

BACKGROUND

Parkinson's Disease (PD) is a neurodegenerative disease that is caused by loss of dopamine cells within the brain. Symptomatic treatment, focused on replacing dopamine, is crucial in optimising patient outcomes and quality of life. These guidelines have been developed to assist healthcare professionals caring for PD patients who are deemed Nil Per Oral (NPO) or present with a swallow impairment in the emergency department or throughout their admission stay. Levodopa is the main medication used for people with Parkinson's Disease. There are three levodopa medications that can be used; these include: **Co-careldopa (Sinemet), Co-beneldopa (Madopar) and levodopa, carbidopa and Entacapone (Sastravi/Stalevo).**

Withholding PD medication or a prolonged delay in administering PD medication can lead to an increase in care needs and increases the risk of neuroleptic malignant type syndromes, which can be fatal.

WARNING: If medications are missed or delayed the patient may have speech difficulties, delirium, increased risk in falls, reduced mobility, stiffness/ rigidity and impaired swallow.

ADMISSION

On admission, the prescriber should:

- Obtain a correct drug history (GP, community pharmacy, patient's own medication).
- Chart medication correctly ensuring Right Dose/Right Form i.e. immediate release/ controlled release and correct time. The Key issue with PD medication is timing. It is crucial that correct times are circled on the drug kardex in accordance with the patient's pre admission medication regime. **DO NOT change the Timing of PD Medications to suit the hospital drug round.**
- Place the Get it ON Time Sticker to the Drug Kardex and complete the PD clock keeping it at the patient's bedside.
- Never withhold PD medication without firstly discussing with Neurology or Geriatric Medicine.
- Contact the PD CNS on 20925 or through the switchboard if there are queries.

MANAGING PD MEDICATIONS IF PATIENT "NPO" or DIFFICULTY SWALLOWING

The doctor, nurse and pharmacist involved in the patient's care should review medications immediately and consider the below points.

- Send an urgent SLT referral.
- If the patient is deemed safe to take modified fluids, use dispersible PD medication such as Madopar.
- If deemed unsafe for modified fluids, the recommended approach is Naso-Gastric Tube (NGT) placement with PD medication switched to dispersible form (i.e. Madopar).
- If an NGT placement is contraindicated or inappropriate (e.g. palliative care settings), consider a Rotigotine patch. This is a Dopamine Agonist and careful consideration needs to be given before prescribing. While this option may seem easier, it is less effective than dispersible Levodopa via

NGT. Out of hours seek guidance from neurology on call. Consult with the pharmacist for advice on switching preparations. Caution needs to be taken if starting a patch in older people or if a cognitive impairment is noted (risk of provoking or exacerbating delirium).

- Please note there is a PD medication press in the Emergency Department. If there are any issues obtaining PD medications out of hours contact the Emergency department.

**Side effects of Dopamine agonists (DA) can be problematic and include:
Hallucinations, confusion and obsessive-compulsive disorders**

- Lower doses should be considered if commencing a dopamine agonist in older people.
- The following link is to assist with the conversion of medications to dispersible form for administration via Naso-Gastric Tubes or for people commencing on a Dopamine agonist patch <http://www.parkinsonscalculator.com/>. Please note this calculator will provide two doses the lower dose is for people with dementia or delirium to try and avoid the side effects noted above. Please commence on the lower dose for all patients if in doubt or any dis-improvement please contact neurology consults the next morning to discuss over the phone. Review the patient daily to clinically judge the patient's response to the medication and to identify if changes to dose need to be made. See QR Code on **Appendix 1**.
- Medications that can safely be omitted for a short period of time include: Entacapone, Selegiline, Rasagiline and Amantadine. Link in with Neurology or Geriatricians for advice if holding these medications.

Patients should be put back on their original medication regime as soon as it is achievable.

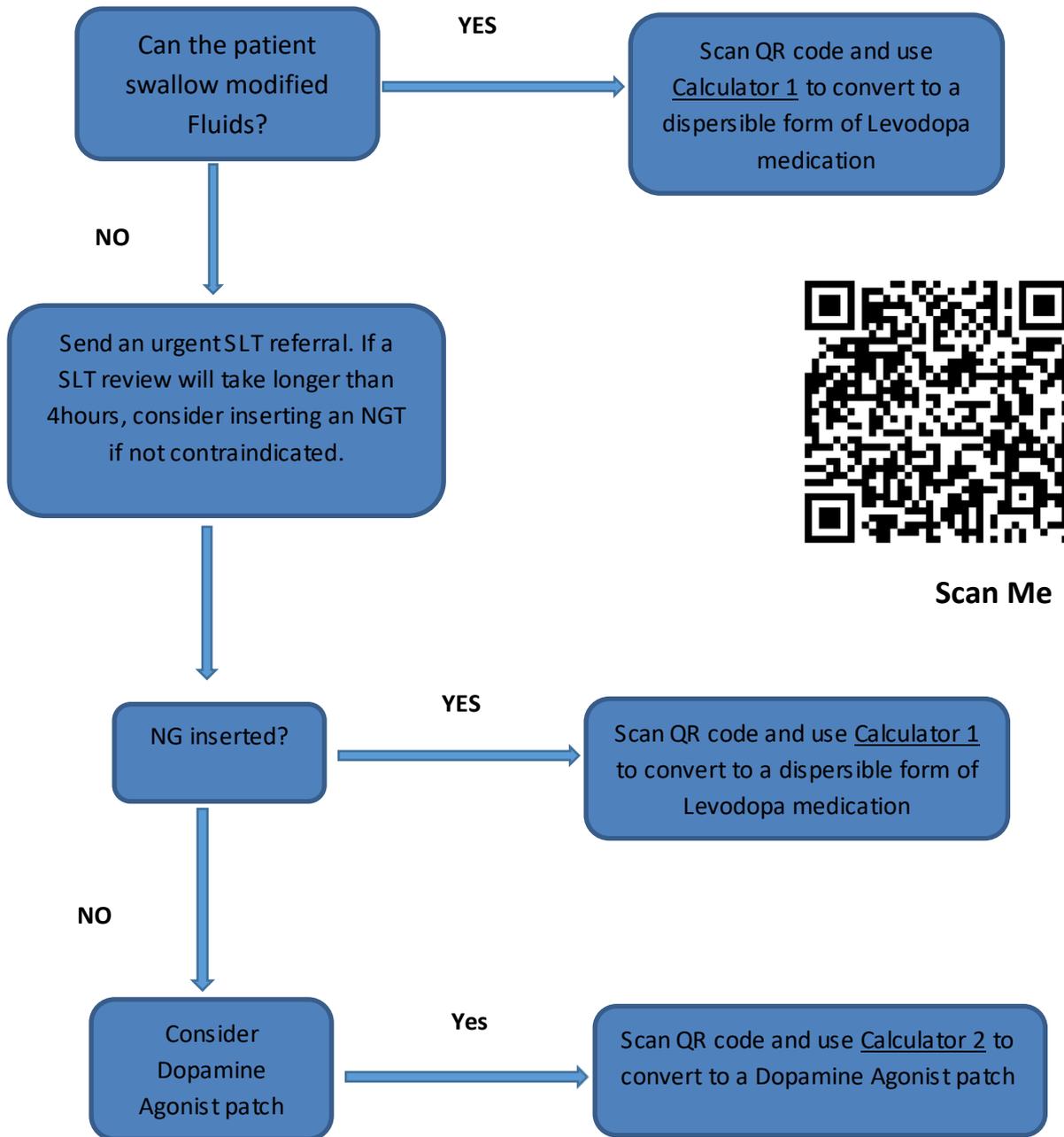
MANAGEMENT OF DEVICE-ASSISTED THERAPIES DURING ADMISSION

When a patient is using an apomorphine infusion, Duodopa pump or Lecigon infusion continue as normal they do not need to be switched to a dopamine agonist patch. See **Appendix 2** for further information on device assisted therapy.

BOWEL MOVEMENT

- Commence a bowel chart for every PD patient.
- Aim for a bowel movement every day.
- Chart laxatives prn or regular pending on the individual.
- Preferred laxatives include, Senna, Movicol or lactulose if not diabetic.
- If in doubt order a PFA.

Appendix 1: FLOW CHART for Parkinsons Patients who are admitted with a Compromised Swallow or Nil Per Oral



Scan Me

If considering a Dopamine Agonist patch great caution needs to be given. Troublesome side effects are associated with this type of medication they include: Increased confusion, hallucinations, nausea/vomiting, hypotension, skin reaction obsessive compulsive disorders. If patients have a history of delirium/dementia remember to start at a lower dose and go slow with titrations. Seek guidance from Neurology or Geriatric Medicine early. Maximum dose of the Rotigotine patch is 16mg/24hrs, doses come in 2mg/4mg/6mg/8mg. The patches cannot be cut to make the desired dose. Patients should be put back on their original medication regime as soon as it is achievable.

Appendix 2: MANAGEMENT OF DEVICE-ASSISTED THERAPIES DURING ADMISSION

| DUODOPA PUMP | APO-GO PUMP | LECIGON PUMP |
|---|---|--|
| Cassette contains a gel made up of Carbidopa and Levodopa | Pump contains Apomorphine Despite the name, apomorphine does not contain morphine. | Pump contains Levodopa/Carbidopa/Entacapone |
| Administered via a Peg-J tube The Peg-J is only for the infusion it is NOT for feeding or for giving dispersible medications. | Administered via a subcutaneous infusion via a butterfly needle | Administered via a Peg-J tube The Peg-J is only for the infusion it is NOT for feeding or for giving dispersible medications. |
| Continue this medication as usual while an in-patient | | |
| All patients and their families are educated on using these devices | | |
| Staff should NOT use the pump unless they have been trained to use the device Contact the PD CNS on 20925 or through the switchboard if there are any queries | | |
| Duodopa nurse contact details: • 1800 945 024 | Apo-Go nurse contact details: • 086 38542649 | Lecigon nurse contact details: • 01 4276028 • lecigonurse@tcp.ie |
| Available to visit site to provide staff education | Available to visit site and provide staff education | Available to visit site and provide staff education |

Reference List

<https://www.parkinsons.org.uk/professionals/resources/nil-mouth-medication-dose-calculators-and-guidelines>

https://www.parkinsons.org.uk/sites/default/files/2020-02/PK0135_Emergency%20management%20of%20patients%20with%20Parkinson%27s_FINAL_WEB_2019.pdf

<https://www.nice.org.uk/guidance/ng71/chapter/Recommendations#pharmacological-management-of-motor-symptoms>