
**Purpose**

To determine whether the initial resuscitation success, or the incidence and severity of post-shock dysfunction, are affected by the amount of biphasic energy delivered.

**Methods**

Ventricular fibrillation (VF) was induced in 10 domestic pigs. Following 7 minutes of untreated VF, pigs were randomized to receive up to 3 biphasic shocks, using either low- (150 Joules; J), or high-energy (200 J). For animals not resuscitated within 3 successive shocks, a minute of cardiopulmonary resuscitation (CPR) was done, followed by another shock sequence.

**Findings**

- All animals were resuscitated, regardless of energy used. However, more shocks were required with high-energy biphasic shocks than with low-energy biphasic shocks (6.4±3.4 versus 2±1, p<0.05).
- Left ventricular ejection fraction (representing the pumping strength of the heart) was higher with low-energy biphasic than with high-energy biphasic shocks, both at 1 hour and 4 hours post-shock (p<0.05).

**Conclusions**

The authors conclude, “...low energy biphasic shocks increase the likelihood of successful defibrillation and minimize post-resuscitation myocardial dysfunction after prolonged cardiac arrest.”