

Defibrillation and cardioversion 2

The electrical discharge of **defibrillation** depolarizes all the cells of the myocardium simultaneously, thereby inducing the conditions for the physiological centres of impulse generation and propagation to apply. Whereas electrical cardioversion is usually a planned procedure (often several weeks), defibrillation must be performed within minutes of the onset of a malignant arrhythmia.

Defibrillation is the most effective therapy for ventricular fibrillation and pulseless ventricular tachycardia. Ventricular fibrillation is an acute, life-threatening condition in which there are no regular, effective contractions of the ventricular musculature, but only uncoordinated beats. The heart stops functioning as a pump and circulation slows to a standstill.

Fibrillation and Atrial flutter can also be reversed by electrical discharge. The procedure is called cardioversion. It is indicated for atrial fibrillation or paroxysmal tachycardias when drug therapy has failed and the patient has persistent difficulties. Cardioversion to abolish pulse ventricular tachycardia requires less energy, usually a discharge of 50-100 J is sufficient.



Defibrillator

References

Related articles

- Defibrillation
- Electrical cardioversion

Source

- KYMPLOVÁ, Jaroslava. *Katalog metod v biofyzice* [online]. [cit. 2012-09-20]. <<https://portal.lf1.cuni.cz/clanek-793-katalog-metod-v-biofyzice>>.