A multi-cycle audit aimed at improving prescribing for patients dying with Parkinson's Disease in the acute hospital setting: still room for improvement…

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Background

Caring for patients with Parkinson's disease (PD) or an atypical PD syndrome approaching end of life poses several challenges. Firstly, if sufficient dopamine therapy is not maintained, these patients are prone to rigidity, which can contribute to discomfort and make personal care more difficult. Secondly, impaired swallow at end of life often necessitates conversion of dopamine therapy to orodispersible or transdermal preparations. This is an imprecise process and can lead to patients being prescribed dopamine excess to their requirements, which has the potential to increase agitation and delirium. Finally, several first-line medications used in managing symptoms common at end of life such as agitation and nausea have anti-dopaminergic activity. Using these medications in patients with PD is liable to increase symptom burden.

Aims

To analyse and improve prescribing for patients dying with PD in an acute hospital setting, focussing on:

1. Dopamine replacement therapy
2. Symptom management

Methods

Deaths within Oxford University Hospitals NHS Foundation Trust where PD was entered on the medical certificate of cause of death (MCCD) were collated in 3 rounds of minimum 3 months duration spanning February 2021 to March 2024. After round 1, a new 'medicines information leaflet' providing guidance on prescribing for patients dying with PD was introduced. After round 2, a new prescribing 'PowerPlan' for end of life symptom management in PD was added to the electronic prescribing system. Patient records were reviewed retrospectively and anonymised data stored on secure NHS drives. Ethics permission was not sought as this audit examined routine clinical practice.

Results

Data was collected on a total of 74 patients who died and had PD or an atypical PD syndrome on their MCCD across the 3 rounds. The majority (84%) had idiopathic PD and the remainder (16%) had an atypical PD syndrome. Patients were most frequently admitted taking oral co-beneldopa and/or co-careldopa. Across the 3 rounds, 41% of the patients recognised to be dying were prescribed rotigotine patches. Comments on patient agitation were found in 38% of these patients' records (52%, 33% and 42% respectively). Corresponding dose adjustments to rotigotine patches were made in just 3 cases across the 3 rounds. Anti-dopaminergic medications were prescribed for 47% of the patients recognised as dying in round 1. This dropped to 7% of patients in round 2, but remained essentially unchanged from pre-intervention levels in round 3 at 50%.

Conclusion

We established that both dopamine replacement therapy and symptom management prescribing practice could be improved for patients dying with PD. Specifically, awareness that excess dopamine therapy can contribute to agitation at end of life could be increased and use of medication with anti-dopaminergic activity for symptom management could be reduced. Targeted interventions were made to try to improved prescribing practice. Notably, introducing local prescribing guidelines and adding a new prescribing 'PowerPlan' to the electronic prescribing system. Unfortunately, neither intervention has yet been found to improve prescribing for patients dying with PD and there remains room for improvement. It is possible these interventions simply need more time to influence common practice in our setting.

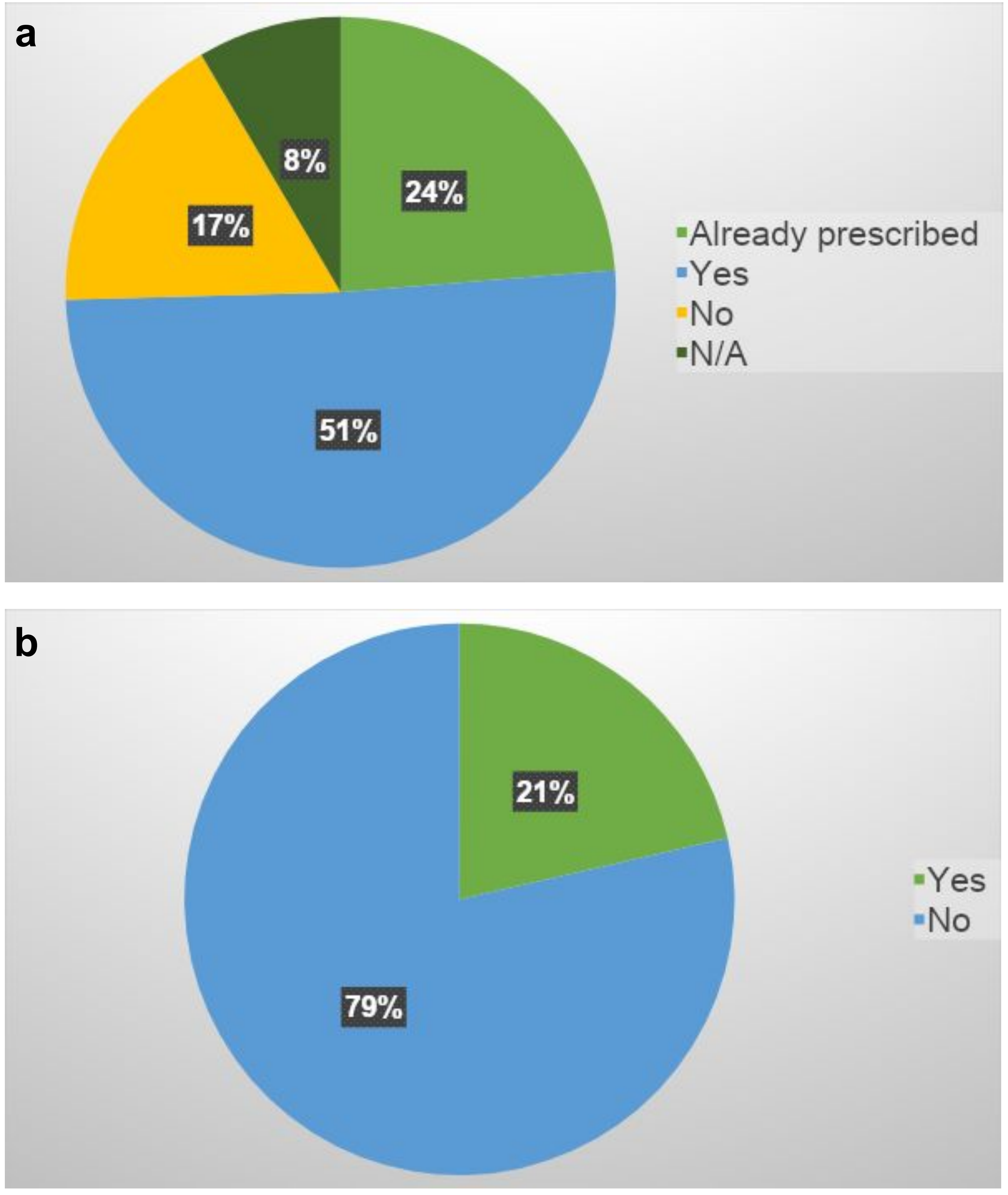

Figure 1 a. percentage (%) of PD patients already prescribed transdermal rotigotine dopamine therapy ('already prescribed'), switched to transdermal rotigotine ('yes') and not switched to transdermal rotigotine ('no') when recognised to be dying across all 3 data collection rounds combined, b. percentage (%) of PD patients recognised to be dying and receiving transdermal rotigotine where agitation was linked to a rotigotine dose adjustment ('yes') or no dose adjustment was made ('no') across all 3 data collection rounds combined.

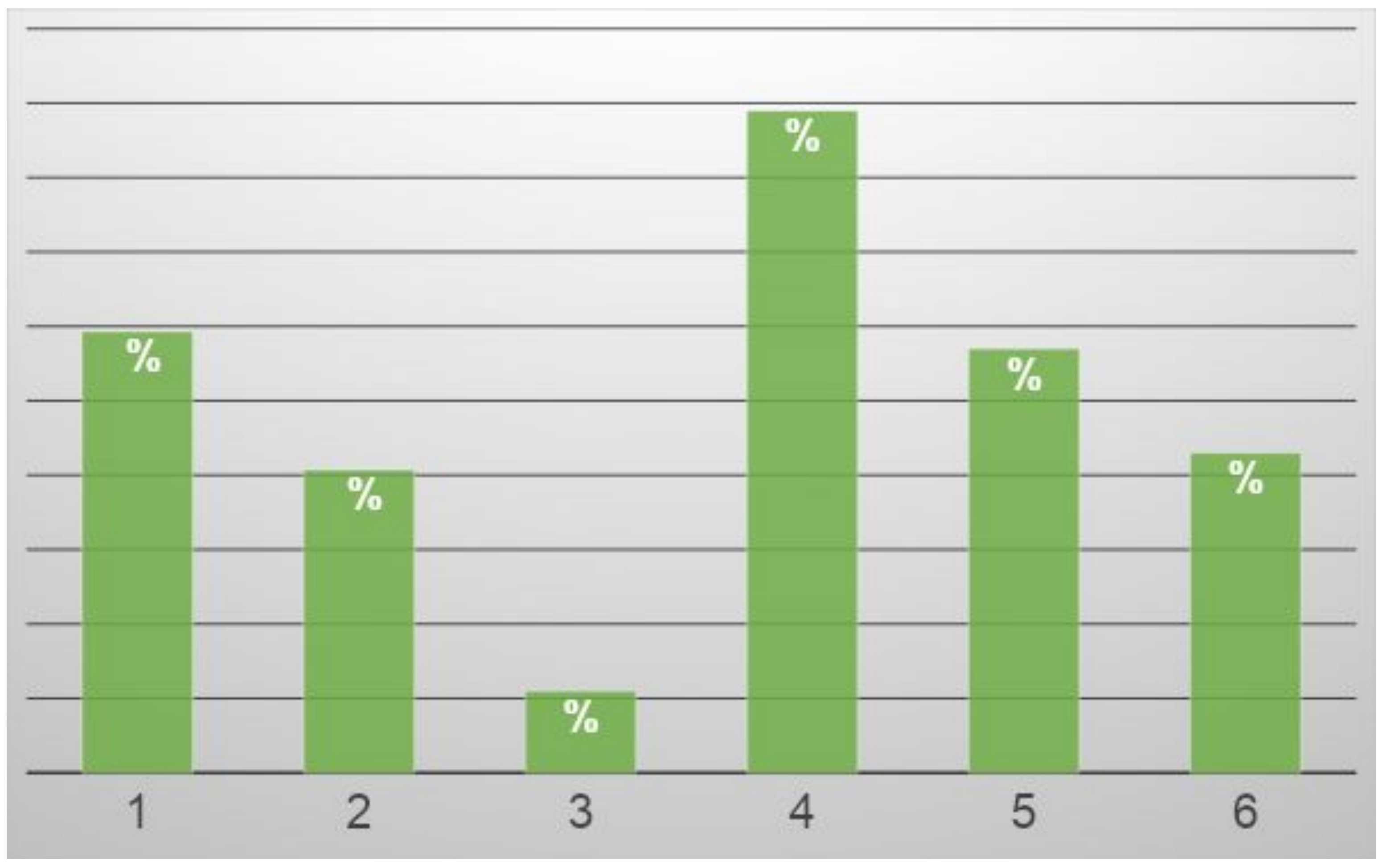

Figure 2 Percentage (%) of PD patients prescribed ('yes') or not prescribed ('no') medications with anti-dopaminergic activity for symptom management at end of life. The 3 data collection rounds are shown separately.