Management of Paracetamol Overdose in Acute Medical Receiving
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Introduction
Paracetamol is the most common drug taken in overdose in the UK and is a leading cause of acute liver failure [1]. Liver damage may be prevented by timely administration of intravenous acetylcysteine. The Medicines and Healthcare products Regulatory Agency (MHRA) recently published updated guidelines regarding treatment with IV acetylcysteine with the adoption of a simplified single treatment line (Figure 1) [2]. Concerns have been raised that this will lead to more inpatient admissions with one centre predicting an increase from 33% to 50% [3].

Aims
To assess the number of patients attending with paracetamol overdose.
To compare treatment of paracetamol overdose with new MHRA guidelines.
To examine the effect of new MHRA guidelines on number of admissions to hospital.

Methodology
All patients who attended Glasgow Royal Infirmary Emergency Department and Acute Medical Receiving with an overdose were retrospectively identified over one month.

Patients with positive paracetamol levels were identified and their clinical records reviewed for details on management, outcomes and length of stay.

Results
91 patients attended with drug overdose of which 47 patients had detectable paracetamol levels. 35 patients (74.4%) were admitted with 29 (61.7%) receiving treatment with IV acetylcysteine. 12 patients (25.6%) were discharged. (Figure 2). The average length of stay was 1.9 days (range 1 to 11 days).

There was one prescribing error due to weight miscalculation and 1 adverse hypersensitivity reaction which did not require treatment. Inadequate blood tests were performed in 2 patients prior to treatment and in 9 patients (31.0%) following treatment. The most common omission was no check of INR/coagulation screen. 2 patients had no bloods checked following treatment and were discharged. No patient suffered significant acute liver injury.

Conclusions
Paracetamol is the most common drug used in overdose. The majority of patients with paracetamol overdose (61.7%) require admission for treatment. This number is higher than previously expected and has implications for bed management requirements.

Treatment is well tolerated and well prescribed but blood monitoring should be improved to meet guidelines.

References