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LETTER TO THE EDITOR

In reply

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To the editor:

Thank you for the interest in our paper [1]. We agree that this study represents a population pharmacokinetic model based on healthy volunteers and that acetylcysteine concentrations may differ within the poisoned population. Currently, there are no suitable pharmacokinetic studies of acetylcysteine concentrations in poisoned patients that can be used to derive these models. These simulations aim to demonstrate acetylcysteine concentrations that may be achieved when modifying the existing regimen and help inform but not replace clinical trials.

The standard three bag regimen that has been used for the last four decades was designed as a "one size fits all" model. At the time, dosing was based on a number of assumptions without the use of population pharmacokinetic models and not based on randomised controlled trials. Clearly, there are individuals that may still develop hepatotoxicity despite receiving acetylcysteine within 8 h [2, 3]. In addition, there is a significant cohort of patients who are at low risk of hepatotoxicity who simply may not require a prolonged course of acetylcysteine [4, 5]. While our study provides some theoretical data on expected acetylcysteine concentrations with various novel regimens, refining and validating risk stratification techniques [6] as well as further acetylcysteine regimen efficacy studies are needed to optimise the management of the paracetamol poisoned patient.

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Compliance with ethical standards

Competing interests The authors declare that they have no conflict of interest.

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