Antiarrhythmic Classifications in the 2000 Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care

To the Editor:

We read the American Heart Association’s Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care with great interest. We think the committee did a thorough and prudent review of the literature and made valid conclusions. However, there are 2 areas of inconsistency that need clarification. The guidelines classified the antiarrhythmic agent lidocaine as Indeterminate (page I-123) for ventricular fibrillation (VF)/pulseless ventricular tachycardia (VT) that persists after defibrillation and the administration of epinephrine. However, elsewhere in the guidelines and in the 2000 Handbook of Emergency Cardiovascular Care for Healthcare Providers, lidocaine is classified as a Class IIb therapeutic intervention. As stated on page I-87 of the guidelines, “The evidence supporting antiarrhythmics in general is only fair, and this accounts for the fact that all antiarrhythmics are lumped into one class IIb ‘consider’ category.” In addition, on page 67 of the Handbook, lidocaine is again classified as IIb for cardiac arrest from VF/VT. These inconsistencies could lead a clinician to believe that lidocaine and amiodarone have similar proof of benefit in VF/pulseless VT. However, in the committee’s review of the Amiodarone in out-of-hospital Resuscitation of REfractory Sustained ventricular Tachyarrhythmias (ARREST) trial, amiodarone had better evidence-based support than other antiarrhythmic drugs in this setting (page I-87).²

Second, the guidelines also state that amiodarone “as currently available, must be drawn up from a 6-mL glass ampule into a syringe and then diluted with 5% dextrose in water to 20 mL before injection” (page I-117).³ Unfortunately, amiodarone is only supplied by the manufacturer in a 3-mL ampule containing 50 mg/mL.⁴ Therefore, when using intravenous amiodarone for VF/pulseless VT, two 3-mL ampules must be drawn up into a syringe and then diluted with 5% dextrose to 20 mL before injection.

In conclusion, lidocaine should be more consistently classified as Indeterminate for VF/pulseless VT, and the contents of 2 ampules of amiodarone should be delivered to achieve effective results.

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