SHORT REPORT

Gut decontamination of acutely poisoned patients: what do doctors really know about it?

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There are consensus guidelines on the appropriate use of gut decontamination in the management of poisoned patients. This study demonstrates that few doctors have read these guidelines and that they have poor knowledge of the use of gut decontamination, which can be improved with specific clinical toxicology teaching. Future guidelines should be published in journals more widely read by those doctors treating poisoned patients.

Consensus guidelines on the appropriate use of gut decontamination in the management of acutely poisoned patients have been produced by the European Association of Poisons Centres and Clinical Toxicologists and the American Academy of Clinical Toxicology.^{1–5} There are no published studies on doctors' knowledge of the appropriate use of gut decontamination and whether this can be improved by specific clinical toxicology based education on gut decontamination.

METHODS

Medical staff in general medicine, emergency medicine and paediatrics, attending either short (1 h) or long (2 day) clinical toxicology teaching courses, were asked about their knowledge of and whether they had read any of the gut decontamination consensus guidelines.^{1–5} Participants were then asked to indicate which method or methods of gut decontamination (induced vomiting, gastric lavage, activated charcoal, multi-dose activated charcoal and whole bowel irrigation), if any, they felt would be appropriate for six clinical scenarios of acute poisoning (correct answer scored 1, maximum 6) (for clinical scenarios see supplementary file available at <http://emj.bmj>.

Figure 1 Percentage of adult general medicine physicians and paediatricians who have heard of each method of gut decontamination.

com/supplemental). Those participants on the long (2 day) clinical toxicology teaching course completed the survey at the beginning and end of the course and at 1 month following the course.

RESULTS

The knowledge of gut decontamination and reading of the consensus guidelines of 69 general/emergency medicine physicians and 23 paediatricians is shown in figs 1 and 2, respectively. Only 34 (37.0%) doctors had heard of all methods of gut decontamination and only 3 (3.3%) doctors had read all the guidelines. The mean (SD) score for all doctors completing the case scenarios of acute poisoning was 2.67 (1.5) (paediatricians 3.78 (1.59), general/emergency medicine physicians 2.30 (1.28), $p < 0.0001$).

The mean (SD) score was 3.48 (0.87) ($n = 21$) at the commencement of the 2 day course and 4.94 (0.73) ($n = 19$) at the end ($p < 0.001$) (fig 3). There was no significant difference between the mean score in the follow up questionnaire scenarios (5.4 (0.5), $n = 10$) at 1 month, and that of all participants who completed a questionnaire at the end of the course (4.95 (0.71), $n = 19$, $p = 0.09$) (fig 3). Additionally there was no difference between those who completed both an end of course and follow up questionnaire (5.4 (0.5) vs 5.2 (0.42), $n = 10$, $p = 0.34$).

DISCUSSION

The consensus guidelines recommend that activated charcoal (single dose), whole bowel irrigation and multi-dose activated charcoal should be considered in some patients presenting with acute poisoning.^{1–3} Gastric lavage is rarely indicated for gut decontamination and induced emesis is no longer recommended.^{4–5} This study demonstrated that few doctors have read the consensus guidelines, which may be because they were published in specialist toxicology rather than mainstream emergency medicine journals.

Much of the data used for the consensus guidelines on the use of gut decontamination are based on animal and volunteer studies and case reports/series. Even among poisons centres and clinical toxicologists there are controversies about the use of gut decontamination in the management of poisoned patients.^{6–7} Further studies are needed to improve the evidence base on which the consensus guidelines have been reached.

Undergraduate training of medical students in the UK rarely includes formal teaching on either clinical toxicology or the management of poisoned patients. Additionally few physicians have formal postgraduate clinical toxicology training as part of their continuing professional development. We demonstrated that even a short 2 day teaching course in clinical toxicology increased doctors' knowledge of the appropriate use of gut decontamination, with retention of this knowledge at 1 month. The course contains a mixture of didactic lectures, interactive case sessions and simulated patient scenarios, a method of teaching shown to provide sustained improvement in knowledge with other medical areas.⁸

Figure 2 Percentage of adult general medicine physicians and paediatricians that had read guidelines about the use of each method of gut decontamination.

It is important that doctors are aware of gut decontamination in the management of the acutely poisoned patient, so that they have an understanding of the methods involved when they seek advice on less commonly seen poisoning. There should be consideration that future consensus guidelines are published in journals that are more widely read by those physicians and nurses actually undertaking gut decontamination.

Supplementary file available at <http://emj.bmj.com/supplemental>

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Figure 3 Mean (SD) scores for the appropriate use of gut decontamination in the clinical scenarios at the beginning and the end of a clinical toxicology training course and at 1 month follow up.

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