Malcolm Lemyze, MD
Richard Chaaban, MD
François Collet, MD

From the Department of Emergency and Critical Care Medicine (Lemyze, Collet) and the Department of Visceral Surgery (Chaaban), Broussais Hospital, St Malo, France.

0196-0644/$-see front matter

doi:10.1016/j.annemergmed.2009.03.033

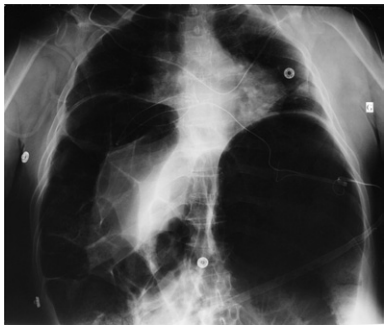

Figure 1. Chest radiograph showing an enormous gaseous dilation of the stomach and the large bowel.

Figure 2. CT of the abdomen showing the hepatodiaphragmatic interposition of the large bowel (Chilaiditi sign).

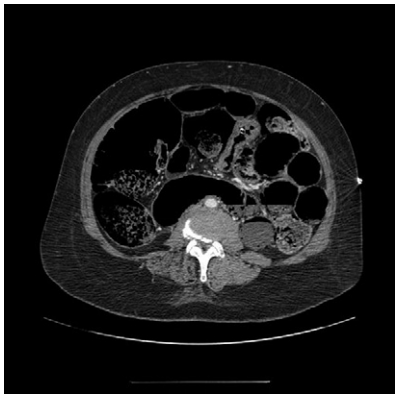

Figure 3. Acute colonic pseudo-obstruction with massive distension of the whole bowel.

Figure 4. Typical bluish aspect of the infarcted intestinal loops that had to be removed during the open surgical procedure. Used with permission of Malcolm Lemyze, MD, Department of Emergency and Critical Care Medicine, Broussais Hospital, St Malo, France.

[Ann Emerg Med. 2009;54:756.]

A 46-year-old psychotic woman presented to our emergency department with a 4-day history of abdominal pain and protracted vomiting. She reported no previous surgeries, and her treatment consisted of high doses of 2 neuroleptics (chlorpromazine and loxapine) and a combination of 2 anticholinergic drugs (trihexyphenidyl and tropatepine). Physical findings included a painful distended abdomen with hypertympanic percussion and rapid shallow breathing. Chest radiograph and computed tomography (CT) of the abdomen revealed an enormous gaseous distension of the stomach and the whole intestinal tract, with hepatodiaphragmatic interposition of the large bowel (Chilaiditi sign) (Figure 1, Figure 2, and Figure 3). Laboratory testing showed no electrolyte imbalance. A few hours later, she was transferred to the operating room for circulatory shock, with acute renal failure and abdominal compartment syndrome, attested to by a high intra-abdominal pressure reaching 36 cm H_2O. Surgical decompression by "blow hole" cecostomy and segmental colonic resection of the infarcted intestinal loops (Figure 4) were performed. No evidence of mechanical bowel obstruction was found during surgery.

For the diagnosis and teaching points, see page 759.
To view the entire collection of Images in Emergency Medicine, visit www.annemergmed.com

cardiac dysrhythmia (personal communication, Graham Smith, Home Office Scientific Development Branch, May 20, 2009).

These data are important because they provide a carefully monitored denominator of consecutive conducted electrical weapon uses, against which a numerator of adverse events can be compared. When this experience is combined with previous reports of medical outcomes after consecutive field use of conducted electrical weapons, including Eastman et al (n=426), Bozeman et al (n=1201), and a recent abstract by Angelidis et al (n=1101), there is a combined experience of 4,058 consecutively monitored conducted electrical weapon uses with an electrical shock delivered.[2-4] Serious injuries are clearly rare, and there are no cases in any of the reports suggesting sudden cardiac death related to the Taser. While these findings of zero observed fatalities neither fully exclude the possibility of conducted electrical weapons having cardiac effects nor diminish the importance of that possibility, they do allow calculation of a 97.5% confidence interval that the risk of an immediate fatal event due to conducted electrical weapon use is not greater than 0.09%.

The accumulating safety evidence from carefully monitored field experience clarifies the potential risks of conducted electrical weapons and continues to support their overall safety. This is particularly evident when safety information is considered in the context of the known benefits of conducted electrical weapons including their effectiveness as a police tool, reductions in injuries among both officers and suspects, and reductions in the use of lethal force.

From a public health/epidemiologic perspective the use of conducted electrical weapons is similar to that of automobile air bags, which are also known to pose a small risk of serious injury and even death in rare cases, but are clearly responsible for marked overall reductions in injuries and fatalities. While investigations to clarify the risks and optimize the safety of these devices must continue, the overall balance of risks versus benefits in terms of injuries prevented and lives saved weighs heavily in favor of the use of both.

William P. Bozeman, MD
Wake Forest University
Department of Emergency Medicine
Winston Salem, NC

doi:10.1016/j.annemergmed.2009.06.015

Funding and support: By *Annals* policy, all authors are required to disclose any and all commercial, financial, and other relationships in any way related to the subject of this article that might create any potential conflict of interest. The author has stated that no such relationships exist. See the Manuscript Submission Agreement in this issue for examples of specific conflicts covered by this statement.

1. Home Office Scientific Development Branch
Figures on the reported and recorded uses of Taser by police forces in England and Wales. 05 May 2009. Available at: http://scienceandresearch.homeoffice.gov.uk/images/106966/Taserfigs_Sep-Dec_08_.pdf. Accessed May 16, 2009.
2. Eastman AL, Metzger JC, Pepe PE, et al. Conductive electrical devices: a prospective, population-based study of the medical safety of law enforcement use. *J Trauma.* 2008;64:1567-172.
3. Bozeman WP, Hauda WE 2nd, Heck JJ, et al. Safety and injury profile of conducted electrical weapons used by law enforcement officers against criminal suspects. *Ann Emerg Med.* 2009;53:480-489.
4. Angelidis M, Basta A, Walsh M, et al. injuries associated with law enforcement use of conducted electrical weapons. *Acad Emerg Med.* 2009;16(suppl. 1):S229.

IMAGES IN EMERGENCY MEDICINE

(continued from p. 756)

DIAGNOSIS:

Life-threatening psychotropic drug–induced gastrointestinal hypomotility. Antipsychotics can affect the entire gastrointestinal system, from esophagus to rectum, and may cause bowel obstruction, colonic distension, ischemia, perforation, and aspiration. The mechanism is likely to be anticholinergic and antiserotonergic. The fatality rate of acute colonic pseudo-obstruction is high, especially if surgery is delayed and in cases of abdominal compartment syndrome associated with multiple organ failure.[1] Althought many cases of fatal neuroleptic-induced constipation have been previously reported, this life-threatening adverse effect of psychotropic drugs remains unknown by most emergency care practitioners who may be in charge of such psychotic patients in the medical-surgical setting.[2,3]

REFERENCES

1. Oudemans-van Straaten HM. Acute megacolon in critically ill patients. In: Fink MP, Abraham E, Vincent JL, et al, eds. Textbook of Critical Care Medicine.5thed. Philadelphia, PA: Elsevier Saunders; 2005:1055-1060.
2. Palmer SE, McLean RM, Ellis PM, et al. Life-threatening clozapine-induced gastrointestinal hypomotility: an analysis of 102 cases. *J Clin Psychiatry.* 2008;69:759-768.
3. Gollock JM, Thomson JP. Ischaemic colitis associated with psychotropic drugs. *Postgrad Med J.* 1984;60:564-565.