ATRIAL FIBRILLATION

RE-LY: dabigatran in cardioversion

Cardioversion in atrial fibrillation (AF) is associated with an increased risk of thromboembolism. Current recommendations advise therapy with the anticoagulant warfarin both before and after cardioversion. A new *post hoc* analysis of data from the Randomized Evaluation of Long-Term Anticoagulation Therapy (RE-LY) trial shows that the novel anticoagulant dabigatran is a safe alternative to warfarin in patients with AF who undergo cardioversion.

The phase III RE-LY study included 18,113 patients with AF who were at risk of stroke and were recruited from multiple centers worldwide. Patients were randomly assigned to receive either dabigatran (110 mg or 150 mg fixed dose twice daily) or warfarin (dose adjusted to the international normalized ratio) and followed up for 2 years. The original study findings, published in 2009, demonstrated that, compared with warfarin, 150 mg dabigatran was superior, and 110 mg dabigatran was similar, in the prevention of thromboembolism and stroke. Moreover, major bleeding rates were similar in the warfarin and 150 mg dabigatran groups with 110 mg dabigatran being superior to warfarin. As both electrical and pharmacological cardioversion are associated with an increased risk of thromboembolic events, Nagarakanti and colleagues examined data on all patients who underwent cardioversion during the RE-LY trial to compare the use of dabigatran and warfarin in this setting.

During the trial, 1,983 cardioversions were performed in 1,270 patients with nonvalvular AF (most patients received electrical cardioversion). More patients in the dabigatran groups had transesophageal echocardiography before cardioversion (25.5% and 24.1% in the 110 mg and 150 mg groups, respectively) than the warfarin group and the number of patients with a left atrial thrombus was similar between the three different treatment arms. Low rates of stroke and systemic embolism 30 days after cardioversion were observed in all patient groups, irrespective of precardioversion transesophageal echocardiography (0.8%, 110 mg dabigatran group; 0.3%, 150 mg dabigatran group; 0.6%, warfarin group). Moreover, major bleeding rates were low across all treatment arms (1.7%, 110 mg dabigatran; 0.6%, 150 mg dabigatran; 0.6%, warfarin). Analysis of the first cardioversion of each patient showed similar low rates of stroke, embolism and major bleeding in all groups.

"The data from this *post hoc* analysis of cardioversion in the RE-LY trial, which is the largest experience of cardioversion to date, are an important guide for future physician practice," write the authors who note that, because therapeutic levels of dabigatran can be achieved within 2 h of administration, the drug might be suitable in an outpatient setting, which could reduce hospitalization rates and costs.

"The RE-LY cohort is the largest experience in a well-defined population of patients undergoing cardioversion" comments Alexander Turpie (McMaster University, Canada) who was not involved in the study. "Although [this study] is a retrospective analysis, it provides useful clinical information. The data indicate that dabigatran is at least as good as warfarin in the prevention of stroke in patients with AF undergoing cardioversion and has the practical advantage of a rapid onset of action and a predictable antithrombotic response," he adds.

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