In Reply.—Doctor Moore can be commended in this attempt to further educate personnel regarding the continuing dangers of lidocaine concentrates “for dilution only.” The purpose of my initial correspondence was to emphasize this danger, to increase reporting of any such occurrences, and, hopefully, to induce removal of the 20% preparations from the market. The morbidity and, especially, mortality of inadvertent injection of concentrated solutions can be prevented by use of the now available safer alternative formulations. The use of 4% solutions in bottles to constitute lidocaine infusions (should self-constitution be required) was proposed because of the inherent margin of safety: use as if it were the 2% solution results in dosing only two, instead of ten, times the intended dose, and would probably be better tolerated by the patient. Drawing up a solution into a syringe also provides extra interaction time in which to prevent a mistake, and this preparation has been found to have a good track record of safety via FDA reports.*

Very recently, International Medication Systems LTD, So. El Monte, CA, has begun to market 1 gm lidocaine sterile powder for constitution in a formulation similar to the familiar Anectine Flo-Pac® under the trade name Bag-A-Mix®. Lidocaine powder would be extremely difficult to inject, and can now be highly recommended, should the need to constitute a lidocaine infusion persist. The “protective-needle-housing” on ready-to-use syringes in no way precludes direct iv injection. Alternatively, if these ready-to-use syringes were not armed with needles, but with ¼ inch diameter spikes similar to those on common infusion administration sets, lidocaine concentrates could be physically introduced via the administration set port on the bag. At the same time, a spike of this type cannot physically find access to an iv tubing set, and direct injection becomes impossible. Furthermore, an infusion constituted in this manner cannot be returned unmarked to the shelf for subsequent use as a crystalloid infusion, because the removal of the ¼ inch spike-tip would cause the solution to run out. Toxic inadvertent 20% lidocaine injections could be eliminated without any inconvenience to the medical profession, and these principles could be applied to other drugs as well (i.e., KCl additives).

Vigilance is the foundation of sound anesthetic practice in particular, basic to medicine in general, and cannot be overemphasized. When specific problems are recognized, they should be addressed as soon as possible in the interests of the safety of our patients and out of basic medical ethical concerns. We live daily with fail-safe principles: Pin and Diameter Index Systems and color coding for medical gasses; the flushed oxygen knob and ratiometers, and multiple alarms on the anesthesia machine; Agent-Specific Filling Devices for volatile anesthetics, etc. We, as professionals, cannot afford to disregard this problem, where the solution costs nothing and is at hand.

* Graham CF: Report to the anesthesia and life support advisory committee. Food and Drug Administration, Rockville, Maryland, October 24, 1984

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Life-threatening ECG Artifact during Extracorporeal Shock Wave Lithotripsy

To the Editor.—Intraoperative dysrhythmias during extracorporeal shock wave lithotripsy (ESWL) have been recently reported.1 We describe a case during which ECG anomalies with potentially serious consequences were observed.

A 68-yr-old woman with nephrolithiasis and controlled hypertension was admitted for ESWL. Prior general anesthetics had been uneventful. She denied angina pectoris, palpitations, or known cardiac abnormalities. Electrolytes and 12-lead ECG were within normal limits.

Pre-induction blood pressure was 130/75 and heart rate was 70. Intravenous induction with thiopental, 450 mg, and fentanyl, 50 µg, was followed by succinylidicho-