were poisoned by digestive tract, 47 cases (70.1%) by Metham, 7 cases (10.4%) by Folimat, 11 cases (16.4%) by Atgard. The dosage taking ranged from 50 to 250 ml, with an average of the doses of 120 ml. The main presenting symptoms and signs were: coma, vomiting, urinary incontinence, drooling, difficulty breathing, hypertension, face muscle trembling, miosis, and rales in both lungs. The serum cholinesterase action ranged from 0 to 8 Units.

Key words: organophosphate poisoning; rescue; signs; symptoms
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The Value of Initial Serum Levels of Drugs as Predictors of Complication Risks in Intentional Intoxications

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Introduction: Intentional intoxications are encountered frequently in emergency services, and the medical management of these patients depends on the initial clinical status of the patient and the local poison unit's advice. Managing these patients can be very expensive due to the fact that the clinical status may vary dramatically within a short period. The aim of the present study is to assess the role of initial serum level of the drugs as a sign of complication risks to these patients in order to improve the cost-effectiveness of their management.
Methods: Clinical and biological findings from a sample of 200 consecutive patients (128 females and 72 males, aged between 17 to 79 years, with an average age of 35 years) were managed in our institution from January 2000 to December 2000. All victims of intentional intoxication (except pure or mixed alcohol and addicts) were reviewed retrospectively. The initial clinical status, the management duration, and the complications were used to assess and establish the effectiveness of each drug on a five-point scale score. Curves between these scores and each drug initial serum level were established and correlation coefficients calculated.
Results: Most of the intoxications were due to intentional benzodiazepin overdose. We did not find any statistically significant correlation between drugs' initial serum level and the effectiveness score of drugs included in the patient's usual drug regiment such as antidepressive agents. Some correlation was found for some uncommon drugs such as paracetamol.

Key words: complication risks; cost; effectiveness; intoxication; overdose; prediction; serum levels
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Hemorrhagic Shock and Antioxidants: Influence of Timing on Survival

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Introduction: Hemorrhagic shock (HS) is associated with the generation of reactive oxygen species (ROS). Interventions that reduce the generation of ROS exert beneficial effects on the acute mechanisms in HS models. Spin trapping nitrones or tempol (4-hydroxy-2,2,6,6-tetramethyl-4-piperidine-N-oxyl), which acts as an antioxidant and membrane-permeable scavenger of superoxide anions, improved short-term outcome in models of hemorrhagic or endotoxic shock. We hypothesized that polynitroxylated, albumin-bound tempol (PNA+Tempol), which increases half-life of free tempol, improves process and outcome variables during and after HS in rats.
Methods: *Study 1*. HS was induced by blood withdrawal of 3 ml/100 g over 15 min. Mean arterial pressure (MAP) was maintained at 40 mmHg with normal saline or blood withdrawal from 20 to 90 minutes. Resuscitation (90 to 270 minutes) was with infusion of shed blood. Observation was to 72 hours. At HS 45 minutes, albumin (ALB, n = 3D 10) or PNA+Tempol (n = 3D 10) was infused (1 ml/100g/h) until 120 minutes.
Study 2. Same as in Study 1 (n = 3D 6 per group), but terminated at 150 minutes.
Study 3. Same as Study 1, but started with ALB or PNA+Tempol (n = 3D 7 per group) at 20 minutes. Primary endpoints in Studies 1 and 3 were survival and biochemical markers, endpoints in Study 2 were antioxidant reserve (serum and tissue) and inflammation (tissue).
Results: Study 1. 72 hour survival was 1/10 (ALB) vs. 2/10 (PNA+Tempol). At 90 minutes, pHa was lower in the ALB group vs. the PNA+Tempol group (p = 3D, 0.02) and remained low. Arterial lactate increased to 8.9 = B1 3.2 vs. 6.5 =B1 1.8 mmol/l (p = 3D, 0.04) and base excess was -9.6 = B1 4.3 vs. -5.2 = B1 3.2 mmol/l (p = 3D 0.01) (ALB vs. PNA+Tempol, respectively).
Study 2. Antioxidant reserve in the serum was threefold lower in the ALB group vs. the PNA+Tempol group (p = 3D 0.002). There were no differences between groups in antioxidant reserve in the small intestines or low molecular weight thiols in liver, kidney, and small intestine. Expression of pro-inflammatory cytokines in liver and gut was similar in both groups.
Study 3. 72 hour survival was 0/7 (ALB) vs. 5/7 (PNA+Tempol), p=3D 0.02. Heart rate and systolic blood pressure at end of HS were higher in the ALB group (p <0.05).
Conclusion: When infused early in HS, PNA+Tempol can increase survival. When given late, it significantly improves acid-base and antioxidant status, without an effect on survival. Early resuscitation with the antioxidant PNA+Tempol may attenuate ROS-mediated injury and the progression toward multiple organ failure and death after HS. The results suggest that antioxidant therapy should be part of the initial resuscitation for HS.

Key words: antioxidants; hemorrhage; outcome; reactive oxygen species; scavengers; shock survival; tempol; timing
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