

Early detection of ventricular tachyarrhythmia using home monitoring prevents electrical storm in patients with defibrillator

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Home monitoring using devices is now widely used, however, the effect on the clinical outcome of home monitoring is not clear

Methods: Subject is consecutive 282 patients, who underwent implantation of ICD or CRTD from 2002 to 2012. Mean age; 62 ± 15 years, Male/Female; 222/60, Ischemic heart disease/Non-ischemic heart disease/Non-structural heart disease; 107/136/39. Seventy-seven patients had home monitoring system. The outcome of patients with monitoring was investigated retrospectively, compared with patients without monitoring.

Results: There was no significant difference of age, gender, type of heart disease, LVEF, BNP, eGFR between monitoring group and Non-monitoring group at the implantation of device. During a mean follow-up period of 40 months, 62 patients (22%) died, 77 patients (27%) had appropriate ICD therapy and 28 patients (10%) suffered electrical storm. Although there was no significant difference survival rate or incidence of appropriate ICD therapy between monitoring group and Non-monitoring group, the occurrence of electrical storm in monitoring group was significantly lower than Non-monitoring group (2/77 vs. 26/205, $p < 0.05$). Early detection of ventricular tachyarrhythmia using home monitoring led to early intervention, which might be related to the reduction of electrical storm.

Conclusion: Home monitoring is useful to lower the incidence of electrical storm. .