When One Defibrillating Shock Isn't Enough

New Clinical Evidence for Increasing the Dosage

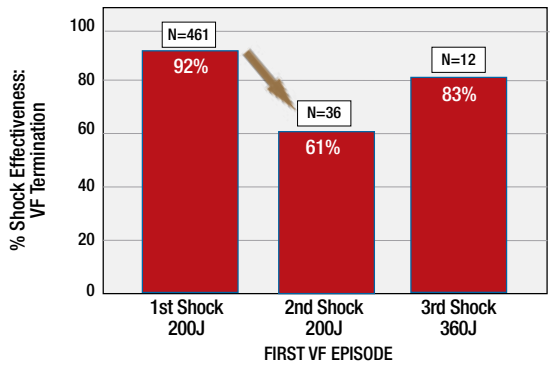
Escalating dosage: a strategy to maximize defibrillation effectiveness

New clinical evidence from two out-of-hospital ventricular fibrillation (VF) studies[1,2] confirms the effectiveness of current AHA recommendations for first shock dosage. But for patients who need additional shocks, these studies show that repeating the same first shock dosage is inferior to a strategy of increasing to a higher dosage.

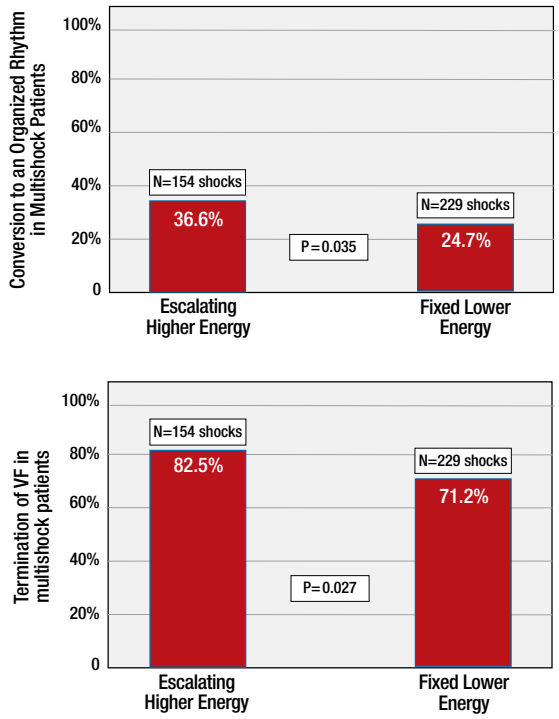
An escalating protocol is consistent with the AHA Guidelines 2005 recommendation for subsequent dosage;

> **"…it is reasonable to use selected energies of 150J to 200J with a biphasic truncated exponential waveform...for the initial shock. For second and subsequent shocks use the same *or higher energy* (Class IIa)[3]."** (emphasis added)

Furthermore, this new clinical evidence from these two studies shows a benefit from escalating dosage.



- High rate of 1st shock success with LIFEPAK® Defibrillator/Monitor at (92%)[1]
- Diminishing return from repeating the dosage after a first shock failed (92% first shock vs. 61% second shock success, P=0.001)
- 121/467 (26%) known survivors at 30 days: 51% of them received 360J



- Triple blinded, randomized controlled clinical trial in 221 patients comparing two biphasic dosage protocols: fixed lower energy 150J vs. escalating higher energy 200J-300J-360J.[2]
- Among patients requiring more than one shock, the escalating higher energy regimen provided significantly higher rates of conversion to an organized rhythm (36.6% vs. 24.7%, P=0.035) and VF termination (82.5% vs. 71.2%, P=0.027) compared to a fixed low energy regimen.

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Broad Dosage Capability: An Important Consideration for Patient Care

Clinical studies have shown a majority of cardiac arrest victims with an initial rhythm of VF will experience repeated episodes of VF over the course of a resuscitation attempt.[4-8] For any given VF episode the initial shock may fail; in fact defibrillation becomes more difficult with each recurrent episode.[1] For these patients in both hospital and out-of-hospital settings, increasing the dosage of subsequent shocks above the dose used for the first shock has proven to be a better strategy for terminating VF than simply repeating a failed dosage.[1,2,9] LIFEPAK defibrillator/monitors provide broad dosage capability, up to 360J. For more information, please contact your Physio-Control representative at 800.442.1142 or visit www.physio-control.com.

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