Implication of cardioverter defibrillator in post-myocardial infarction patients: when and how?

We read with great interest the recently published guidelines in the European Heart Journal ‘for the management of patients with ventricular arrhythmias and the prevention of sudden cardiac death’. In chapter XIV, page 2115, it is recommended (class I) that an implantable cardioverter defibrillator (ICD) should be implanted at least 40 days post myocardial infarction (MI) in patients with left ventricular dysfunction with an ejection fraction (EF) of 30–40% and NYHA functional class II or III. We presume that this recommendation is based on the results of MADIT II trial.

MADIT II trial clearly demonstrated that the Kaplan-Meier estimates of survival in the two groups began to diverge at approximately 9 months and continued their separate paths thereafter favoring the group who received an ICD. In our opinion, there is no obvious or reasonable explanation for this delay. If we wanted to follow strictly the outcome of MADIT II, we would recommend an ICD implantation not earlier than 6 months post MI. There is strong evidence to support this hypothesis although its mechanism is not entirely clear. Furthermore, according to the results of MADIT I trial, clear benefit from ICD implantation was documented in post MI patients with NYHA functional class I, II, or III, a left ventricular EF <0.35, documented episodes of asymptomatic non-sustained ventricular tachycardia (VT) and inducible non-suppressible VT on electrophysiologic study. Therefore, based on the results of these two large-scale trials, it seems reasonable to treat post MI patients according to MADIT I data during the first 9 months, and according to MADIT II data thereafter. This strategy may reduce the number of unnecessary ICD implantations.

In view of the recent developments in the treatment of acute MI, it is more than evident that ischaemic cardiomyopathy is an evolving area. Does this mean that new studies are required to resolve this issue?

References

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Role of delayed enhancement MRI in patients with acute coronary syndrome and unobstructed coronary arteries

We read with interest the paper by Assoum et al. on the use of magnetic resonance...