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## VALVULAR HEART DISEASE

**ANGIOTENSIN CONVERTING ENZYME INHIBITOR USE IS ASSOCIATED WITH REDUCED MORTALITY IN PATIENTS WITH AORTIC REGURGITATION**

ACC Oral Contributions

Ernest N. Morial Convention Center, Room 245

Sunday, April 03, 2011, 4:45 p.m.-5:00 p.m.

Session Title: Valvular Regurgitation

Abstract Category: 19. Valvular Disease

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**Background:** The vasodilatory effects of ACE inhibitors would be expected to be of benefit in aortic regurgitation and many patients receive these drugs, irrespective of left ventricular (LV) function. However no previous data exist on whether ACE inhibitors actually improve survival in chronic AR.

**Methods:** This was an observational cohort study. We screened our large echocardiographic database and identified individuals with at least moderate AR. We subsequently linked these patients using their unique identifier to demographic information, dispensed prescribing database, primary care and secondary care data, laboratory results and registry office death data. Patients with incident AR (reported by accredited sonographers) between 1993 and 2008 were identified. Cox regression analysis was used to assess differences in all-cause mortality and cardiovascular (CV) events (CV death or hospitalizations) between those treated with and without ACE inhibitors, adjusted for confounding variables.

**Results:** A total of 2266 subjects with AR (aged  $71.2 \pm 14.2$  years, 40% males) were studied with a mean follow-up of  $4.4 \pm 3.7$  years. 876 (39%) patients received ACE inhibitor therapy. There were 582 (25.7%) all-cause deaths and 1069 (47.0%) CV events. Those treated with ACE inhibitor had significantly lower all-cause mortality and fewer CV events with an adjusted hazard ratio (HR) of 0.56 (95% CI 0.64 - 0.89,  $p < 0.01$ ) for all-cause mortality and 0.77 (95% CI 0.67 - 0.89,  $p < 0.01$ ) for CV events. For a propensity score matched cohort analysis, the adjusted HR for CV events was 0.57 (95% CI 0.41 - 0.79,  $p < 0.01$ ).

**Conclusions:** The finding of this large retrospective study of the use of ACE inhibitors in AR suggest that ACE inhibitor therapy is associated with improved mortality and CV outcome in our cohort of patients with moderate to severe AR.