Labeling Drug Ampules

To the Editor:—Unsatisfactory labeling of drug ampules contributes an unnecessary hazard to patient care. Present labeling practice makes serious errors not only possible, but likely, especially in situations requiring haste. Poor labeling adds to the burden imposed by the deterioration of eyesight with age. The problem is widespread, involving most drug ampules and single-dose disposable syringes. It can be solved by general use of the labeling method illustrated in figure 4.

J. O. Alyea, M.D.
Cape Girardeau, Mo. 63701

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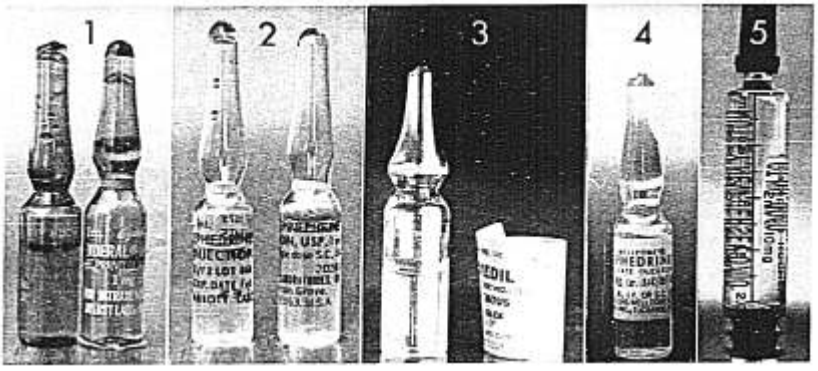

Fig. 1. Propranolol ampules are difficult to read. Labels are affected by solvents (*left*).

Fig. 2. Ephedrine and epinephrine, from competing disposable spinal sets, are easily confused.

Fig. 3. Paper labels may come unglued.

Fig. 4. Excellent label; ceramic background with superimposed letters has been scrubbed with solvent and scraped with a knife, but remains clear.

Fig. 5. A disposable syringe should have a contrasting background. Letters on the far side obscure the volume scale.

Methohexital Precipitation

To the Editor:—We have been in the practice of using a 1 per cent sodium methohexital solution for induction of anesthesia. This has been prepared by adding bacteriostatic water for injection, U.S.P., to ampules of methohexital sodium (Brevital, Lilly). We recently noticed that a precipitate formed when we were using a new brand of bacteriostatic water. The former brand had a *p*H of 6.05 and contained as preservatives methylparaben, 0.05 per cent, and propylparaben, 0.005 per cent. The *p*H of the new supply was 5.5, and it contained methylparaben, 0.18 per cent, and propylparaben, 0.02 per cent, as preservatives. The manufacturer cautions that the preservatives are incompatible with atropine, sodium thiopental, sodium phenobarbital, sodium sulfadiazine, and sodium sulfathiazole, but fails to mention sodium methohexital. Although the methohexital label cautions against the use of diluents containing bacteriostats, we have found no precipitation with solutions contain-

ing small percentages of parabens or benzyl alcohol. Intravenous barbiturates require solutions of relatively high *p*H to maintain solubility. We therefore suspect that the precipitation observed was the result of the lower *p*H of the new preparation. It should be noted that all U.S.P. bacteriostatic water for injection is not of the same *p*H.

MAURICE LIPPMANN, M.D.
ROBERT C. ROGOFF, M.D.
LAURENCE S. REISNER, M.D.
Department of Anesthesia
Harbor General Hospital
Torrance, California 90509

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The Incidence of Nonfatal Aspiration in Obstetric Patients

To the Editor: Following reorganization of the obstetric anesthesia service of this hospital, we attempted to draw a baseline against which improved services could be measured. An initial effort was directed toward learning the incidence of clinically significant aspiration of vomitus in maternity patients. A careful search of the literature failed to reveal any recent studies indicating how frequently nonfatal aspiration might be expected in maternity patients. We therefore undertook a retrospective study of the births in our institution in the years 1962 to 1972. During these eleven years anesthesia was administered predominately by registered nurses, who devoted full time to the administration of anesthesia for obstetrics but whose only training was supervised on-the-job training. During this period there were 37,282 vaginal deliveries and 3,076 cesarean sections. Approximately 85 per cent of the vaginal deliveries were accomplished during general anesthesia given by nurses. More than 90 per cent of the cesarean sections were done with the patients under general anesthesia administered by anesthesiologists.

None of the 31,600 patients who had vaginal deliveries with general anesthesia was intubated. Previous practice here permitted almost any patient to have general anesthesia regardless of time of last food intake. Judging from a sample of our present population, 65–75 per cent of our patients who deliver vaginally ingest liquid or solid food within four hours of onset of labor. Before 1965, ether–nitrous oxide–oxygen was the most frequently used anesthetic. Since 1965, methoxyflurane–nitrous oxide–oxygen has been the most common.

Using the international classification of diseases coding system, all patient records which indicated maternal death, anesthetic or analgesic complication, or any type of pneumonia were examined. Our medical record department reviews all postpartum hospitalizations longer than three days in an effort to assign a diagnosis to the complicating factor. These records were reviewed and a diagnosis of aspiration was made when there was radiographic evidence of pneumonitis within 36 hours of delivery in a patient who had been asymptomatic prior to delivery, or the patient vomited during delivery and had dyspnea, cyanosis, or persistent cough in the recovery room. Some clinically mild aspirations in cases in which no x-ray was obtained or the patient was discharged within three days with no coded complication may have been missed.

Over this 11-year period, five patients developed aspiration pneumonitis following vaginal delivery (1 in 6,000). All cases were mild and responded to antibiotics, steroids and IPPB by mask. Since 1965, only two patients have developed aspiration pneumonitis following vaginal delivery, (1 in 11,000), and both cases were mild.

Aspiration during cesarean sections occurred seven times (1 in 430). One fatality and several severe cases occurred in patients who were not intubated. Two mild cases of aspiration occurred in intubated patients at time of extubation.

We certainly do not believe that the use of general anesthesia without adequate airway protection should be encouraged, but we now believe that the incidence of clinically significent aspiration during vaginal delivery under light general anesthesia may be less than generally assumed.

MICHAEL L. KRANTZ, M.D.
WENDELL L. EDWARDS, M.D.
Department of Anesthesia
Methodist Hospital
Indianapolis, Indiana 46202

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