

DEVICE THERAPY

Wearable cardioverter–defibrillators in the spotlight

Wearable cardioverter–defibrillators (WCDs) are sometimes used as a ‘bridge’ to implantation of implantable cardioverter–defibrillators (ICDs) in circumstances where ICD implantation must be deferred. However, many physicians have looked for alternative options, as they believe that the size and weight of the WCD unit will result in poor patient compliance. A new study has, in fact, shown that the majority of users in the USA have good compliance and that survival is comparable with that for ICD use.

In 2,208 patients who used a WCD between August 2002 and December 2006 in the USA, 52% and 71% wore the device for >90% and >80% of the day, respectively. Longer monitoring duration correlated with higher compliance rates. Of all patients included in the study, 1.9% experienced inappropriate shocks, at a rate of 1.4% per month, which is comparable with that reported for ICDs. Survival after a sustained ventricular tachycardia or

fibrillation event was 89.5%, and overall acute survival while using a WCD was 99.2%. A comparison of patients with WCDs and ICDs showed no difference in survival over 3 years.

Dr Mina Chung, lead author on the report of the study in the *Journal of the American College of Cardiology*, believes that the findings “rationalize the use of WCDs ... as an acceptable temporary alternative or a bridge to long-term ICD implantation.” However, “because sudden death ... occurred in patients who were not wearing the WCD,” she cautions, “patient instruction regarding proper use and compliance remain vital to ensuring efficacy of WCDs in preventing sudden cardiac death.”

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Original article Chung, M. K. *et al.* Aggregate national experience with the wearable cardioverter-defibrillator: event rates, compliance, and survival. *J. Am. Coll. Cardiol.* 56, 194–203 (2010)