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ARTICLE

The hazards of gastric lavage for intentional self-poisoning in a resource poor location

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Objective. The 10–20% case fatality found with self-poisoning in the developing world differs markedly from the 0.5% found in the West. This may explain in part why the recent movement away from the use of gastric lavage in the West has not been followed in the developing world. After noting probable harm from gastric lavage in Sri Lanka, we performed an observational study to determine how lavage is routinely performed and the frequency of complications. *Case series*. Fourteen consecutive gastric lavages were observed in four hospitals. Lavage was given to patients unable or unwilling to undergo forced emesis, regardless of whether they gave consent or the time elapsed since ingestion. It was also given to patients who had taken non-lethal ingestions. The airway was rarely protected in patients with reduced consciousness, large volumes of fluid were given for each cycle (200 to more than 1000 ml), and monitoring was not used. Serious complications likely to be due to the lavage were observed, including cardiac arrest and probable aspiration of fluid. Health care workers perceived lavage as being highly effective and often life-saving; there was peer and relative pressure to perform lavage in self-poisoned patients. *Conclusions*. Gastric lavage as performed for highly toxic poisons in a resource-poor location is hazardous. In the absence of evidence for patient benefit from lavage, (and in agreement with some local guidelines), we believe that lavage should be considered for few patients – in those who have recently taken a potentially fatal dose of a poison, and who either give their verbal consent for the procedure or are sedated and intubated. Ideally, a randomized controlled trial should be performed to determine the balance of risks and benefits of safely performed gastric lavage in this patient population.

Keywords Self-poisoning; Gastric lavage; Pesticides

Introduction

For much of the 20th century, gastric decontamination routinely followed resuscitation in the management of self-poisoned patients (1,2). Gastric lavage or forced emesis was performed to remove poison from the stomach, while activated charcoal was given to adsorb the poison left behind in the bowel (3). Gastric lavage, in particular, appears to have been considered important for all significant poisonings (3).

Over the last two decades, however, gastric lavage has fallen out of favour (2,4,5). Extensive review of the literature for evidence of effectiveness concluded in 2004 that "gastric lavage should not be employed routinely, if ever, in the management of poisoned patients," and that "the results of clinical outcome studies in overdose patients are weighed heavily on the side of showing a lack of beneficial effect" (6). An earlier review by the same organizations in 1997 had come to similar conclusions (7). Clinical toxicologists have taken this message on board and guidelines published over the last ten years generally discourage its routine use (8–11).

However, the position statement was developed after a review of animal and human studies that primarily looked at self-poisoning with medicines (6). Clinical studies all came from well-equipped Western hospitals. Case fatality ratio (CFR) for self-poisoning is usually 0.5% or less in such hospitals (12) — very different from the developing world where CFRs of 10–20% are common (13,14). Pesticides in particular are widely available in rural homes and associated with high CFRs: aluminium phosphide 70%, paraquat >50%, and organophosphorus pesticides 20% (13).

The guidelines also stated that: "In certain cases, where the procedure is of attractive theoretical benefit (eg., recent ingestion of a very toxic substance), the substantial risks should be weighed carefully against the sparse evidence that the procedure is of any benefit" (6). In the rural developing world, where toxic pesticides and plant poisons are the common means of self-poisoning, and antidotes and facilities for ventilation scarce (13), lavage might be considered of "attractive theoretical benefit" for some poisonings (15,16).

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