

Is paracetamol prescribed appropriately in elderly patients admitted for a fall? – A Geriatrician’s perspective

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Introduction

Paracetamol is a commonly used analgesic in older adults¹. Even when prescribed at therapeutic doses, paracetamol use has been associated with acute liver injury and acute liver failure². Due to altered pharmacokinetics and pharmacodynamics, presence of multiple co-morbidities and polypharmacy, the elderly are more prone to adverse outcomes from even common medications^{3,4}. Existing guidelines do not have specific dosing recommendations on the use of paracetamol in the elderly, though there is mention of cautionary use in those who are malnourished or who weigh <50kg⁵. The objective of this quality improvement activity (QIA) was to evaluate the prevalence of inappropriate paracetamol prescription in the elderly admitted for falls and to introduce strategies to reduce the rate of inappropriate paracetamol prescription in this population.

Method

A clinical audit against locally developed criteria for inappropriate prescription of paracetamol based upon available literature was conducted. Clinical charts of 100 patients aged ≥75 years old, admitted under the Geriatric Medicine department of a tertiary hospital with a primary diagnosis of a fall between July 2019 and October 2019 were reviewed.

Data collected included demographic data, relevant medical history of cirrhosis, cognitive impairment, alcohol use and weight <50kg, prescription pattern of paracetamol on day 1 or 2 of admission and on discharge as well as clinical data on the documented indications for paracetamol use.

Inappropriate use of paracetamol in this study was defined as one out of the following 3 criteria: (1) Dose of paracetamol not adjusted according to body weight, renal or liver impairment and alcohol use; (2) Patients given a lower dose of paracetamol than what he or she should have received; (3) Patients prescribed round-the-clock paracetamol when there was no indication stated. For patients weighing <50kg, the maximum dose of paracetamol is 3g/day⁵. Those with underlying cirrhosis or consume regular alcohol, the maximum dose of paracetamol is 3g/day⁵.

Results

Paracetamol was prescribed in 84 patients. 56 patients were prescribed round-the-clock paracetamol for a median duration of 9 (IQR=10) days and 28 patients were prescribed paracetamol pro re nata (PRN). The mean age of the patients was 85.5 (SD=5) and 86.6 (SD=5) years old for the group who were prescribed round-the-clock paracetamol and for the group who were prescribed paracetamol PRN respectively.

In the group prescribed with round-the-clock paracetamol, paracetamol was inappropriately used in 32 (57%) of them. 32 out of 56 (57%) patients prescribed round-the-clock paracetamol on day 1/2 of admission were discharged with round-the-clock paracetamol for a median of 17.5 (IQR=46) days.

Discussion

This clinical audit revealed a high prevalence of round-the-clock and inappropriate doses of paracetamol prescribed in elderly patients admitted for a fall. Although paracetamol is recommended as a first-choice analgesic in various guidelines⁶, its use is not without the risk of adverse events especially in the elderly. Hence, it is prudent for paracetamol to be prescribed at the appropriate dose when indicated and to deprescribe whenever appropriate. We propose an algorithm (Figure 1) to reduce the rates of inappropriate prescription of paracetamol in older patients admitted for a fall.

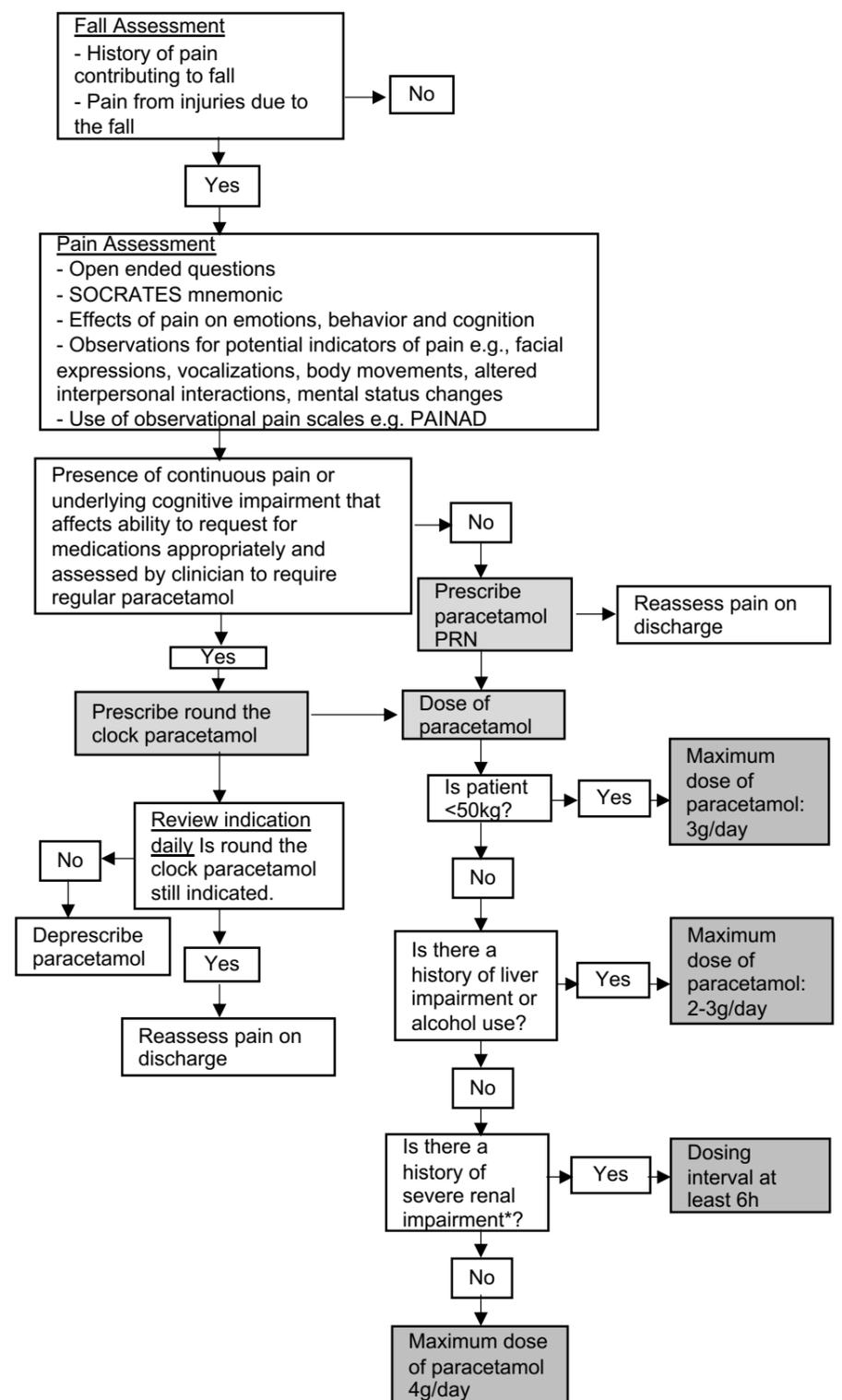


Figure 1: Algorithm for paracetamol prescription in elderly patients admitted for a fall PAINAD - Pain Assessment in Advanced Dementia, PRN – Pro re nata, *- severe renal impairment is defined as creatinine clearance <30ml/min

Conclusion

Moving forward, we hope that with the implementation of this algorithm in our clinical setting, the rates of inappropriate paracetamol prescription in elderly patients admitted for a fall will be reduced. Other than serving as a reminder to clinicians of the need to be judicious in paracetamol prescription, it is also an opportunity to educate the junior doctors of the adverse events associated with paracetamol use and to encourage good paracetamol prescribing habits.

References

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