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for all events, Δ LVEF and rest LVEF were both independent prognostic variables ($p = 0.009$ and $p = 0.02$, respectively). The multivariate analysis showed that the above difference in LVEF predicted future interventions with a power of $p < 0.002$.

Forty-four patients (51%) survived without a cardiac event and without cardiac surgery during follow-up. The most significant predictors for event-free survival in this subgroup were exercise heart rate, resting LVEF, and change and fractional change in LVEF during exercise.

In an editorial based on this and other studies, Yim and colleagues (May 2000)³ recommended that patients should not be turned down for surgical revascularization because of advanced age alone. We applaud this approach, which comes in the wake of valuable, novel contributions from a variety of disciplines, one of which is ERN. We demonstrated that ERN performed at an early postoperative interval in elderly CABG patients is prognostically useful and that it provides additional information to help guide the physician in consulting with and treating elderly patients after CABG.

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REFERENCES

- 1 Hirose H, Amano A, Yoshida S, et al. Coronary artery bypass in the elderly. *Chest* 2000; 117:1262–1270
- 2 Shapira I, Isakov A, Yakirevich V, et al. Long-term results of coronary artery bypass surgery in patients with severely depressed left ventricular function. *Chest* 1995; 108:1546–1550
- 3 Yim AP, Arifi AA, Wan S. Coronary bypass grafting in the elderly: the challenge and the opportunity [editorial]. *Chest* 2000; 117:1220–1221

Placement of the Esophageal Doppler Ultrasound Monitor Probe in Awake Patients

To the Editor:

By anesthetizing the nasal mucosa, the esophageal Doppler ultrasound monitor (EDM) probe can be readily inserted into awake patients. The advantages of this minimally invasive tool to accurately and quickly ascertain cardiac contractility, aortic flow, and preload are well established.^{1–3} In addition, these indexes are determined on a continuous basis. Thus, there is tremendous utility for this device in critically ill patients who are awake or sedated, including those in the operating room, intensive care or “step-down” units, or postanesthesia care unit.

Initially, the patient’s coagulation status must be examined. With nasal insertion of the EDM probe, anticoagulation could lead to significant nasal bleeding. The presence of nasal polyps may also predispose to bleeding. Furthermore, patients with facial or basilar skull fractures should be carefully evaluated prior to placement of any nasal device.

The significance of a deviated septum can be assessed by having the patient breathe while manually occluding each nostril individually. Accordingly, the nostril with the greatest patency should be used for probe placement.

Following this, nasal vasoconstrictors, such as oxymetazoline or

phenylephrine, may be applied by spray. Topically placed cocaine, which produces both vasoconstriction and local anesthesia, can also be used.⁴ However, the hemodynamic effects of cocaine may limit its use.

The turbinates may be dilated by use of a nasal airway.⁵ Topical 2% lidocaine gel applied to the nasal airway will act as both a lubricant and anesthetic. Use of sequentially larger diameter nasal airways may be necessary to achieve adequate dilation. Each nasal airway should be left in place for several minutes before proceeding.

The posterior oropharynx can be sprayed with benzocaine or a similar aerosol-based local anesthetic. Having the patient swallow then allows for additional oropharyngeal and esophageal anesthesia.

The proximal aspect of the EDM probe should also be coated with lidocaine gel before insertion. If necessary, small amounts of benzodiazepines and/or opiates may be useful for increasing patient tolerance.

Using this technique, the EDM probe has been reliably placed in awake patients for up to several hours. Subsequent manipulation of the EDM probe is also well tolerated.

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REFERENCES

- 1 Singer M. Esophageal Doppler monitoring of aortic blood flow: beat by beat cardiac output monitoring. *Int Anesthesiol Clin* 1993; 31:99–125
- 2 Madan AK, UyBarreta VV, Aliabadi-Wahle S, et al. Esophageal Doppler ultrasound monitor versus pulmonary artery catheter in the hemodynamic management of critically ill surgical patients. *J Trauma* 1999; 46:607–612
- 3 Marik PE. Pulmonary artery catheterization and esophageal Doppler monitoring in the ICU. *Chest* 1999; 116:1085–1091
- 4 Gross JB, Hartigan ML, Schaffer DW. A suitable substitute for 4% cocaine before blind nasotracheal intubation: 3% lidocaine-0.25% phenylephrine nasal spray. *Anesth Analg* 1984; 63:915–918
- 5 Dow A. Regional anesthesia. In: Grande CM, ed. *Textbook of trauma anesthesia and critical care*. St. Louis, MO: Mosby, 1993; 486–487

Errata

In the August 2000 supplement, “Translating Guidelines Into Practice: Implementation and Physician Behavior Change” [*CHEST* 2000; 118(Suppl):1S–73S], Barry Fuchs, MD, FCCP, of the University of Pennsylvania, was omitted from the list of conference participants.

In the October 2000 issue, the article “Medical and Surgical Treatment of Parapneumonic Effusions: An Evidence-Based Guideline” (*CHEST* 2000; 118:1158–1171), by Colice et al, the affiliation for Roger D. Yusen, MD, should have been given as the Department of Medicine, Washington University School of Medicine, St. Louis, MO.

In the October 2000 issue, the article “Maximal Inspiratory Flow Rates in Patients With COPD” (*CHEST* 2000; 118:976–980), by Stanescu et al, contained a printer’s error in Figure 4. The upper part of the figure should be labeled “MEFR,” and the lower part should be labeled “MIFR.”

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