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IN BRIEF

CORONARY ARTERY DISEASE

Ceramides predict CV death in stable CAD and ACS

Molecular lipid species such as ceramides have been linked with processes involved in atherosclerotic development, such as lipoprotein uptake, inflammation, and apoptosis. Laaksonen *et al.* sought to determine the role of ceramides and their distinct ratios as predictors of cardiovascular (CV) death in patients with stable coronary artery disease (CAD) or acute coronary syndrome (ACS). Ceramides were significantly associated with CV death in all patients, independent of other lipid markers and C-reactive protein level, particularly when ratios were used. Furthermore, ceramide also predicted CV death in statin-treated patients, and is, therefore, an indicator of residual risk. "Ceramide testing is entering the clinic this year," explain the investigators, "and only this real-life evaluation will allow for a better judgement of the ceramide utility and will establish them as a new armament in the clinical diagnostic tool-kit."

ORIGINAL ARTICLE Laaksonen, R. *et al.* Plasma ceramides predict cardiovascular death in patients with stable coronary artery disease and acute coronary syndromes beyond LDL-cholesterol. *Eur. Heart. J.* http://dx.doi.org/10.1093/eurheartj/ehw148 (2016)

HEART FAILURE

Finerenone vs eplerenone for patients with HFrEF

Although the steroidal mineralocorticoid-receptor antagonists (MRAs) spironolactone and eplerenone are currently guideline-recommended for patients with heart failure with reduced ejection fraction (HFrEF), they are often underprescribed in patients with worsening HFrEF owing to high risk of adverse events. The randomized, double-blind, phase IIb ARTS-HF study was designed to assess the efficacy of the novel nonsteroidal MRA finerenone in patients with worsening HFrEF and chronic kidney disease and/or diabetes mellitus. Finerenone was well tolerated and induced a ≥30% decrease in plasma N-terminal pro-B-type natriuretic peptide levels in a similar proportion of patients to eplerenone. Furthermore, patients in the finerenone 10–20 mg dose group had the largest reduction in the composite outcome of death from any cause, cardiovascular hospitalization, or emergency presentation to hospital compared with patients in the eplerenone group. According to the investigators, these results "indicate that the 10 mg once-daily dose of finerenone, uptitrated to 20 mg after 30 days, would provide the best balance of safety and efficacy for further investigation in larger clinical trials".

ORIGINAL ARTICLE Filippatos, G. *et al.* A randomized controlled study of finerenone vs. eplerenone in patients with worsening chronic heart failure and diabetes mellitus and/or chronic kidney disease. *Eur. Heart J.* http://dx.doi.org/10.1093/eurheartj/ehw132 (2016)

GENETICS

Non-HDL cholesterol confers increased risk of CAD

To explore the relationship between sequence variants affecting blood lipids and coronary artery disease (CAD), Helgadottir *et al.* examined rare and low-frequency variants for effects on non-HDL-cholesterol, HDL-cholesterol, LDL-cholesterol, and triglyceride levels in a large cohort. In total, 13 rare and low-frequency sequence variants with large effects on lipid levels were identified, in addition to 14 previously reported variants. The causality analysis using genetic risk scores demonstrated an effect of non-HDL cholesterol, but not HDL cholesterol or triglycerides, on the pathogenesis of CAD. Furthermore, the results indicate that non-HDL cholesterol confers an additional risk of CAD beyond that associated with LDL cholesterol.

ORIGINAL ARTICLE Helgadottir, A. *et al.* Variants with large effects on blood lipids and the role of cholesterol and triglycerides in coronary disease. *Nat. Genet.* http://dx.doi.org/10.1038/ng.3561 (2016)