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Baseline characteristics of patients recruited in the AREA IN-CHF study (Antiremodelling Effect of Aldosterone Receptors Blockade with Canrenone in Mild Chronic Heart Failure).

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Abstract

OBJECTIVE: Excess aldosterone activity contributes to the pathogenesis and progression of heart failure (HF). Aldosterone antagonists improve clinical outcome in patients with severe HF or left ventricular (LV) dysfunction after myocardial infarction, but knowledge of their impact in mild chronic HF is sparse. AREA IN-CHF was planned to investigate the effects of canrenone on progression of LV remodelling in mild HF.

METHODS: AREA IN-CHF is a multicentre, randomised, double-blind, parallel group comparison of canrenone (up to 50 mg/day) versus placebo in mild stable HF. The primary endpoint is change in echocardiographic LV end-diastolic volume over 12 months. Patients had New York Heart Association class II HF, LV ejection fraction < or =45%, stable standard therapy, creatinine < or =2.5 mg/dl, potassium < or =5.0 mmol/l. Follow-up examinations were scheduled monthly for the first 3 months and every 3 months thereafter. Aldosterone was measured at baseline, brain natriuretic peptide and procollagen type III amino-terminal peptide (PIIINP) at baseline and at 6 months. Echocardiography was performed at baseline, at 6 and 12 months.

RESULTS: Among 467 patients, median age 64 years (interquartile range (IQR) 56-70 years), 84% were men, 52% had ischaemic HF, 96% were receiving angiotensin-converting enzyme inhibitors or angiotensin receptor blockers, 79% beta-blockers. Brain natriuretic peptide, aldosterone and PIIINP were 88 pg/ml (IQR 35-185 pg/ml), 118 pg/ml (IQR 75-177 pg/ml), and 5.38 microg/l (IQR 3.98-7.14 microg/l), respectively. LV end-diastolic volume was 79 ml/m (IQR 64-105 ml/m) and LV ejection fraction was 40% (IQR 33-45%).

CONCLUSIONS: The role of aldosterone blockade in patients with mild HF remains to be established. AREA IN-CHF is addressing this issue in a large population on optimal medical therapy.

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