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### An Additional Concern with Respect to Patient-controlled Analgesia

*To the Editor:*—We recently have undertaken a survey of the visitors of patients who were receiving patient-controlled analgesia (PCA) after surgery to determine their understanding of the system. Upon being seen on rounds by the Acute Pain Service, the visitors of 30 patients were asked two questions: 1) "Do you know the function of this button?" (*i.e.*, the hand-held device that the patient depresses to receive a dose), and 2) "If the patient were asleep but looked like he/she was in pain, would you push the button for him/her?"

Twenty-six of the 30 respondents correctly identified the button; of these, 14 indicated that they would push the button to deliver a dose of analgesic if the patient appeared to be in pain. After being informed of the button's function, 2 of the 4 remaining visitors likewise said they would press it for the patient.

We believe that this potentially negates one of the safety features of PCA, namely, that the patient must be awake in order to depress the button. Although we know of no complications to date, we nevertheless believe that it is important to inform visitors appropriately.

Perhaps it would be reasonable to place a label on each PCA device indicating that "this button is to be pushed by the patient only." An appreciation of the potential problem may be of vital importance, especially as hospitals hurry to comply with recommendations that techniques such as PCA be used to provide postoperative analgesia (*i.e.*, the new Guidelines for Postoperative Pain Management prepared by the United States Agency for Health Care Policy and Research of the Department of Health and Human Services).

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### Anterograde, Not Retrograde, Amnesia after Thiopental

*To the Editor:*—Ghoneim and Block,<sup>1</sup> in their review article "Learning and Consciousness during General Anesthesia," have misquoted the conclusions of our paper<sup>2</sup> regarding the amnesic properties of thiopental, which leads to an entirely confusing impression on the subject. They state, "Although Dundee and Pandit have suggested that both thiopental (6 mg/kg) and methohexital (4 mg/kg) have little effect on memory, definitive study with thiopental using a paired associate task showed impairment."<sup>3</sup> One cannot compare the two studies, because whereas we<sup>2</sup> studied the retrograde amnesic properties of various intravenous anesthetics, Osborn and coauthors<sup>3</sup> studied the anterograde amnesic effects of thiopental. One must differentiate between the two types of amnesia (anterograde *vs.* retrograde) while discussing the drug effects. In our study, we found that not only did thiopental 6 mg/kg and methohexital 4 mg/kg produce no retrograde amnesia, even diazepam 1 mg/kg and propanidid 4 mg/kg did not produce any retrograde amnesia. This is because, it is well known that these agents will produce varying degrees of anterograde amnesia in a dose-dependent fashion. I hope this explanation will clear the misunderstanding that some readers may have after reading Ghoneim and Block's excellent article.

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3. Osborn AG, Bunker JP, Cooper LM, Frank GS, Hilgard ER: Effects of thiopental sedation on learning and memory. *Science* 157:574–576, 1967

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*In Reply:*—Pandit is correct in directing our attention to the fact that he and the late Dundee were looking only for retrograde amnesic effects in the study cited.<sup>1</sup> Osborn *et al.*,<sup>2</sup> in a particularly analytical study, examined various aspects of learning and memory under the influence of thiopental. They found that while most of the memory impairment could be attributed to acquisition and retention, there was

some evidence that retrieval also was impaired. In terms of anterograde and retrograde types of memories, the amnesia was anterograde but not retrograde. In retrospect, we should have written "While Dundee and Pandit have suggested that both thiopental and methohexital have little effect on memory for information acquired before treatment, a definitive study with thiopental using a paired associate task showed various