UNDERLYING CORONARY ARTERY DISEASE POTENTIATES THE ANTIARRHYTHMIC EFFICACY OF DOFETILIDE ON ATRIAL FIBRILLATION

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Authors: Venkata V. Bavikati, J. Ryan Jordan, Pankaj Manocha, Jonathan J. Langberg, Richard N. Vest, III, Heather L. Bloom, Michael S. Lloyd, Emory University School of Medicine, Atlanta, GA

Background: Dofetilide, a class III antiarrhythmic, is a useful alternative to amiodarone in patients with atrial fibrillation (AF) and heart failure or coronary artery disease (CAD). Since inpatient monitoring is mandatory during drug initiation, it would be particularly helpful to better define predictors of response to dofetilide. We sought to identify clinical parameters associated with dofetilide success in a large cohort of patients with AF.

Methods: Two hundred and eighty-seven patients with AF started on dofetilide between 2001 and 2008 were included. Dofetilide was deemed effective if the patient remained on dofetilide at follow up and had no recurrences of AF clinically or by electrocardiogram. Dofetilide efficacy was analyzed in relation to following variables: dose, age, creatinine clearance, ejection fraction, left atrial size, diabetes, hypertension (HTN), a history of CAD, beta blocker use, angiotensin-converting enzyme inhibitor or angiotensin receptor blocker (ACE-I/ARB) use.

Results: After a follow up of 10.2±7.68 months, 54.7% of the patients were still on dofetilide and 26.8% were successfully maintained in sinus rhythm. A history of CAD was the only univariate predictor of dofetilide efficacy (OR 2.27; 95% C.I 1.29-4.01; p < 0.05). Age, HTN, ACE-I/ARB use and use of a higher dofetilide dose showed a trend on univariate analysis, (p<0.1), and were used in multivariate logistic regression analysis along with CAD (n=270). CAD remained the only significant factor associated with successful use of dofetilide in maintaining sinus rhythm (OR 2.18; 95% C.I 1.18-4.02; p< 0.05). The overall efficacy of dofetilide in the subgroup of patients with CAD was 41.1%, compared to 23.5% in those without CAD (p< 0.05).

Discussion: In this large cohort of patients with AF, the presence of coronary disease was a potent predictor of dofetilide success. This finding has important implications for dofetilide patient selection.