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 neuroprotective 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 underserviced 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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Reference

1. Cheung M, Morrison L, Verbeek PR. Prehospital vs. emergency department pronouncement of death: a cost analysis. CJEM 2001;3(1):19-25.

[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

mileage to the out-of-hospital setting relative to the hospital was not taken into account because the impact of this difference was assumed to be negligible. Subsequent to the study period, the regional coroner's office emphasized the need for emergency physicians to complete the death certificate and to call the coroner's office only when the death met certain criteria. Presumably, this would reduce the cost of the coroner's investigation for each in-hospital ED pronouncement. However, requests for additional responsibility and more paperwork must be weighed against competing service and academic demands, and the routine practice of calling the coroner has not significantly changed.

Dr. Gall identifies an important factor that may limit the generalizability of our results to other regions as alluded to in the limitation section of the manuscript. We thank the Editor for the opportunity to respond and to Dr. Gall for his cogent comments and his interest in this subject.

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Pine Lake Tornado: the rural response

To the editor:

We read with interest the Pine Lake Disaster article by Sookram and colleagues[1] in the January issue of *CJEM*. Having been involved in the disaster response we feel it important to comment. Certainly, learning from such disasters will improve preparedness for future events, but accurate information about the response and the experiences of those directly involved are essential. Having read the article, we are not sure that this occurred.

The article discusses the value of physicians at the scene and indicates, correctly, that there was a STARS flight physician on site. In our opinion he should be praised for his actions in managing and triaging patients for transfer. The article also states that, within 2 hours, Edmonton emergency physicians were on site, but this observation diverges from our own experience.

In the aftermath of the tornado, Guardian Ambulance, the primary EMS responders to the event, rapidly contacted Innisfail Hospital (which normally covers the Pine Lake area), and requested a physician presence. In response, we left for the scene approximately an hour after the tornado touched down. After arriving, the only physicians we encountered were the STARS physician and one other physician, who arrived later in the evening. Despite being part of the tornado response, neither of us have been approached for any comment on the events of the day. The question is, if input from physicians and support staff both at the scene and at smaller regional hospitals was not solicited, can meaningful conclusions be drawn from limited reports of what occurred?

On a personal note, and reflecting our desire for accurate reporting of the event, we are concerned that the *CJEM* article focuses on the response of and the care provided by secondary and tertiary hospitals. Whilst most of the severely injured patients were correctly sent to centres with the facilities to cope with them, a large number were sent to Innisfail and other primary care hospitals. The lack of acknowledgement of the role played by these other hospitals and care providers is a cause of upset to many of the people involved.

Given that many disasters occur in areas remote from large urban hospitals, it seems that the rural and primary care disaster response should surely be of interest, yet it seems our contributions are not considered to the same degree as those of the larger centres. We do not want to belittle the efforts of anyone involved, and it was heartening to see how so many people came together to deal with the tornado, but we do have concerns about the way the disaster response was portrayed, and we would be interested in the authors' response to these concerns.

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Reference

1. Sookram S, Borkent H, Powell G, Hogarth WD, Shepherd L. Tornado at Pine Lake, Alberta — July 14, 2000. Assessment of the emergency medicine response to a disaster. CJEM 2001;3(1):34-7.

[One of the authors responds:]

Thank you for reading and responding to our article. It was an unfortunate oversight that we did not solicit your input since, clearly, your perspective would have been valuable. As you suggest, Guardian Ambulance and the other early responders did a wonderful job establishing a triage station and recruiting help from the later-responding services. Health centres, rural hospitals and caregivers from Olds, Innisfail, Stettler, Three Hills, Lacombe and other small communities performed well during the night and made invaluable contributions to the disaster response.

An earlier draft of the article contained a more extensive discussion of the role of smaller communities. Unfortunately, for reasons of space, and perhaps because of our own more urban

perspective, we narrowed the focus of the article and perhaps failed to give credit where credit was due. This was not an intentional slight, and an apology is warranted.

With respect to the physician response, I compiled first-hand accounts from the STARS physician and 3 other physicians who flew to the disaster site with me on the night in question. Additional information was compiled during debriefings in Red Deer over the following weeks, and much of the information was subsequently confirmed and published by Hogarth and Neil.[1] It is not surprising our paths did not cross, since I worked most of that evening at the Red Deer airport treatment unit, receiving badly injured patients from the scene, from Red Deer Hospital and from primary care centres like yours. So, just as you were unaware of the contributions of the Edmonton physicians, I was unaware of yours. Had I known of your direct participation, I would have invited you to contribute your perspective to the article. I thank you for bringing it to my attention.

Your experience and perspective, described in the letter above, adds an important dimension to the picture. It might be appropriate to publish this experience or consider presenting it at an appropriate venue.

Of interest, there will be a Disaster Medicine stream at the CAEP 2002 meetings in Hamilton, Ont., next spring that you might be interested in contributing to. Further information on the Disaster Medicine track is available from Dr. Garnet Cummings at the Royal Alexandra Hospital in Edmonton (gcummings@ualberta.ca).

Once again, thank you for your insight, and I apologize for not providing an adequate discussion of the primary care facility's important role in disaster response.

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Reference

1. Hogarth WD, Neil GF. Tornado at Pine Lake, Alberta — July 14, 2000. Anatomy of a disaster: one hospital's experience and recommendations. CJEM 2001;3(1):38-40.

CAEP 2001 Research Grants Applications

Hoffman–La Roche Limited (HLR) has agreed, once again, to provide a $25 000 unrestricted grant to support the CAEP Research Grants Competition. HLR's generous support allows CAEP to offer several research grants this year, and Canadian emergency medicine (EM) researchers are eligible to apply for individual grants of up to $5000.

The goal of the CAEP Research Grants Competition is to promote and support Canadian EM research. Consideration will be given to applications from all centres, irrespective of affiliation (e.g., community physicians, non-university centres and rural physicians are encouraged to apply); however, only applications from CAEP members will be reviewed. Resident, fellow and student projects must be supervised by a CAEP member who is ultimately responsible for the completion of the project and is listed as the principal or co-investigator. Experienced researchers who graduated from their residency or research training programs more than 5 years ago are not eligible for this competition. A working group of the CAEP Research Committee will review grant proposals and allocate funds on the basis of methodological quality, originality and generalizability in the Canadian EM setting.

Process

Proposals for research projects must be delivered to the CAEP office no later than 5:00 p.m. (EST) on **September 3rd, 2001**. Fax and email versions of proposals will **not** be accepted. The grants will be reviewed, and all applicants will be notified of the funding decisions by October 1, 2001.

Proposals must be no more than five (5) pages of single-spaced text (excluding references and appendices). Size 12 font and unadjusted margins are mandatory. The proposal should be formatted under the following headings: Structured Research Abstract (limit: 1 page), Introduction/Rationale/Research Question/Methods (limit: 3 pages), Timing/Future Plans (1 page), and References (limit: 20 references). The research data collection tool and abbreviated curriculum vitae (<3 pages) of the principal investigator must be appended. Proposals that fail to comply with these rules will be returned to the author(s) and will not be reviewed.

Applications will be considered from all areas of interest to emergency medicine. Proposals may involve practice audits, feasibility studies, meta-analyses or small clinical projects.

Budget

Maximum grant funding is $5000 per grant. Grants in excess of $5000 will **not** be considered, unless proof of alternative and secured funding is provided. A single page outlining the use of the grant resources is mandatory as an appendix to all grant applications. No funding will be provided for presentations at meetings, conference travel or major equipment purchases (e.g., computers). Funding unclaimed within 12 months of the deadline will be reallocated.

Expectations

Successful applicants must provide a final report on the research project and they will be encouraged to present their completed projects at the CAEP Annual Scientific Meeting.

For further information, please contact the CAEP Head Office.

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