CLINICAL ASPECTS OF DEFIBRILLATION STRATEGY

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Introduction
Sudden cardiac arrest generally presents as one of the three different pathologic conditions:  
Ventricular fibrillation/tachycardia (VF/VT), Asystole electromechanical dissociation (EMD)

Overview on ventricular fibrillation
During repolarization the cells rest for the next wave, this refractory period has two stages,  
The Absolute and Relative refractory periods any impulse during the relative refractory period can cause premature contractions. VF leads to uncoordinated ventricular contractions resulting in ineffective pumping of the heart. If immediate action is delayed the results is fatal.
The triggering event to ventricular fibrillation manifesting R on P phenomenon or even Fall on P wave of the following beat R on T phenomenon. As a fibrillating heart consumes a very large amount of oxygen. The amplitude and waveform of VF deteriorate rapidly, reflecting the depletion of myocardial high energy phosphate stores.

Defibrillation is
the therapeutic use of controlled direct electric current delivered in large amounts over very brief periods of time.

Clinical aspects in defibrillation strategy
The longer the duration of fibrillation, the greater the deterioration of the myocardium related to hypoxia. The chance of successful defibrillation is also reduced with the length of time fibrillating. Survival rates for OR cardiac arrest can be remarkably high if the event is witnessed. Defibrillation is usually performed within few minutes. The earlier defibrillation occurs the better the prognosis.

Conclusion
Future improvements in the field of cardiopulmonary circulation will depend on the timely implementation of promising therapies. Efforts to identify patients at risk for sudden death may provide increasing opportunity for preventative strategies such as AICDs and antiarrhythmics.
Most important will be the continued use of well-designed clinical trials to better direct treatment strategies based on valid scientific data.