

Missed scientific abstracts from the 1999 CAEP/AMUQ scientific assembly

The following three CAEP/AMUQ research abstracts were inadvertently missed during the compilation of the October issue of *CJEM*. Each was awarded a poster presentation and is published in its correct format below. The Research Committee apologizes for any inconvenience this may have caused.

Profound lactic acidosis following a mixed overdose.

Moser M, Pursell R, McErlane K, Willis G. University of British Columbia, Vancouver, BC.

CASE REPORT: A 19-year-old female was admitted to the emergency department agitated, combative and screaming incoherently. Empty bottles of ibuprofen, as well as a number of empty bubble packs labeled Negicide (a trade name for nalidixic acid) and Panadol were brought in with her. On arrival in the emergency department she was tachycardic, normotensive and had kussmaul respirations. Initial blood work revealed a pH of 7.02, a bicarbonate of 2.8, an anion gap of 30, and a measured lactate level of 20.68 mmol/L. There was no witnessed seizure activity or hypotension prehospital, or in the emergency department. Her levels were as follows: ibuprofen 2604 mmol/L, acetaminophen 521 mmol/L, and nalidixic acid, 6 mmol/L. She was intubated, gastric lavaged and treated with bicarbonate, mucomyst infusion and charcoal. She improved over the course of the night and was extubated early the next day. **DISCUSSION:** We present a case of profound metabolic acidosis caused by an intentional overdose. It is unclear which of the drugs was responsible for the lactic acidemia. Profound metabolic acidosis (pH < 7.10) occurs rarely in patients who have taken an overdose of ibuprofen or acetaminophen; however, all three agents are capable of causing metabolic acidosis. It is possible that the combination of agents had a synergistic effect. **CONCLUSIONS:** Physicians should consider over-the-counter analgesics in isolation, or in combination with other medications as a cause for profound metabolic acidosis.

Predicting outcome in renal colic.

Papa L, Stiell IG, Klassen T, Wells G, Vandemheen K, Mahoney J, Division of Emergency Medicine and Clinical Epidemiology Unit, University of Ottawa, Ottawa.

OBJECTIVES: To prospectively evaluate the role of intravenous pyelography (IVP) in patients presenting with renal colic to the emergency department. **METHODS:** Patients with acute renal colic were assessed prospectively at the Ottawa Hospital Emergency Department. Pain measures and assessments as to the clinical usefulness of an IVP were performed in the ED. Patients were then followed via telephone interviews until stone passage. **RESULTS:** From July to September 1998, 24 patients were assessed prospectively. 79.2% of the patients were found to have kidney stones. IVP was performed on 60% of patients, ultrasounds were done on 20% and a KUB was done on 5%. Of those who had stones 68.4% passed them spontaneously (31.6% within 48 hrs of presenting to emergency), and 31.6% did not pass their calculi after 12 weeks and required some form of interven-

tion. Emergency physicians estimated that the average likelihood of the IVP results changing their management of the above patients was 42% (SD = 34.5). However, of those patients who had difficulties passing their stones only 40% had had an IVP done in the emergency department initially. In addition, pain scores (evaluated via a ten-point visual analogue scale) at initial ED visit in those patients with complications from their stone had a tendency of being higher than average (mean = 9.2 ± 1.10) vs (mean = 8.5 ± 1.42). **CONCLUSION:** If we could identify clinically, using tools such as pain scales, those patients who will have complications from delayed passage of their kidney stones we could be more selective and precise in the use of IVPs in the ED and provide earlier follow-up to the urologist for intervention.

A retrospective evaluation of the performance of prehospital advanced life support providers during cardiac arrest.

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OBJECTIVE: To evaluate the performance of newly trained advanced life support (ALS) providers during cardiac arrests. **METHODS:** A retrospective chart review of all cardiac arrests with ALS response from July 1, 1997, to June 30, 1998. **RESULTS:** 222 charts were reviewed. Six were excluded from procedures analysis due to only basic life support response, however, they were included in outcome analysis. The mean age was 65.2 years. 88% of arrests received ALS on scene within 11 minutes (7.3 min. mean). Of the arrests terminated at the scene mean resuscitation time was 19.4 min. If transported mean scene time was 24.3 min. Transport time averaged 6.7 min. Bystander CPR occurred 18.7% of the time. Fire department responded to 62% of cases. BLS crews were first responders to 25% of cases. A second crew was present in 50% of arrests (30% ALS). Presenting rhythms were asystole (49.2%), pulseless electrical activity (26.4%), ventricular fibrillation (21.2%) and ventricular tachycardia (3.2%). 4.3% of patients were conscious upon ALS arrival. Initial rhythms were misinterpreted in 9.5% of cases. Mean time to defibrillation (if immediately indicated) was 4 minutes. Time to endotracheal intubation (ETT) (if immediately indicated) was 6.4 minutes. Mean time to intravenous (IV) cannulation was 9.8 min. Success rates at ETT and IV were 76.4 and 58.5% respectively. 2.6% and 12.4% of all cardiac arrests failed to ever have successful ETT or IV placement. 7.4% (14 cases) were discharged from hospital. 10 cases, including 4 of the survivors, were conscious for a mean of 22.9 minutes at scene prior to arrest. 2 more survivors had only BLS response. **CONCLUSION:** In the setting of recently trained ALS providers problems arose with rhythm interpretation and the timeliness and successful completion of ETT and IV placement. Outcomes from cardiac arrest remain universally poor.