

Prescribing cascades and their effect on patients; investigating inappropriate prescribing in people with Parkinson's

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Parkinson's and prescribing cascades

Parkinson's disease is the 2nd most common neurological disease in Australia and affects approximately 64,000 people. Cardinal symptoms of Parkinson's disease include tremor, bradykinesia, postural instability and muscle rigidity. Non motor complications such as fatigue, neuropsychiatric symptoms and autonomic symptoms are major causes of disability.

People with Parkinson's disease are frequently prescribed complex, multi-drug regimens to manage their condition. Complex regimes can increase the chance of a patient experiencing side effects and may lead to prescribing cascades. A prescribing cascade is any series of events where medicines are being prescribed to treat symptoms, which may then inadvertently worsen or create symptoms that require intervention.

Prescribing cascades can be particularly problematic during hospital admission when potentially pharmacologically inappropriate medicines may be prescribed. Potentially inappropriate medicines include:

- Prochlorperazine, metoclopramide, haloperidol
- Risperidone, olanzapine, periciazine

These medicines are inappropriate due to their pharmacological action, opposing the effects of dopamine.

(Parkinson's WA) Thus, prescribing these medications in those with Parkinson's could lead to deterioration in motor symptom control, influencing quality of life during admission.

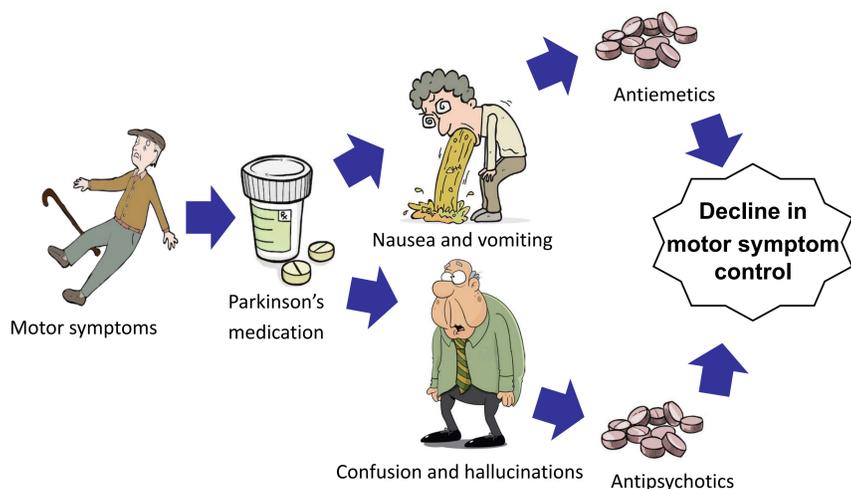


Figure 1: Prescribing cascades in Parkinson's

Aims

1. Describe the type and frequency of inappropriate medicines prescribed and/or administered to people with Parkinson's disease during hospital admission.
2. Describe and compare rates of potentially inappropriate medication prescribing in patients who received pharmacist input and those who did not.

Methods

Discharge diagnosis search identified admissions for patient's with Parkinson's between June 2013 & July 2016

Retrospective case note review

Describe & quantify the type & frequency of potentially inappropriate medicines prescribed and administered

Documentation of pharmacist involvement during admission

Figure 2: Methods

Potentially problematic prescribing

230 admissions were reviewed.

Potentially inappropriate medicines were prescribed during

14.8%

of admissions.

34

Patients identified with inappropriate medicines

25 patients administered inappropriate medicines



Metoclopramide was the most commonly prescribed with

43

incidents

Risperidone, haloperidol and prochlorperazine were among other prescribed inappropriate medicines.

Pharmacist review was identified on 68 admissions, with 92.6% of reviewed admissions resulting in no prescribing of inappropriate medicines.

Are pharmacists part of the solution?

A significant proportion of people with Parkinson's disease are likely to have inappropriate medicines prescribed during hospital admission. Pharmacist involvement appears to contribute to medication safety, by decreasing risk of prescribing and administration of inappropriate medicines, likely improving Parkinson's management during admission.

Where now?

A literature review is required to provide clarity in defining and quantifying the potentially inappropriate medicines in Parkinson's disease. By identifying the patterns of prescribing of these medicines, valuable interventions can be developed to provide awareness for prescribers. Empowering pharmacists to be active in this area may also prove to be beneficial in reducing inappropriate prescribing and improving quality of life for patients.