

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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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-

spectively (these values refer to the maximal differences seen within 15 minutes of induction). Mean change in heart rate was (+) 4.2 beats/min, and in oxygen saturation, (+) 0.7%. Sedation and muscle relaxation were adequate, intubations were achieved without complication, and no adverse effects were recorded (muscular activity, seizures, dysrhythmias, bronchospasm, nausea or vomiting, pain on injection, thrombophlebitis, infections or clinical multiple organ dysfunction/adrenal insufficiency).

These results are in keeping with other published data on etomidate use for ED RSI.¹⁻⁴ Etomidate provides good intubation conditions and some neuro-protective effects with a low incidence of adverse hemodynamic effects. Of the induction agents on the market, it seems to offer "the best balance of utility and safety."⁵ We encourage Canadian emergency physicians to expand their experience with this agent for optimal results in most ED intubations. Those interested in applying for etomidate use or in contributing to our prospective registry are invited to contact the authors.

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Prehospital vs. ED pronouncement of death

To the editor:

I read with interest the article by Cheung and colleagues.¹ I believe a significant cost omission was made in the analysis of the costs involved in field pronouncement.

I work as coroner in Windsor, Ontario, a city and county that has been deemed by various reports of the Ministry of Health as underserved to the tune of 50 general practitioners and 50 specialists. Often I am called to *certify* a death that has been pronounced in the field, either because the deceased has no physician or because the family physician cannot be reached (answering machine indicates to go to the ED or a walk-in clinic) or is unwilling to go to the scene in a timely fashion. In these instances funeral homes will not come to get the body without a death certificate being on the scene.

The cost of a coroner's investigation to the Ministry of the Solicitor General is \$155 plus mileage. If the coroner is concerned about the circumstances of the death, an autopsy may be ordered. This necessitates transfer of the body to the nearest morgue (not by an ambulance doing field pronouncement but by a body removal service) (\$89), then an autopsy (pathologist's fee: ~\$400), not to mention the hidden institutional costs to the ministry for morgue attendants and facility fees.

Finally, there is the time involved in

notifying the family of the autopsy results and answering their questions about their loved one's demise. Although this is covered in the \$155 fee, it takes time and energy and, for most coroners who are busy family physicians, takes time away from their practices.

Studies into the cost benefits of field pronouncement that make statements such as: "Pronouncement in the field requires more paramedic time but less physician time" (p. 19) and "This study suggests an economic advantage for field vs. ED pronouncement" (p. 24) need to take the above facts into consideration before suggesting a significant saving to the system.

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[The authors respond:]

Dr. Gall has identified an important cost associated with field pronouncement that was not measured in this study. We chose a priori to exclude the cost attributed to the coroner's investigation, mileage, body removal and autopsy for specific reasons.

The patients in the ED pronouncement cohort were cared for in an institution that routinely contacts the coroner for all ED pronouncements. Thus, the cost of the coroner's investigation was the same for each group. Body removal by the coroner's office and autopsy are both at the discretion of the coroner and were similar for the two comparative groups. Body removal by a funeral home was presumed to be the same for both groups. The coroner's