

function.^{2,3} In acutely ill patients, left ventricular function must be evaluated by means of a pulmonary-artery catheter, which permits wedging in a distal pulmonary artery and balloon occlusion (wedge pressure), or placement of a left atrial catheter at the time of open-heart surgery. No measurement of cardiac output or left ventricular function was made in the case report by them. We believe the patient was already in pulmonary edema prior to the administration of naloxone, as evidenced by post-cardiopulmonary bypass difficulties and by the increased alveolar-arterial oxygen tension difference. The use of naloxone may well have increased sympathetic nervous system activity, increasing the preload and afterload with the resultant worsening of pulmonary edema in an already compromised heart.

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In reply:—We are sorry to see that Drs. Sprissler and O'Connor seem to have missed the point of our case report. The purpose of the report was to draw attention to the dramatic consequences of administering what was then considered a standard dose of naloxone. Obviously, there was no intention of studying the hemodynamics of the changes seen, but the documentation provided suffices to support the conclusions drawn. As a matter of fact, Drs. Sprissler and O'Connor suggested the same mechanisms as we did, although we used a different terminology. The report emphasized the fact that the patient's cardiac function was poor before, during and after the operation. There can be no argument about the temporal and causal relationship between the injection of naloxone and the acute worsening of the patient's condition, and its alleviation by subsequent doses of morphine given to overcome the effects of the an-

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General Anesthesia by Dentists Unacceptable

To the Editor:—I was interested to read the recent article by Klein *et al.*,¹ since the practice of general anesthesia by dentists is so rarely mentioned in anesthesiology journals. They correctly point out that no one knows the total number of anesthetic administrations involved, the mortality rate, or even how many dentists administer general anesthesia in the office. They quote an estimate of between 4 and 10 per cent of practicing dentists who administer general anesthesia (of these about half have had three months' training in anesthesia). The authors advocate the train-

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tagonist. The unanswered question is: what was the mechanism(s) for the increase in sympathetic nervous system activity following naloxone? Was it simply the return of pain? Was it a precipitated withdrawal syndrome? Or could there be still other mechanisms involved in this massive response to naloxone nine hours after a large dose of morphine?

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ing of dental anesthesiologists to teach in dental schools. These specialists would teach at "the undergraduate dental level" and would set up "graduate programs for practicing dentists, who could return to the dental school for short periods of training."

Surely this is not a proposal that most anesthesiologists would endorse. It could be compared to having anesthesiologists: a) teach general anesthesia to medical students, thus enabling them to administer general anesthesia in their office practices after graduation; b) hold short courses in general anesthesia for family

practitioners. No one could advocate such a program today as increasing patient safety.

Anesthesiology can continue to advance only by keeping patient safety as a paramount consideration. General anesthesia in a dental office often means that one person, the dentist, is administering general anesthesia and doing operative procedures at the same time. Continuous monitoring of the progress of and patient responses to the anesthetic by the dentist is impossible. The occasional patient may unsuspectingly have a full stomach or a profound adverse response to anesthetic drugs, necessitating endotracheal intubation or cardiopulmonary resuscitation. These unexpected, untoward events cannot be properly managed by a lone party in a dental office. I sincerely doubt that the program outlined by Klein *et al.* "would go far toward increasing the quality of a significant number of the general anesthetic administrations in this country." It could equally well have the disastrous effect of conferring the implied approval of prestigious dental school faculty on the practice of general anesthesia in the dental office. By increasing the numbers of patients anesthetized in dental offices, it could well exacerbate the problem that exists today.

To become involved, however vicariously, in pro-

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In reply:—We thank Dr. McLaughlin for his comments on our paper. Both he and we are interested in the same results—the highest possible quality of care and the greatest safety for the patient in the dental office. Dr. McLaughlin believes that if principles of general anesthesia are taught in dental schools, we may create a large number of barely trained individuals who feel that they have the stamp of approval to administer general anesthesia in a dental office. We would consider that result highly undesirable, but we do not believe that would be the result if the principles of general anesthesia and sedation were taught in dental schools. It is our own experience from the teaching of anesthesia to medical students, interns, and residents in other specialties that the result of such instruction is a healthy respect for possible complications and a greater tendency to call on the services of a qualified and fully trained individual more frequently.

Whether or not it is desirable that dental practice in offices be limited to local anesthesia, a significant number of general anesthetics and intravenous sedation techniques continue to be performed in dental offices. No amount of discouragement of this practice has successfully decreased it. We therefore believe that training in anesthesia is a more logical approach, not because we would like to see the individual who

moting this activity is not in the best interests of patient safety or anesthesiology. We in anesthesiology should strongly support the total discontinuance of general anesthesia in the dental office. Using the authors' own figures, it appears that 90 to 96 per cent of dentists practice effectively with local anesthesia, thus making a very strong case for the position that general anesthesia in the dental office is totally unnecessary. The extremely small number of dental patients who need general anesthesia can be cared for safely in hospitals or outpatient surgery centers. The dentists have shown that they are the most accomplished health care professionals in the use of local anesthesia. Let us continue to encourage them to use this expertise for all their patients.

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has had a few weeks of anesthesia training in dental school administer anesthesia, but because we believe that individual will have a better concept of what he should and should not do as a solo practitioner in the office.

We do not believe there is any objection to the fully trained practitioner administering anesthesia, and we believe that if adequate numbers of dental faculty are fully trained they can provide others with as much as two years of clinical anesthesia training. These trainees could then safely administer anesthesia to dental patients.

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