

Are we overdosing older people with paracetamol in hospital?

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Background

- Paracetamol can cause hepatic injury when used in excessive doses.
- Older people may be at increased risk.
- Australian guidelines recommend a maximum dose of 60mg/kg/day for older people who weigh < 50kg.^{1,2}
- Liver function tests (LFT) should be monitored after 48 hours of paracetamol.^{1,2}

Aims

- To determine whether older hospital inpatients weighing < 50kg were prescribed excessive paracetamol doses.
- Secondary aim was to determine whether patients receiving regular paracetamol had their LFTs monitored.

Method

Study design

Retrospective medical record audit.

Method (continued)

Setting

Large metropolitan teaching hospital.

Patients

Age \geq 70 years, weight < 50kg, admitted August-December 2018, length of stay > 72 hours, prescribed paracetamol.

Data collection

Medication and LFT data were extracted from patients' electronic medical records.

Primary endpoint

% patients who received a potentially excessive paracetamol dose (> 60 mg/kg per day).

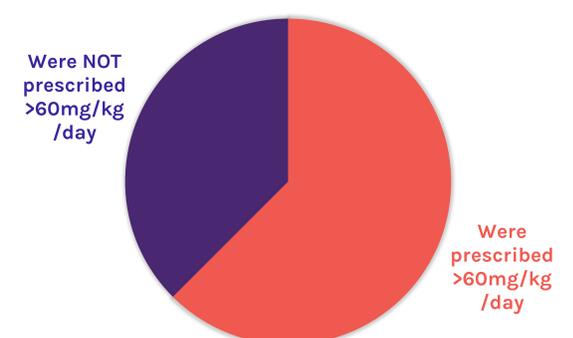
Secondary endpoints

% patients initiated on excessive paracetamol dose in hospital.

% patients with continuous paracetamol administration who had LFTs monitored.

More than 60% of older patients who weighed < 50kg received potentially excessive paracetamol doses.

Paracetamol dosing in patients aged \geq 70 years who weighed < 50kg



Results

- 108 patients (mean age 85.6 years, mean weight 43.9 kg, 90.7% female) received paracetamol during 120 hospital admissions.

Inpatient prescribing

- During 75/120 (62.5%) admissions, patients received > 60 mg/kg/day of paracetamol (mean dose 81.7 mg/kg/day, range 61.2-117.3).
- 46/75 (61.3%) excessive doses were initiated in hospital:
 - 26 (56.5%) started in hospital;
 - 20 (43.5%) increased from a lower pre-admission dose.
- 101/120 (84.2%) inpatient orders were for regular administration.

- The median number of days of paracetamol > 60mg/kg/day in hospital was 8 (IQR 4-16, range 1-51).

Discharge prescribing

- On 71 occasions, patients were prescribed paracetamol on discharge, and 60 (84.5%) of these were > 60 mg/kg/day (mean dose 86.3 mg/kg/day, range 61.2-125.9).
- 46/71 (64.8%) discharge orders were for regular administration.

LFT monitoring

- When inpatients received regular paracetamol for > 48 hours (n = 101), 64 (63.4%) had LFTs measured after day 2.
- When treatment continued for > 5 days (n = 80), 38 (47.5%) had LFTs measured after day 5.

Discussion & conclusion

- Potentially excessive paracetamol dosing was common.
 - Majority were initiated in hospital and continued on discharge.
- LFTs were not routinely monitored.
- Strategies are needed to raise awareness of the need to adjust doses and monitor LFTs in older people.

References:

1. Paracetamol use: a position statement of the NSW Therapeutic Advisory Group Inc. 2008. Available from: <http://www.nswtag.org.au/wp-content/uploads/2017/07/paracetamol-use-dec-2008.pdf>

2. Safe paracetamol use guideline. Queensland Health. 2014. Available from: https://www.health.qld.gov.au/_data/assets/pdf_file/0030/147666/qh-gdl-415.pdf

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