EFFECTS OF CALCIUM CHANNEL BLOCKER BENIDIPINE-BASED COMBINATION THERAPY ON CARDIAC EVENTS: SUB-ANALYSIS OF THE COPE TRIAL

Poster Contributions
Hall C
Sunday, March 30, 2014, 3:45 p.m.-4:30 p.m.

Session Title: Novel Trials in Hypertension
Presentation Number: 1218-125

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Background: The Combination Therapy of Hypertension to Prevent Cardiovascular Events (COPE) trial was a prospective, randomized, open-label, blinded-endpoint design with three T/L-type dihydropyridine calcium channel blocker benidipine-based regimens: angiotensin receptor blocker (ARB), β-blocker, or thiazide, in hypertensive outpatients between the ages of 40 and 85 years who did not achieve the target blood pressure (<140/90 mm Hg) with 4 mg per day of benidipine. A total of 3293 patients (ARB; 1110, β-blocker; 1089, and thiazide; 1094, respectively) who received each combination treatment were included in the analysis. Median follow-up was 3.61 years. The results of the COPE trial demonstrated that the incidence of hard cardiovascular composite endpoints and the incidence of fatal or non-fatal strokes were higher in the benidipine-β-blocker group than in the benidipine-thiazide group (P = 0.0201, P = 0.0109, respectively).

Methods: In this pre-specified sub-analysis, we further evaluated the treatment effects on different cardiac events among the three benidipine-based regimens.

Results: We observed a total of 50 cardiac events, 4.2 per 1000 person-years; fatal or non-fatal myocardial infarctions: 12, 1.0 per 1000 person-years; sudden cardiac deaths: 2, 0.2 per 1000 person-years; hospitalizations due to unstable angina: 27, 2.3 per 1000 person-years; and hospitalizations due to new onset of heart failure (New York Heart Association class II-IV): 10, 0.8 per 1000 person-years, respectively. Few differences in each cardiac event were observed among the three treatment groups (fatal or non-fatal myocardial infarction, P = 0.808; sudden cardiac death, P = 0.606; hospitalization due to unstable angina, P = 0.669; and hospitalization due to new onset of heart failure, P = 0.884) and multi-adjusted hazard ratios of the incidence of all cardiac events were not different among the three treatment groups.

Conclusions: This pre-specified sub-analysis of the COPE trial demonstrated that blood pressure-lowering therapy with benidipine combined with ARB, β-blocker, or thiazide diuretic was similarly effective in the prevention of cardiac events in hypertensive outpatients.