EMERGENCY MANAGEMENT OF PATIENTS WITH PARKINSON'S

PARKINSON'S UK CHANGE ATTITUDES. FIND A CURE. JOIN US.

DON'T STOP PARKINSON'S MEDICATION

Missing doses increases care needs and can cause serious complications, including rare but potentially fatal neuroleptic-like malignant syndrome.

- Keep same dose, preparation and brand or generic. Ask patient/carers for prescribed times. Doses may not coincide with drug round.
- Check prescribed drugs with clinic letter/dispensing list for correct delivery. Patients with confusion/ delirium may be taking them wrongly. Consult with community pharmacist if unsure.
- Write up first dose as stat prescription.
- Support continued self-administration of usable medication.
- Use emergency drug cupboard or contact on-call pharmacist to ensure enough medication.

- Only adjust prescribed medication routine with Parkinson's specialist (if in the patient's best interest. See below).
- Consider timing of operations and therapy sessions to enable maintenance of medication.
- If it's elective surgery, consider post operative requirements. Eg if the patient can't swallow, consider delivery of Parkinson's medication.

Emergency observations if Parkinson's drugs are missed

- Increased tremor (note baseline).
- Temperature and respiratory rate.
- Blood pressure.
- Dipstick urine.
- Mental test score (eg AMT, MMSE).
- Swallowing assessment.
- Check Creatine Kinase Blood Test if doses are missed/might have been.

NBM status with surgery

Post-operatively, patients may be NBM.

- Patients can take oral medication with clear fluids up to two hours before elective surgery. So, put patients at the start of operating lists to optimise medication. Prepare in pre-op clinic.
- Confirm timing of surgery with all anaesthetists. Regional anaesthesia (compared to general) allows continuation of usual medication.

Can't take oral medication? Treat underlying issue

Swallowing difficulties (refer to SaLT for urgent assessment and advice).

- Consider posture for effective swallow (ie sitting upright with chin neutral).
- Consider placing tablets one at a time on teaspoon with soft foods/ thickened fluids (eg yoghurt – if bitter use sweetened foods/fluids).

- **Never** crush/split modified release preparations (CR, MR, XL or PR).
- Only break other tablets if scored.
- Consider dispersible or liquid versions of drug preparations and levodopa dose equivalents.

Nausea/vomiting

- **Avoid** metoclopramide (Maxalon) and prochlorperazine (Stemetil) (can worsen Parkinson's symptoms).
- Consider oral/PR domperidone (Motilium).
- Note cyclizine and ondansetron can also be used post-operatively.

Altered level of consciousness/ confusion/agitation/hallucinations

- Check history of cognitive impairment. **Think delirium** and check it at **www.the4at.com**
- Check for underlying cause (eg infection, dehydration, constipation), and treat accordingly.

- **Avoid** haloperidol (Serenace/Haldol) and chlorpromazine (Largactil) and other anti-psychotics (can worsen Parkinson's symptoms). If needed, consider a benzodiazepine.

If patient still can't take next prescribed oral dose, consider:

Administration via NG/NJ/PEG tube

- Assess for any contraindications.
- Insert as per local protocol.

Administration via rotigotine patches (if unable to tolerate NG/NJ/PEG tube)

- Tell Parkinson's specialist as priority.
- Assess rotigotine is appropriate as it could be contraindicated in delirium.

Preparing Parkinson's medication for NG/NJ/PEG tube use

- **Priority** is short-term management of Parkinson's with dopaminergic medication (Levodopa, Madopar/Sinemet).

- Consult specialist about long-term, non-oral administration of medications.
- For medication given in liquid form, flush tube afterwards to ensure complete administration and to prevent blockages.
- Return to usual medication routine as soon as clinically possible.

Equivalent doses of Parkinson's medication

To work out doses for your patient see Parkinson's drug calculator **www.pdmedcalc.co.uk**

Levodopa (main absorption site is the jejunum – NG recommended)

Co-beneldopa (Madopar)
Use dispersible versions.

For CR doses, because of reduced bioavailability, convert to dispersible equivalent. Monitor as dose frequency may need altering.

Co-careldopa (Sinemet/ Lecado/Caramet)
Use dispersible co-beneldopa (using equivalent dosage of levodopa).
For CR doses, use co-beneldopa dispersible equivalent.
Regularly assess: tremor/stiffness/ discomfort/cognitive state.

Co-careldopa and entacapone (Stalevo, Sastravi, Stanek)
Refer to drug calculator for all equivalents.

Entacapone not licensed for use in enteral feeding systems – can be safely omitted temporarily (see MAO-B/COMT inhibitors).

Dopamine agonists

Pramipexole (Mirapexin)
Ropinirole (Requip)
Use if not contraindicated in delirium.
Not licensed in enteral feeding systems. So, consider rotigotine patches as substitute.

MAO-B/Comt Inhibitors

Selegiline (Eldepryl/Zelapar)
Use Eldepryl (as available in liquid form) – for NJ tubes, dilute with equal volume of water just before use.

Rasagiline (Azilect)
Safinamide (Xadago)
Selegiline (Eldepryl and Zelapar)
Opicapone (Ongentys)
Tolcapone (Tasmar)
Entacapone (Comtess)
Not licensed for use in enteral feeding systems – can usually be safely omitted temporarily. Observe symptoms regularly – report changes.

Glutamate Antagonist

Amantadine
Use liquid version.

Anticholinergics

Procyclidine (kemadrin)
Trihexyphenidyl (benzhexol)

Estimating equivalent levodopa dosages for rotigotine patches

(Use www.pdmedcalc.co.uk)

- Round to nearest 2mg (to max of 16mg) and prescribe as 24-hour patch.
- **DO NOT** cut patches – available as 2mg/4mg/6mg/8mg patches (can use more than one patch).

Treat each patient individually.

- If there's increased stiffness/ slowness, increase their dose and review daily.
- If increased confusion/hallucinations are observed, decrease dose and review daily.
- If adjusted LEDD >350mg, use rotigotine 16mg and consult with specialist regarding administration of apomorphine.

Is the patient taking apomorphine (APO-go), duodopa infusion or using deep brain stimulation (DBS)?

Apomorphine (APO-go)

- A dopamine agonist administrated via an intermittent sub-cut injection or a pump. It's not morphine-based or an analgesic. Not a controlled drug.
- Apomorphine routines need to be continued at the prescribed dose and frequency (injection) or rate (pump) – **do not change the pump settings** unless requested to.
- For support APO–go Helpline **0844 880 1327** or contact specialist (eg Parkinson's nurse 24/7).

Duodopa infusion

- Patients on a Duodopa routine need to be continued at the prescribed rate (providing gastric emptying isn't delayed and PEJ tube is patent). If not, discontinue and start on rotigotine patches.
- Start emergency oral drugs. All patients will have a prescription.
- Patients should have an emergency drug list with oral levodopa dosage.

Deep brain stimulation (DBS)

- Patients on DBS need to be maintained on their routine.
- Patients should have an ID card with model number and contact deatils.
- Oral drug list should be available if DBS fails so patient can revert back.

Complications of Parkinson's

- Delirium (acute confusion due to drugs or infection).
- Chest infection, especially aspiration pneumonia.
- Urinary tract infections.
- Postural hypotension and falls – check meds and BP lying/sitting then standing.
- Constipation. Search for underlying cause manage promptly and appropriately.
- Neuroleptic-like malignant syndrome if does of Parkinson's medication are missed.

If in doubt contact your pharmacist 24/7. (Several hospitals have specialist Parkinson's pharmacist).

For references used in this leaflet, email **infocontent@parkinsons.org.uk**

The UK Parkinson's Excellence Network is the driving force for improving Parkinson's care, connecting and equipping professionals to provide the services people affected by the condition want to see.

This is your Network. Get involved at
parkinsons.org.uk/excellencenetwork

Order code PK0135.
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