

Enteric-coated salicylate ingestion and gastric lavage

To the editor:

The case report by Drs. Drummond, Kadri and St-Cyr describes a patient who ingested a toxic amount of enteric-coated acetylsalicylic acid (ECASA) 2 hours prior to ED presentation.¹ The patient received gastric lavage and activated charcoal, was observed and discharged, but returned with signs and symptoms of salicylism. We wish to comment upon the choice of gastrointestinal decontamination used in this patient.

Although gastrointestinal decontamination is a cardinal principle in the management of the overdose patient, its utilization should be based on sound clinical evidence and current standards. The gastric lavage literature fails to demonstrate benefit from this procedure. Experimental studies have found that the mean reduction in the bioavailability ranges from 8% to 32% when gastric lavage was performed at 60 minutes after drug ingestion.² Gastric lavage has also been shown to be ineffective after the ingestion of liquids. In other clinical studies, gastric lavage has not been demonstrated to be beneficial.²

There are potential downsides from the use of gastric lavage. One study suggested that tablet debris may be found in the stomach after lavage and that the lavage may actually enhance the movement of tablets from stomach to small intestine.³ Recorded complications include aspiration pneumonia, laryngeal spasm, hypoxemia, hypercapnia, fluid and electrolyte problems and, most recently, esophageal laceration and charcoal mediastinum.²

In 1997 the American Academy of Clinical Toxicology and the European Association of Poisons Centres and

Clinical Toxicologists published a Position Statement on gastric lavage.² They stated: "Gastric lavage should not be employed routinely in the management of overdose patients. ... There is no certain evidence that its use improves clinical outcomes and it may cause significant morbidity." This position has been adopted by others.⁴

In fact, the gastrointestinal decontamination procedure of choice for ECASA-poisoned patients is whole bowel irrigation.⁵ This was supported by these same two groups, also in 1997, in their Position Statement on whole bowel irrigation.⁶ We were surprised that the authors did not discuss the role of whole bowel irrigation in ECASA overdose.

Drummond et al state that "...physicians should consider initiating therapy regardless of initial salicylate levels." (p. 46). We assume that the therapy to which they are referring is gastrointestinal decontamination and not hemodialysis. Obviously gastrointestinal decontamination should always be initiated as soon as possible after potentially toxic overdoses since its thrust is to prevent the absorption of the poison. Waiting for elevations of serum concentrations is akin to closing the barn doors after the horses have left.

Gastric lavage is invasive, unpleasant, ineffective and is associated with significant complications. It should be abandoned as a gastrointestinal decontamination procedure.

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References

1. Drummond R, Kadri N, St-Cyr J. Delayed salicylate toxicity following enteric-coated acetylsalicylic acid overdose: a case report and review of the literature. *CJEM* 2001;3(1):44-6.
2. Vale JA. Position statement: gastric lavage [review]. American Academy of Clinical Toxicology, European Association of Poisons Centres and Clinical Toxicologists. *J Toxicol Clin Toxicol* 1997; 35(7):711-9.
3. Saetta IP, March S, Gaunt ME, Quinton DN. Gastric emptying procedures in the self-poisoned patient: Are we forcing gastric content beyond the pylorus? *J Roy Soc Med* 1991;84:274-6.
4. American College of Emergency Physicians. Clinical policy for the initial approach the patients presenting with acute toxic ingestion or dermal or inhalation exposure. *Ann Emerg Med* 1999;33:735-61.
5. Kirshenbaum LA, Mathews SC, Sitar DS, Tenenbein M. Whole-bowel irrigation versus activated charcoal in sorbitol for the ingestion of modified-release pharmaceuticals. *Clin Pharmacol Ther* 1989;46: 264-71.
6. Tenenbein M. Position statement: whole bowel irrigation [review]. American Academy of Clinical Toxicology, European Association of Poisons Centres and Clinical Toxicologists. *J Toxicol Clin Toxicol* 1997;35(7):753-62.

Etomidate in Canadian EDs

To the editor:

Etomidate is widely used in US emergency departments (EDs) as an induction agent for rapid sequence intubation (RSI); however, it is unavailable in Canada except by special release from the Health Protection Branch. Recently, our two Montreal area EDs have pooled preliminary data documenting etomidate use for RSI.

Using an induction dose of 0.3 mg/kg, with 1.5 mg/kg of succinylcholine, we have obtained very good results. In 25 cases, the mean changes in systolic and diastolic blood pressure were (-) 0.2 mm Hg and (+) 6.1 mm Hg re-