Abstracts in this issue were prepared by residents in the University of Arizona Emergency Medicine Residency Program.

ABSTRACTS

Richard Dart, MD
Co-Editor
Section of Emergency Medicine
University of Arizona College of Medicine
Tucson, Arizona

Vincent J Markovchick, MD, FACEP
Co-Editor
Emergency Medical Services
Denver General Hospital
Denver, Colorado

William A Robinson, MD, FACEP
Co-Editor
Department of Emergency Medicine
University of Missouri-Kansas City
School of Medicine
Kansas City, Missouri

intubation, endotracheal

Which drug prevents tachycardia and hypertension associated with tracheal intubation: Lidocaine, fentanyl, or esmolol?

Helfman SM, Gold MI, DeLisser EA, et al
Anesthes Analg 72:482-486
Apr 1991

This study attempted to determine if a single bolus of placebo, lidocaine, fentanyl, or esmolol has a significant effect on a patient's hemodynamic response to endotracheal intubation. Patients were more than 21 years old; ASA II-IV; scheduled for noncardiac surgery; had no history of greater than first-degree atrioventricular block or of congestive heart failure; had no history of cardiac arrhythmias; and had not taken beta-blockers within 24 hours prior to surgery. Patients were pretreated with glycopyrrolate and midazolam 30 to 60 minutes before induction. Oxygen and thiopental were administered in the operating room, followed by the study drug (placebo, lidocaine 200 mg, fentanyl 200 μg, or esmolol 150 mg). Succinylcholine was given at one minute followed by intubation. All patients were intubated by the same person. Intubations taking more than 30 seconds were excluded from the study. Heart rate was taken every 15 seconds, and systolic blood pressure was taken every minute for ten minutes after intubation. The results showed that the increases in heart rate were the same for the placebo, lidocaine, and fentanyl groups, but were lower in the esmolol group. Systolic blood pressure and changes in systolic blood pressure were lower in the three drug groups than the placebo group but showed no intergroup differences. The authors conclude that the use of esmolol before intubation should be considered when there is worry about the hemodynamic response to intubation.

Jeff Schaffer, MD

pregnancy, ectopic; progesterone

Use of a single random serum progesterone value as a diagnostic aid for ectopic pregnancy

Gilder MS, Boots LR, Younger JB
Fertil Steril 55:497-500
Mar 1991

The authors retrospectively evaluated random serum progesterone levels from 126 pregnant patients to assess the value of a single random serum progesterone value in the diagnosis of ectopic pregnancy. Pregnancy was initially determined by at least two successive serum β-HCG levels. Patients were divided into three groups based on pregnancy outcome, including intrauterine pregnancy, ectopic pregnancy, or abnormal intrauterine pregnancy (spontaneous or missed abortion, blighted ova). All patients had at least two serum samples assayed for progesterone between three and ten weeks' gestation, and all values obtained for each group during this time interval were averaged. Although significant differences of mean values for all three groups were identified, there was no single progesterone value that predicted the presence or absence of ectopic pregnancy due to the considerable overlap in the range of values. Of the patients with ectopic pregnancy, only 2% had a progesterone value of more than 20 mg/mL, and only 2% of patients with intrauterine pregnancy had a value of less than 10 mg/mL. The authors conclude that the usefulness of a single random progesterone value in the diagnosis of ectopic pregnancy remains unproven.

Mark Mahoney, MD

deferoxamine; chelation

An objective criterion for the cessation of deferoxamine therapy in the acutely poisoned patient

Yatscoff RW, Wayne EA, Tenenbein M
Clin Toxicol 29:1-10
Mar 1991

There are no clear end points for discontinuation of deferoxamine therapy in patients with iron poisoning. The purpose of this study was to develop an objective end point for chelation therapy. Most methods for quickly determining iron in fluids are confounded by the presence of deferoxamine. The authors adapted and validated a method for iron determination in urine in the presence of deferoxamine. Urine was collected from 20 healthy volunteers at two-hour intervals for a total of 24 hours on day 1, and iron and creatinine were measured in each sample. The ratio of iron to creatinine (Fe:Cr) was calculated, thereby giving a measure that was independent of urine flow. On day 2, urine samples were again collected, this time during and after a 15 mg/kg/hr infusion of deferoxamine over two hours. The mean Fe:Cr ratios calculated on day 1 (2.78 ± 3.1) and day 2 (3.36 ± 3.7) were not statistically different. The Fe:Cr ratio greater than the 97.5th percentile (12.5) was chosen in these normal subjects as an indicator of increased ferruresis. The Fe:Cr ratios in three iron-poisoned patients were found to be greater than 12.5 during the deferoxamine infusion. Less than half of the urine samples were colored at times when the Fe:Cr ratio was greater than 12.5. The authors conclude that the assay is accurate and reliable; during an infusion of deferoxamine the Fe:Cr ratio provides an objective end point for termination of therapy (the end point ratio of 12.5 is based on the above infusion