A Comparison of Rate Control and Rhythm Control in Patients with Recurrent Persistent Atrial Fibrillation


ABSTRACT

Background Maintenance of sinus rhythm is the main therapeutic goal in patients with atrial fibrillation. However, recurrences of atrial fibrillation and side effects of antiarrhythmic drugs offset the benefits of sinus rhythm. We hypothesized that ventricular rate control is not inferior to the maintenance of sinus rhythm for the treatment of atrial fibrillation.

Methods We randomly assigned 522 patients who had persistent atrial fibrillation after a previous electrical cardioversion to receive treatment aimed at rate control or rhythm control. Patients in the rate-control group received oral anticoagulant drugs and rate-slowing medication. Patients in the rhythm-control group underwent serial cardioversions and received antiarrhythmic drugs and oral anticoagulant drugs. The end point was a composite of death from cardiovascular causes, heart failure, thromboembolic complications, bleeding, implantation of a pacemaker, and severe adverse effects of drugs.

Results After a mean (±SD) of 2.3±0.6 years, 39 percent of the 266 patients in the rhythm-control group had sinus rhythm, as compared with 10 percent of the 256 patients in the rate-control group. The primary end point occurred in 44 patients (17.2 percent) in the rate-control group and in 60 (22.6 percent) in the rhythm-control group. The 90 percent (two-sided) upper boundary of the absolute difference in the primary end point was 0.4 percent (the prespecified criterion for noninferiority was 10 percent or less). The distribution of the various components of the primary end point was similar in the rate-control and rhythm-control groups.

Conclusions Rate control is not inferior to rhythm control for the prevention of death and morbidity from cardiovascular causes and may be appropriate therapy in patients with a recurrence of persistent atrial fibrillation after electrical cardioversion.

Source Information

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