

read "sodium nitroprusside and halothane," since the effects of the two drugs may be additive or even synergistic in some patients.

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## Patient Acceptance of Orally Administered Antacid Therapy during Labor

*To the Editor:*—As anesthesiologists working on an active obstetric service, we have closely followed the reporting of the efficacies of various antacid-anticholinergic regimens, since aspiration of liquid vomitus is a leading cause of maternal death. We recognize that the pH of the aspirate is one critical factor in determining maternal outcome, and that much effort has been directed at controlling this variable. It is known that the percentage of patients "at risk," in terms of pH, can be reduced from 42 per cent to 0 per cent by the administration of magnesium trisilicate or to 13 per cent with aluminum hydroxide when given less than 45 min prior to anesthesia.<sup>1</sup> Roberts and Shirley also substantiated the efficacy of prophylactic alkalization of gastric contents by the routine use of antacids in labor.<sup>2</sup> We have followed this practice, but since previous studies have not considered patient acceptance of repeated doses of antacids, we examined the antacids commonly used at our institution in the following manner.

For a period of one month all patients received 30 ml of Gelusil®, Maalox®, or Mylanta II® every three hours throughout labor. On the first day after delivery the patients were visited by an anesthesiologist, who asked them whether they had experienced nausea and vomiting during labor or diarrhea since labor. They were also specifically asked whether they found the antacid objectionable, and what they thought the purpose of the antacid was.

TABLE 1. Palatability of Antacids

	Number of Patients	Vomiting (Per Cent)	Objections (Per Cent)
Mylanta®	155	9	5.2
Gelusil®	170	13	5.3
Maalox®	130	12	10.7
No antacid	123	20	—

There was no statistical difference between antacids in the incidences of nausea and vomiting or diarrhea, irrespective of parity, type of anesthesia, or administration of narcotics and tranquilizers. Regardless of the number of doses given, the majority of patients found the taste of the antacids to be either pleasant or neutral, and only 6.8 per cent of parturients objected to them. Although not statistically significant, there was a tendency for Maalox to be objectionable more often (table 1). We were surprised to find a higher incidence of vomiting in the control group compared with those receiving antacids ( $P < 0.05$ ). Very few patients possessed a real understanding of the purpose of antacid administration.

We conclude that the administration of antacid during labor is acceptable to the vast majority of patients, and seems to decrease the incidence of vomiting. Since no difference in palatabilities exists and the buffering capacity of Gelusil is half that of

Mylanta II or Maalox, the latter two are more desirable. Mylanta is our choice because of the tendency of Maalox to be more objectionable to patients. Finally, greater efforts toward patient education concerning the need for antacids should improve patient acceptance.

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## Ketamine and Paralysis Agitans

*To the Editor:*—It has been suggested that ketamine be avoided in patients being treated with L-dihydroxyphenylalanine (L-dopa) because of an exaggerated sympathetic response.<sup>1</sup> We administered ketamine anesthesia to a 75-year-old man who had severe paralysis agitans (Parkinson's disease) and was receiving L-dopa, and found no hypertension but, instead, a salutary alleviation of his disease. The patient had a ten-year history of paralysis agitans and was totally incapacitated by the disease: he had extreme akinesia, rhythmic tremor, and general enfeeblement. He used eye signals to communicate, and could withdraw in response to painful stimuli. Surgical closure of a large trochanteric decubitus ulcer was planned. We chose ketamine anesthesia to avoid a difficult intubation. Ketamine, 200 mg, iv, was given over three hours, supplemented with nitrous oxide. The tremor ceased and the muscle rigidity decreased. This effect persisted for several hours postoperatively.

The postulated biomolecular defect in paralysis agitans is a decrease in dopaminergic neurons in the nigrostriatal pathways.<sup>2</sup> Treatment consists of increasing dopaminergic activity. Experimentally, ketamine has been shown to alter dopamine levels in rat brain.<sup>3</sup> Whether it does so in man is unknown; our clinical observation suggests it may.

Paralysis agitans is a common disabling disease (1.57 cases per 1,000 population) presenting multiple prob-

lems for the anesthesiologist.<sup>4,5</sup> Musculoskeletal deformities can make intubation traumatic, pharyngeal dysfunction increases the potential for aspiration, and impaired baroreceptor reflexes can produce unpredictable blood pressure responses. Although ketamine may be theoretically contraindicated in patients receiving L-dopa therapy, we found its use in this particular case to be advantageous.

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