be used as first line treatment for Parkinson's disease.**
☑	When an ergot derived dopamine agonist is used patients should undergo: ▪ baseline echocardiographic screening and regular follow up scans to identify cardiac abnormalities ▪ baseline laboratory and radiological investigations with regular follow up surveillance to identify serosal fibrosis.
A	**Patients should be warned about the potential for dopamine agonists to cause impulse control disorders and excessive daytime somnolence and be informed of the implications for driving/operating machinery.**

Monoamine oxidase B inhibitors

A	**Patients with early Parkinson's disease and motor symptoms may be considered for treatment with monoamine oxidase B inhibitors.**

Anticholinergics

B	**Anticholinergic drugs should not be used as first line treatment in patients with Parkinson's disease.**

TRIGGERS FOR INITIATING ADJUNCTIVE THERAPY

☑	The decision to add levodopa to non-levodopa monotherapy should be taken on an individual basis, taking into account the patient's overall level of symptoms, both motor and non-motor, and the risk of adverse effects. An informed discussion with the patient is essential and with the carer and Parkinson's disease specialist nurse with experience of managing the patient is desirable.

This Quick Reference Guide provides a summary of the main recommendations in **SIGN guideline 113: Diagnosis and pharmacological management of Parkinson's disease.** Recommendations are graded **A B C D** to indicate the strength of the supporting evidence. Good practice points ☑ are provided where the guideline development group wishes to highlight specific aspects of accepted clinical practice. Details of the evidence supporting these recommendations can be found in the full guideline, available on the SIGN website: **www.sign.ac.uk**