GUIDELINES FOR THE MANAGEMENT OF PATIENTS WITH PARKINSON’S DISEASE ADMITTED ACUTEELY

Amendments

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<th>Date</th>
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<th>Comments</th>
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<td>Nov 2014</td>
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Compiled by: Dr Rachel Davies

In Consultation with: Dr Z Dhakam, Dr R Nari, S Chaudhry (Pharmacist), K Reygate (Pharmacist)

Ratified by: Clinical Governance Committee

Date Ratified: April 2011

Date Issued: November 2014

Review Date: November 2017

Target Audience: All Clinical Staff

Impact Assessment Carried Out By: Rachel Davies

Comments on this document to: Dr Zahid Dhakam (Consultant Physician)

Dr R Davies (SpR Geriatric medicine)
INTRODUCTION:
Parkinson’s disease is a complex neurodegenerative disease which in view of the ageing population is becoming more prevalent. It is a multi-system disease and is associated with significant morbidity and can be challenging to manage appropriately. These guidelines are aimed predominantly at junior doctors to help guide the management, particularly with regards to medication, of patients with Parkinson’s disease when they are admitted acutely to hospital.

PURPOSE:
The purpose of these guidelines is to enable junior doctors to manage patients with Parkinson’s disease when they are admitted acutely (either under the medical or surgical teams) and to guide them how to seek appropriate help. The aim of this being to provide a better service for these patients, ideally reduced their inpatient stay and reduce morbidity.

Recent publications in leading medical journals have highlighted issues in the management of patients with Parkinson’s disease which results in increased morbidity, mortality and length of stay.

DUTIES AND RESPONSIBILITIES:
These guidelines will be available for use by junior doctors and other clinical staff on the Trust intranet and are a guide only for patient management. Each patient should as always be treated individually. Relevant senior help should be sought for any other / more complex queries.

DISSEMINATION AND IMPLEMENTATION:
These guidelines will be disseminated to the junior medical staff via presentations at Grand Round meetings and will be available on the Trust intranet

EQUALITY IMPACT ASSESSMENT:
See attached sheet (Appendix 1)

MONITORING OF COMPLIANCE:
The aim will be to undertake a survey of how useful junior doctors find the guidelines and will be incorporated into a larger audit that is currently underway looking at length of stay of Parkinson’s patients.

ARCHIVING ARRANGEMENTS
This is a Trust-wide document and archiving arrangements are managed by the Quality Department, who can be contacted to request master/archived copies.
COMMON CAUSES FOR THE EMERGENCY ADMISSION IN PATIENTS WITH PARKINSON’S DISEASE (PD) [1,2,3,]:
1. Falls/ fractures/ trauma
2. Pneumonia
3. Dysphagia (+/- aspiration pneumonia)
4. Constipation / abdominal pain
5. UTI
6. Reduced mobility (often due to missed drugs)
7. Cardiovascular emergencies and Stroke
8. GI emergencies
9. Electrolyte disturbances
10. Dementia / psychiatric problems

Some of these reasons are unrelated to Parkinson's disease.
Studies have shown that people with Parkinson's disease tend to have an increased length of hospital stay [3].

THINGS TO LOOK OUT FOR:
1. Constipation
2. Rigidity; on-off fluctuations
3. Memory impairment
4. Hallucinations
5. Depression
6. Sleep disorders
7. Postural instability / hypotension
8. Dyskinesia
9. Falls risk

OTHER IMPORTANT ISSUES:
- Impaired enteral drug absorption (i.e.: bowel obstruction, ileus…)
- Don’t give patients with PD Metoclopramide, Haloperidol or Prochlorperazine (Stemetil) – these exacerbate the symptoms of Parkinson’s disease
MEDICINE MANAGEMENT:

Ensure medications are given from the time of admission:
This is extremely important to ensure there are no complications from omission of medications.

The consequences of missing a PD medication dose vary enormously from person to person. Some people can tolerate a missed dose with no consequences, others become immobile.

Occasionally, missing doses can precipitate Neuroleptic Malignant-like Syndrome (associated with fever, confusion, raised CK and can cause death). Occurs especially in those with severe PD.

Ensure medications are given at the time the patient takes them at home:
The regimen will have been finely titrated to suit the patients and any change will lead to an exacerbation of their PD symptoms.

Patients with Parkinson’s disease are higher risk surgical candidates:
Higher risk of aspiration pneumonia, post-operative respiratory failure and post-extubation laryngospasm

Exacerbation of PD symptoms can be problematic during surgery

Consider putting patients with PD at the start of the list to allow more predictability over the fasting time and surgery and allowing early post-operative management

SEEK ASSISTANCE FROM PHARMACY OR PARKINSON’S SPECIALIST WHEN CHANGING DRUGS

ALWAYS MONITOR PATIENT WHEN CHANGING DRUGS AS MAY NEED TO TITRATE DOSES ACCORDING TO THE RESPONSE
WHAT TO DO IF THE PATIENT IS NIL BY MOUTH BUT CAN HAVE ENTERAL MEDICATIONS:

Always liaise with pharmacy to check alterations to medications.

1. Insert NG tube (please note, main site of absorption for Levodopa is the jejunum. As such if NJ tube is inserted higher doses may be required).
2. Standard release preparations of Sinemet disperse in water in 1-5 minutes. Please give immediately as drug is unstable in water. Alternatively, Sinemet (Co-Careldopa) or Madopar (Co-Beneldopa) tablets can also be converted to dispersible Madopar tablets:

<table>
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<tr>
<th>Sinemet (Co-Careldopa)</th>
<th>Madopar (Co-Beneldopa)</th>
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<tbody>
<tr>
<td>Sinemet 62.5mg tablets</td>
<td>Madopar 62.5mg dispersible tablets</td>
</tr>
<tr>
<td>Sinemet 110mg tablets</td>
<td>Madopar 125mg dispersible tablets</td>
</tr>
<tr>
<td>Sinemet 125mg tablets</td>
<td>Madopar 125mg dispersible tablets</td>
</tr>
<tr>
<td>Sinemet 275mg tablets</td>
<td>2 x Madopar 125mg dispersible tablets</td>
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<tr>
<td>Half Sinemet CR 125mg tablets</td>
<td>Madopar 125mg dispersible tablets. Use equivalent dose and titrate upwards to control symptoms. *</td>
</tr>
<tr>
<td>Sinemet Cr 250mg tablets</td>
<td>2 x Madopar 125mg dispersible tablets. Use equivalent dose and titrate upwards to control symptoms. *</td>
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- "When switching from controlled release levodopa to dispersible Madopar a dose reduction of about 30% is suggested [4].
- In general, dispersible tablets may need to be given more frequently.

3. Entacapone (Comtess) tablets dispersed in water in 1-5 minutes. Enteral tube needs to be flushed well after use as drug does not completely dissolve.
4. Selegiline liquid is available (10mg/5ml). Alternatively tablets disperse in water.
5. Amantadine liquid / syrup formulation is available (50mg/5ml).
6. Cabergoline – tablets can be crushed and mixed in water.
WHAT TO DO IF THE PATIENT IS NIL BY MOUTH AND CAN NOT HAVE ENTERAL MEDICATIONS:

1. Change to a rotigotine patch and titrate as per response – prescribe a lower than equivalent dose but review early (see figure 1).

2. Apomorphine can be used as a subcutaneous infusion – always seek guidance if considering using (has significant side effects including nausea). To use this drug the patient needs to be pre-treated with domperidone for about 48 hours and their usual PD drugs need to be stopped for about 3 days therefore it is not ideal to use in the acute setting.

SEEK ASSISTANCE FROM PHARMACY OR PARKINSON’S SPECIALIST WHEN CHANGING DRUGS

ALWAYS MONITOR PATIENT WHEN CHANGING DRUGS AS MAY NEED TO TITRATE DOSES ACCORDING TO THE RESPONSE

The lead for Parkinson’s disease at St Peter’s Hospital is Dr Dhakam.
Figure 1:
Algorithm for estimating parenteral doses of drugs for Parkinson’s disease [4]
(Abbreviations: COMT - Catechol-O-Methyl Transferase; LD – Levodopa; LEF – Levodopa equivalent factor; LEDD – Equivalent total levodopa dose)

REFERENCES:

APPENDICES:
1. Equality Impact Assessment Summary
2. Ratification procedure
APPENDIX 1

Equality Impact Assessment Summary
Name: Dr Rachel Davies
Policy/Service: GUIDELINES FOR THE MANAGEMENT OF PATIENTS WITH PARKINSON’S DISEASE ADMITTED ACUTELY

<table>
<thead>
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<th>Background</th>
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<tr>
<td>• Description of the aims of the policy</td>
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<td>• Context in which the policy operates</td>
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<td>• Who was involved in the Equality Impact Assessment</td>
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These guidelines are aimed at predominantly junior doctors to help manage patients with Parkinson’s disease when admitted acutely to hospital and aim to also provide a degree of education regarding Parkinson’s disease.

The aim is to have these guidelines available for clinical staff to access at any time on the intranet but they are guidance rather than a policy. Each patient should still be treated / managed on an individual basis and senior / other advice should be sought when appropriate.

This impact assessment has been carried out by me with involvement from the Consultant lead in Parkinson’s disease.

<table>
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<th>Methodology</th>
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<td>• A brief account of how the likely effects of the policy was assessed (to include race and ethnic origin, disability, gender, culture, religion or belief, sexual orientation, age)</td>
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<tr>
<td>• The data sources and any other information used</td>
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<tr>
<td>• The consultation that was carried out (who, why and how?)</td>
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These guidelines are not discriminatory in any way but are for patients with Parkinson’s disease irrelevant of race / gender / belief etc.

The data sources are from medical journals and books (see references).

Consultation was carried out with specialist pharmacists and the medical consultants who specialise in Parkinson’s disease (Dr Z Dhakam and Dr R Nari).

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<th>Key Findings</th>
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<td>• Describe the results of the assessment</td>
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<td>• Identify if there is adverse or a potentially adverse impacts for any equalities groups</td>
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I do not feel that these guidelines have any discriminatory factors or potentially adverse outcomes for any equalities groups.
**Conclusion**
- Provide a summary of the overall conclusions

These guidelines are aimed at supplying otherwise not freely available information to junior doctors and other clinical staff to help in the management of a complex group of patients with Parkinson’s disease. They are not likely to have any adverse outcomes for equalities groups and are not discriminatory. They have been reviewed and approved by the relevant clinical staff.

**Recommendations**
- State recommended changes to the proposed policy as a result of the impact assessment
- Where it has not been possible to amend the policy, provide the detail of any actions that have been identified
- Describe the plans for reviewing the assessment

No obvious adverse impacts identified. This could be reviewed after 6 months of implementation of these guidelines.