Reducing Blood Pressure Cuts Deaths Due to AF

BY MIRIAM E. TUCKER

Diabetic patients with atrial fibrillation obtained greater absolute benefits from blood pressure–lowering treatment than did those without in a study of more than 11,000 patients with type 2 diabetes.

The findings suggest that an estimated 5 years of active blood pressure–lowering treatment would prevent one cardiovascular death among every 42 patients with atrial fibrillation (AF) at baseline, compared with one death among 120 patients without AF. "These findings are of direct relevance for the routine clinical management of diabetic patients and indicate that detection of AF

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in a patient with diabetes should prompt more aggressive treatment of all cardiovascular risk factors," said Dr. Xin Du of the University of Sydney, and associates (Eur. Heart J. 2009 March 12 [doi:-10.1093/eurheartj/ehp055]).

AF was present at baseline in 847 (7.6%) of the 11,140 patients with type 2 diabetes in the Action in Diabetes and Vascular Disease: preterAx and diamicroN-MR Controlled Evaluation (ADVANCE) study, jointly funded by the National Health and Medical Research Council of Australia and Servier, France. Measured outcomes were all-cause mortality cardiovascular death, myocardial infarction, stroke, and heart failure.

Patients with AF were older and heavier, had higher blood pressure levels and urinary albumin-creatinine ratios, and had lower estimated glomerular filtration rates than did the patients without AF. They also were more likely to be taking antiplatelet therapy and were less likely to be current smokers.

Over a mean follow-up of 4.3 years (range less than 1 month to 5.6 years), 879 patients died. Of those deaths, 468 (53%) were due to cardiovascular causes and 15% of the total deaths occurred in patients with AF. Patients with AF at baseline had significantly higher rates of all-cause and cardiovascular mortality, at 3.9% and 2.4%, respectively, than did those without AF, whose all cause and cardiovascular mortality rates were 1.7% and 0.9%, respectively. After adjustment for covariates, those hazard ratios were 1.61 and 1.77, respectively. Patients with AF had higher risk of major cerebrovascular events, with a hazard ratio of 1.68 that was similar for ischemic and hemorrhagic subtypes.

Among patients who were on oral anticoagulants at baseline, the adjusted hazard ratios associated with AF were 2.16 for all-cause mortality and 2.32 for cardiovascular death. The association between AF and cardiovascular death was significantly stronger in women compared with men, while the associations between AF and total mortality, coronary events, and cerebrovascular events were also stronger for women but not significantly so, the investigators said.

During follow-up, active treatment with a fixed combination of perindopril and indapamide reduced blood pressure by 5.3/2.3 mm Hg more than did placebo in those with AF and by 5.9/2.3 mm Hg more in patients without AF. The active treatment produced similar relative reductions in all-cause mortality and cardiovascular mortality in patients with and without AF, but the absolute benefit was greater for those with AF because their baseline risk was higher, the researchers said.

New-onset AF was identified in 3.3% of patients randomized to active treatment and in 3.6% of those who received placebo, but there was limited power to evaluate the effects of the combined treatment on new-onset AF during follow-up.

The study highlights the importance of actively evaluating diabetic patients for AF, said the authors, several of whom other than Dr. Du have received lecture fees or grant support from, or served on an advisory board for, Servier. ■