Electrical cardioversion resulting in ventricular fibrillation

Fig. 1

A 50-year-old man presented to a community hospital with palpitations for approximately two weeks. ECG revealed atrial fibrillation. The patient was treated with warfarin for three weeks and then re-submitted for cardioversion [1]. Cardioversion was performed with a Bruker Defigard 2002 (Bruker, Ettlingen, Germany) with 25 Ws, the procedure was performed according to the recommendations from the handbook. Probably due to synchronization failure ventricular fibrillation occurred (Fig. 1), which was terminated by defibrillation with 100Ws 30 seconds later, resulting in stable sinus rhythm. The patient was discharged at well-being. Synchronization failures due to inappropriate performance by the operator and due to accidental T wave synchronization have been reported [2]. An alternative explanation for this incident can be found in the very low energy applied in this case in the attempt to terminate atrial fibrillation. An initial energy of 200J or higher is recommended for electrical cardioversion of AF to prevent incomplete depolarisation which could promote ventricular fibrillation [3, 4]. Repetitive analysis of the software by the manufacturer did not reveal a defect in the software of the defibrillator.

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References

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