PARKINSON'S ON THE ACUTE TAKE

Dr Sally A Jones

Consultant Physician and Geriatrician with special interest in Parkinson's

Ysbyty Gwynedd, BCUHB

@sallyjones1976

DECLARATION – DR SALLY JONES

I have no financial interests or relationships to disclose with regard to the subject matter of this presentation.

OVERVIEW

- Common PD problems on the acute take
- Including…
  - Some cases
  - A little bit about drugs
  - But mostly, practical tips for the generalist
- Three Golden Rules….even if you forget everything else!

PARKINSON'S ON THE ACUTE TAKE

- Presentation may be directly due to Parkinson's
  - Falls and postural hypotension
  - Aspiration pneumonia
- More commonly, patients present with something else but the Parkinson's makes it more complicated
  - Pre-existing autonomic instability…and now they're shocked/septic…
  - Pre-existing mobility difficulties make rehabilitation/recovery more difficult
  - Pre-existing cognitive impairment increases vulnerability to delirium
  - Iatrogenic medication delays/errors in acute hospital
  - What do we do if they're nil by mouth or we're worried about swallow?

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  - What do we do if they're **nil by mouth** or we're **worried about swallow**?

PD MEDICATION DELAYS AND OTHER ERRORS

CASE 1

- Elderly patient with Parkinson's, living independently
- Attended ED after a fall downstairs
- Peg #
- In ED for 15 hours, then transferred to T&O
- At 36 hours – urgent call to PD team
  - Patient had not had any PD meds since arrival to hospital
  - No longer able to speak, swallow or move
  - Rescanned – no change in neck/head
  - Neurological change was PD related
  - Subsequently died

CASE 2

- 70 yr old lady with Parkinson's disease
- Attended ED after a fall – no injuries
- Mobile, bright and chatty, but febrile with cough so referred medics
- 11 hours in ED – wasn't given any PD medication:
  - Wasn't prescribed any PD medication by ED team
  - Medics clerked in ED at 7 hours and prescribed – still wasn't given
- On arrival AMU:
  - "unsafe to eat", "rousable to voice only", "unable to swallow meds"
- Needed NG tube for medication
- 10 day length of stay
- Big complaint

CASE 3

- 70 yr old lady with Parkinson's disease
- Seen in PD clinic 4 weeks before admission – living alone, independent, learning to drive.
- Admitted after being found on floor at home – long lie
- Rigid, mute, unable to swallow
- AMU diagnosis - "advanced Parkinson's" – plan for palliation
- Family shocked and phoned PD consultant
- Further history:
  - Tooth extraction several days earlier – sore mouth, so difficult to eat
  - Missed PD medication during long lie
  - Missed PD medication in AMU - "now palliative"
- NG tube inserted and usual PD medication given
- Slow recovery, though never returned to baseline – discharged to RH

CASE 4

- Man with Parkinson's & PD dementia (causes hallucinations)
- Living with wife, independently mobile
- Attended after wife was admitted as no-one to care for him
- Medical bed overnight until his sister could take him home in the morning
- Hallucinating/agitated overnight
- Given 5mg IM haloperidol by SpR
  - GCS 9 for several days
  - Required NG tube for PD drugs
  - Duty of candour meeting with subsequent complaint

SO WHY DOES THIS HAPPEN?

DELAYED & MISSED PD MEDICATION

- Anxiety and distress
- Rapid deterioration in:
  - Movement
  - Speech
  - Swallow
- Aspiration pneumonia
- Immobility, Falls, Pressure sores
- Rapid de-conditioning
- Neuroleptic malignant syndrome
- Increased length of stay
- Can be fatal

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A few missed doses of PD medication can be fatal: someone who's nil by mouth w/ Parkinson's is no less of an emergency than sepsis #bgsconf

16/10/2015 15:03

35 RETWEETS 22 FAVORITES

NEUROLEPTIC MALIGNANT SYNDROME

- NMS is typically caused by neuroleptics or other dopamine blocking agents
- In PD, the same thing can occur when their dopamine is (abruptly) stopped/reduced
  - Sometimes called Parkinson's Hyperpyrexia Syndrome
  - Usually precipitated by abrupt withdrawal or malabsorption of PD medication
  - Or if a PD patient is given neuroleptics
  - Can be triggered by infection/other acute illness
  - Sometimes called parkinsonism-hyperpyrexia syndrome
  - Characterised by rigidity, hyperpyrexia and stupor, usually with raised CK and acidosis
- GIVE THE PD MEDS!
- +/- critical care, hydration, antipyretics, cooling, dantrolene for refractory rigidity

SOME EVIDENCE

- Patients who missed at least 1 dose of PD medication stayed in hospital longer ($p<0.01$)[1]
  - 8.6 +/- 0.8 days compared to 3.5+/- 1.1
- Administration of a dopamine blocking agent lengthens hospital stay ($p<0.05$)[1]
  - 7.5+/-1.2 days compared to 4.6+/-0.7
- Medication errors (delays/omissions) are the most important risk factor ($p<0.00$) for worse motor function at discharge.[2]
- Study showing no motor deterioration in patients who were allowed to take control of their own PD medication while in hospital.[2]

[1] Martinez-Ramierz et al. *Medication errors prolong length of stay in hospitalised Parkinson's patients.* Movement Disorders, June 2015.
[2] Gelach, Broen, Weber. *Motor outcomes during hospitalisation in Parkinson's disease patients.* Parkinsonism & Related Disorders, August 2013.

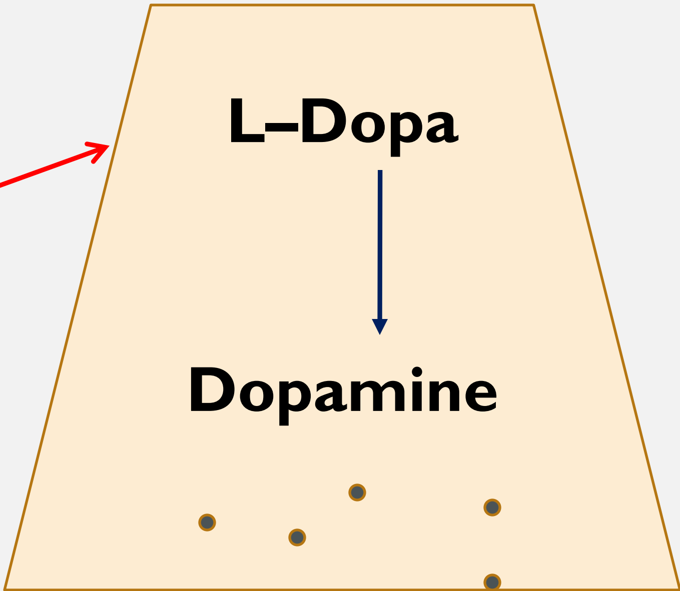
SWALLOW ISSUES & NIL BY MOUTH

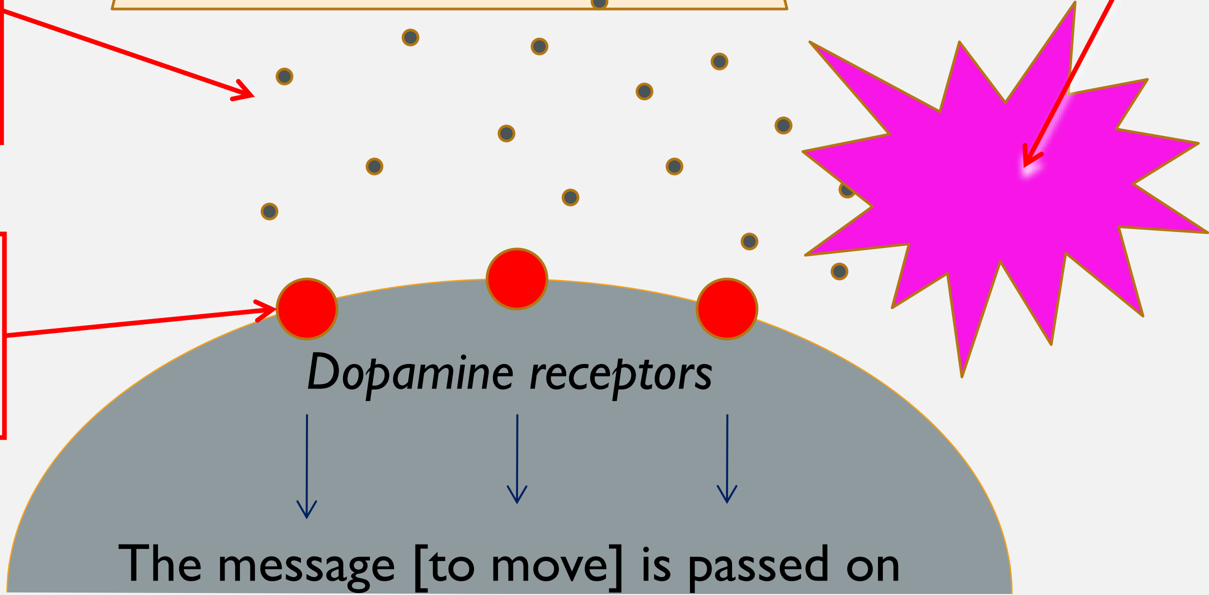
People with Parkinson's produce less dopamine

Some PD medications replace L-dopa

Some PD medications stop dopamine breakdown (Dopamine Re-uptake inhibitors)

Some PD medications mimic action of dopamine (Dopamine Agonists)





Some medications CAUSE parkinsonism by blocking dopamine receptors

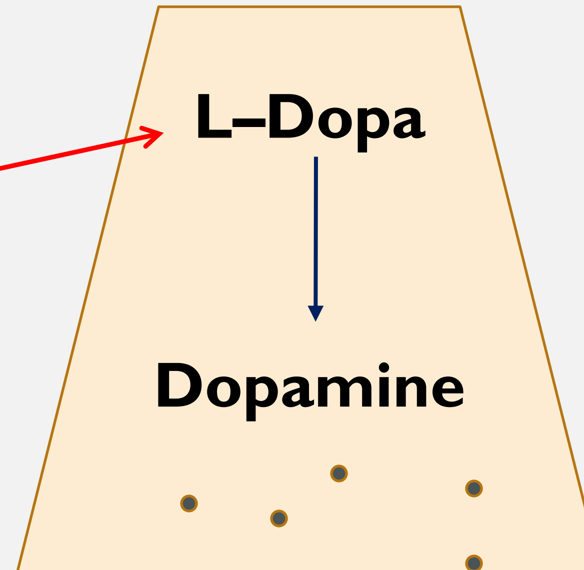
Patients with Parkinson's Disease produce less dopamine

Some PD medications replace L-dopa:
- co-careldopa (sinemet)
- co-beneldopa (madopar)
- duodopa & produodopa

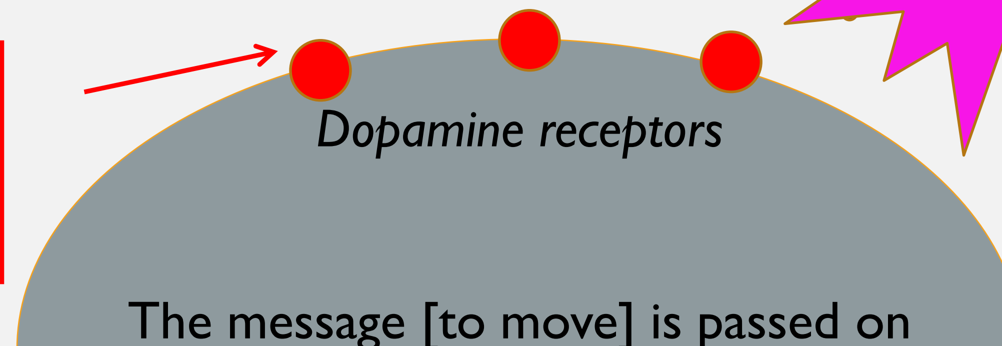
Levodopa combined with dopa decarboxylase inhibitor.

Some PD medications stop dopamine breakdown (Dopamine Reuptake Inhibitors)
- **COMT inhibitors**
  (entacapone, opicapone)
- **MAO-B inhibitors**
  (selegeline, rasagaline, safinamide)

Some PD medications mimic action of dopamine (Dopamine Agonists)
ropinirole, pramipexole,
rotigotine, apomorphine



Some medications CAUSE parkinsonism - "Dopamine Antagonists"
- Most anti-psychotics
- Prochlorperazine
- Metoclopramide
- Some anti-histamines
- Phenothiazines



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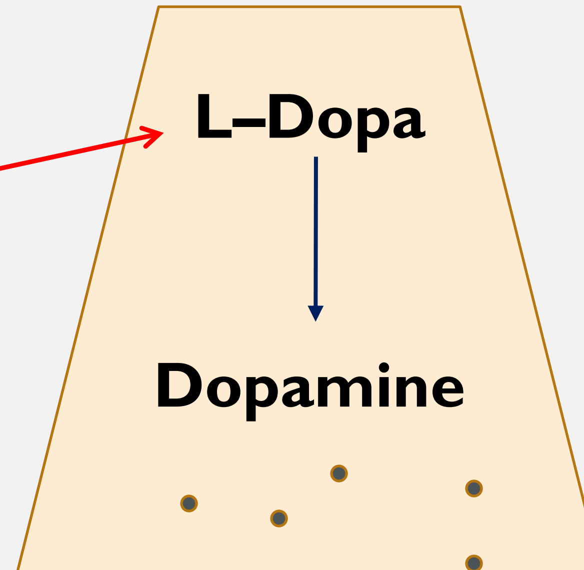

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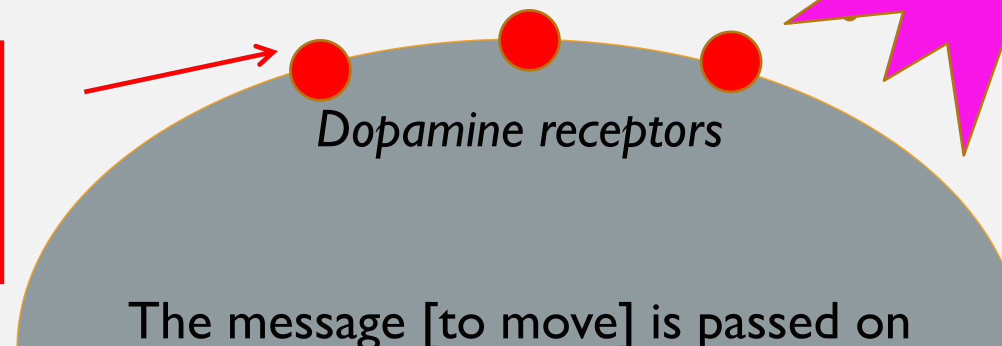
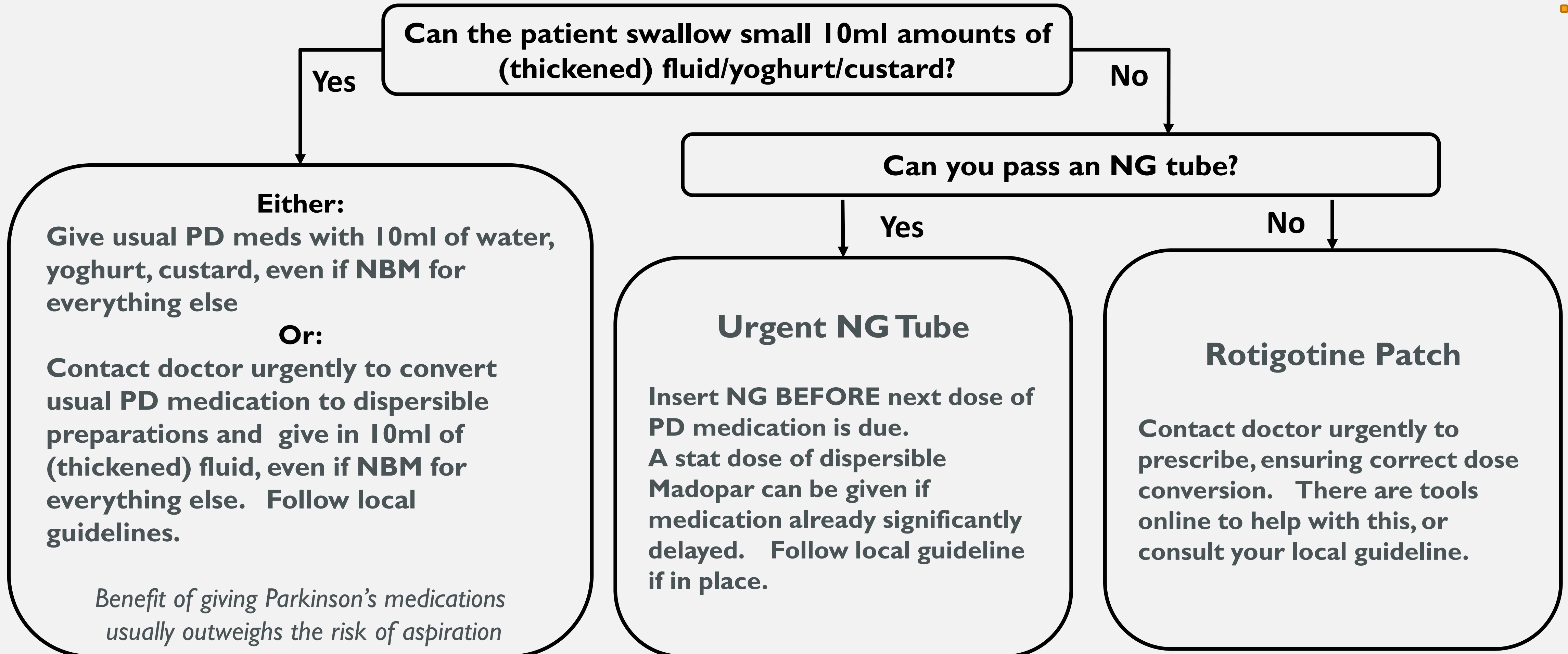


NBM & SWALLOWING PROBLEMS IN PARKINSON'S



NB. If patient has a non-functioning gut (eg ileus) or has an NG tube on free drainage for non-functioning gut, then use a rotigotine patch, ensuring correct dose conversion.

FALLS IN PD

SOME DAYS YOU WAKE AND IMMEDIATELY START TO WORRY. NOTHING IN PARTICULAR IS WRONG. IT'S JUST THE SUSPICION THAT FORCES ARE ALIGNING QUIETLY AND THERE WILL BE TROUBLE.

Jenny Holzer

- Postural instability
- Postural hypotension
- Difficulty with gait initiation
- Freezing
- Festination
- Perceptual problems
- Diplopia
- Cognitive impairment
- And then….

FALLS IN PD - PITFALLS AND PEARLS

PITFALL:

Assuming the person has fallen due to their Parkinson's, and MISSING the acute event!

(GI bleed, cardiac event, hyponatraemia, stroke etc etc…)

PEARL:

If a patient has fallen, ask yourself two questions:

1. Why this patient?
2. Why now?

And don't forget that most falls in multimorbid people are multifactorial.

AND THE SAME IS TRUE OF DELIRIUM

PITFALL:

Assuming the person is delirious due to their Parkinson's combined with trimethoprim deficiency, and MISSING the acute event!

PEARL:

If a patient is delirious, ask yourself two questions:

1. Why this patient?
2. Why now?

And don't forget that most delirium in multimorbid people are multifactorial.

IN FACT…

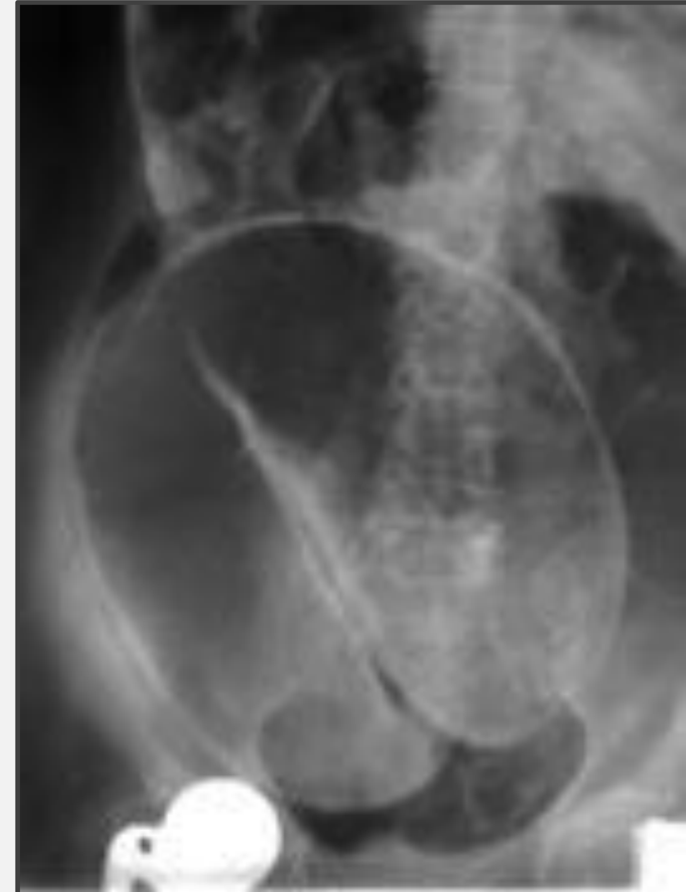
"Every time a consultant says they believe in urine dipsticks, a geriatrician dies"

Dr Mark Taylor

Geriatrician Lancashire

GI PROBLEMS & EMERGENCIES IN PD

- Nausea & Vomiting
  - Common s/e of PD meds
  - Domperidone is anti-emetic of choice in PD
  - Ondansetron and cyclizine are ok
  - Metoclopramide & prochlorperazine are NOT!
- Constipation
- Faecal impaction & pseudo-obstruction
- Sigmoid volvulus
  - Some PD patients get this recurrently
- D&V will impair absorption of PD meds



SURGICAL PATIENTS WITH PD

- PD patients MUST continue to take some form of PD medication
- Place 1st on operating lists
- If timing of PD medication is going to clash with surgery, the regimen MUST be altered – call PD team if necessary
- Patients can still receive PD medication with a small amount of water up to 1-2 hours pre-op, even if NBM for everything else
- If surgery is expected to last more than 3 hours, or if likely to be NBM period >6hours, an alternative route of drug administration MUST be arranged – eg NG tube or rotigotine patch (get specialist advice from PD team if necessary)
- Non-functioning gut (eg ileus)? - convert PD drugs to rotigotine

GOLDEN RULE 1

Parkinson's is a gradually progressive condition and does NOT get worse overnight, so if a PD patient suddenly deteriorates:

- Either it's not the PD – you've missed something!
- Or they've missed their medication
- Or someone has given a contraindicated medication

GOLDEN RULE 2

You Retweeted

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35 RETWEETS **22** FAVORITES

Never ever delay or miss Parkinson’s medication

GOLDEN RULE 3

NEVER prescribe metoclopramide, prochlorperazine, haloperidol or risperidone for a PD patient or we will hunt you down and shoot you!

- Most anti-psychotics, and several anti-emetics:
  - Make Parkinson’s Disease WORSE
  - CAUSE drug induced parkinsonism
  - Can cause life threatening complications
- Anti-emetic of choice is domperidone
  - Cyclizine & ondansetron also ok
- Benzo for severe agitation, then ask specialist for help

“ I shove the cancer behind me. But Parkinson’s – I think about it every day. It’s forever isn’t it?”.

Billy Connolly 2016.