In addition, our conclusion is strongly supported by recent data assessing (fast Fourier transformation) heart rate variability in young men with chronic complete cervical spinal cord transection as well as in healthy volunteers. In this study, a substantial amount of low-frequency spectral power is present in patients with transected spinal cord, related to arterial blood pressure, and nearly abolished by atropine in both the tetraplegic and healthy subjects.14 This suggests that low-frequency spectral power is related to central baroreflex mechanisms and, at least in a major fashion, to vagal rather than sympathetic cardiac outflow. In addition, the same results were obtained by au-
20norreceptive data analysis proposed by Introna et al.15,19 leading Koh et al. to "raise serious doubts that any measure of low frequency R-R interval power, including absolute integrals, or integrals divided by total power, can provide meaningful estimates of sympathetic traffic to the heart, or of the balance between sympathetic and vagal neural outflows."
14,15
Thus, whether any measure of low-frequency spectral power provides a simple, meaningful, specific, sensitive, and reproducible estimate of cardiac sympathetic modulation in the hand of unbiased investigators appears questionable.

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The Penn State Anesthesia Electronic Case Conference

To the Editor—The Internet, once the domain of the military and research scientists, is becoming a useful resource for the anesthesia community. The ease of use and richness of information within the World Wide Web is quickly making it the most popular area of the Internet.

Anesthesia Case Conferences, held within virtually every academic center in the United States, is a place where anesthesiologists gather to discuss patient management issues. Unusual cases are presented and discussed by the group. In the past, access to these discussions was limited to the hospital of occurrence. Access by the private practitioner was almost nonexistent.

The Penn State Anesthesia Electronic Case Conference combines
Coma and Vegetative State Are Not Interchangeable Terms

To the Editor—Alkire et al.1 used positron emission tomography (PET) scanning technology to characterize cerebral metabolism during propofol anesthesia. In the discussion, the authors refer to Levy et al.’s paper2 to state that global cerebral metabolism of glucose (CMRglu) in comatose patients is reduced by 60%. However, the patients studied by Levy et al. were not comatose patients, but patients in a “vegetative state” or in a “locked-in syndrome.”

Unfortunately, physicians interchange these categories and consider the vegetative state in patients to be a coma state. In the early 1970s, Jennett and Plum3 clearly identified such categories of patients, and great effort is made internationally to identify these categories of patients because of several ethical dilemmas.4,5 Patients in a coma state are unconscious because they lack both wakefulness and awareness. Patients in a vegetative state are in a clinical condition of complete unawarness of self and environment, but they have sleep-wake cycles and complete or partial preservation of hypothalamic and brainstem autonomic functions. The locked-in syndrome refers to a state in which consciousness and cognition are retained, and patients in this condition can communicate through eye-movement signals.

In a recent study,6 we demonstrated that patients with different disturbances of consciousness have different CMRglu. Comatose patients have a 45% reduction of global CMRglu (range in the discrete cerebral areas 34–54%), whereas patients in the vegetative state have a global CMRglu reduction (according to the length of their vegetative condition) ranging from 49% to 65% (range in the cerebral areas 36–72%) from control normal subjects.

I recommend that we, as physicians and anesthesiologists, in particular, should not increase the confusion regarding the terminology used to describe patients in such different clinical conditions.

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Carbon Dioxide Somatosensory Evoked Potentials

To the Editor—Thiel et al.1 did not find a difference between preoperative changes in carbon dioxide as determined by transcranial somatosensory evoked potentials (TSEPs) and changes in the corresponding arterial carbon dioxide. The authors conclude that changes in the arterial carbon dioxide reactivity assessed by TSEPs were not significant. We do not agree. We need to differentiate between the cerebral ischemia associated with carbon dioxide changes in the arterial carbon dioxide reactivity assessed by TSEPs and the changes in the cerebral ischemia associated with carbon dioxide changes in the arterial carbon dioxide reactivity. The investigation by Thiel et al. is highly interesting, but we need to differentiate between the cerebral ischemia associated with carbon dioxide changes in the arterial carbon dioxide reactivity assessed by TSEPs and the cerebral ischemia associated with carbon dioxide changes in the arterial carbon dioxide reactivity.

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