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Fractional flow reserve assessed by computed tomography more accurate than angiography

Data from the prospective Determination of Fractional Flow Reserve by Anatomic Computed Tomographic Angiography (DeFACTO) study, presented by Dr James K Min, Cedars-Sinai Heart Institute, Los Angeles, USA, show that, when compared to standard coronary angiography, non-invasive assessment of fractional flow reserve by computed tomography provides a more accurate determination of which lesions require invasive evaluation.

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The study compared the ability of fractional flow reserve by computed tomography and coronary angiography alone to identify flow-restricting lesions.

DeFACTO enrolled 252 stable patients with suspected coronary artery disease at 17 centres in five countries. All patients underwent coronary angiography, invasive coronary angiography, invasive fractional flow reserve and subsequent fractional flow reserve by computed tomography analysis.

Fractional flow reserve by computed tomography was better able to identify flow-restricting arterial lesions than coronary angiography alone. The per-patient sensitivity and specificity of fractional flow reserve by computed tomography were also higher than coronary angiography alone using an area under the curve (AUC) analysis (AUC 0.81 *vs* 0.68, $P=0.0002$).

Dr Min commented: 'The results of the DeFACTO trial clearly demonstrate that when added to coronary angiographic findings, fractional flow reserve by computed tomography provides essential physiologic information as to which specific arterial blockages truly restrict blood flow to the heart and heighten patient risk.'

Prasugrel and clopidogrel no different in preventing death, MI or stroke

The first trial to study the effect of platelet inhibition in patients with acute coronary syndromes managed medically has found no significant difference between prasugrel and clopidogrel in preventing death, myocardial infarction (MI) or stroke.

Findings from the phase III Targeted Platelet Inhibition to Clarify the Optimal Strategy to Medically Manage Acute Coronary Syndromes (TRILOGY ACS) study were presented at a Hot Line session.

In this double-blind, randomized trial prasugrel (10 mg daily) was compared with clopidogrel (75 mg daily) for up to 30 months in acute coronary syndrome patients under 75 years with unstable angina or non-ST elevation myocardial infarction managed without revascularization. All 7243 study subjects were taking aspirin. The primary end point of was cardiovascular death, MI or stroke.

Over a median follow up of 17 months, the primary end point occurred in 13.9% of those treated with prasugrel and 16.0% of those treated with clopidogrel (hazard ratio 0.91; 95% confidence interval 0.79–1.05; $P=0.21$).

Female gender increases stroke risk in atrial fibrillation patients aged >75 years by 20%

Female gender increases the risk of stroke in patients with atrial fibrillation aged >75 years by 20%, according to a new study. The results suggest that female gender should not be included as an independent stroke or thromboembolism risk factor in guidelines or risk stratification schemes used in treatment of patients with atrial fibrillation.

The study investigated the association between female gender and stroke or thromboembolism in a large nationwide cohort.

Researchers identified 87 202 patients with non-valvular atrial fibrillation between 1997 and 2008 who were not treated with oral anticoagulants, of whom 44 744 (51.3%) were female. The population was assembled by linking patients in national Danish registers.

The population was subdivided into three age groups: <65 years, 65–74 years, and ≥75 years – chosen as these are cut-off points in atrial fibrillation risk stratification schemes and current guidelines.

Female gender did not increase the risk of stroke in patients aged <75 years. The relative ratio associated with female gender was 0.89 (95% confidence interval: 0.70–1.13) for patients aged <65 years and 0.91 (0.79–1.05) for patients aged 65–74 years.

For patients aged >75 years, female gender was associated with a 1.20 (1.12–1.28) increased risk of stroke after 1 year of follow up – corresponding to a 20% increased risk in this age group.