SNAPTIMED: Does the Scottish and Newcastle Antiemetic Protocol achieve Timely Intervention & Management from the Emergency Department to Discharge for Paracetamol Poisoning?

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Introduction

Many hospitals are now using the modified 12-hour Scottish and Newcastle Antiemetic Protocol for acetylcysteine (NAC) in paracetamol poisoning. However, to our knowledge, the perceived benefit of decreased Length of Stay (LoS) is unproven. This study aimed to establish whether the SNAP is associated with improvement in hospital length of stay, as well as validate the performance of the protocol for the prevention of anaphylactoid reactions and total infusion duration.

Results and discussion

294 patients were included in the analysis. Use of the SNAP was associated with a statistically significant reduction in length of stay: -7.9hrs (95% CI -12.6hrs to -2hrs), and a reduced risk of anaphylactoid reaction (NNT = 10). There were no significant differences in the rate of hepatotoxicity or other adverse outcomes. When extended infusions were accounted for, the mean time periods attributable to NAC treatment were 15.0hrs and 23.4hrs respectively.

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<th>Protocol</th>
<th>SNAP</th>
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<tbody>
<tr>
<td>NAC delivery</td>
<td>300mg/kg over 12 hours</td>
<td>300mg/kg over 21 hours</td>
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<tr>
<td>Criteria to cease treatment</td>
<td>INR 1.3 or less ALT normal</td>
<td>INR 1.3 or less ALT normal (or less than 2 x upper limit of normal and not more than double admission value)</td>
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Table 1. The more stringent requirements for stopping NAC at 12hrs

Materials and methods

Retrospective chart review: 25/03/19 to 25/09/20. Patients age 16+ with a diagnosis of paracetamol poisoning were included in the analysis if they received treatment with NAC and the protocol could be identified. Inter-rater reliability for data abstraction was assessed using Krippendorff’s alpha.

Conclusion

In this retrospective study, use of the SNAP reduced the duration of inpatient admissions and rate of anaphylactoid reactions.