Coronary Anatomy, Ischemia and Angina: Associations at Baseline in the ISCHEMIA Trial

Methods

ISCHEMIA was a large multi-center randomized trial of patients with known or suspected SIHD selected for enrollment based on the finding of moderate or severe ischemia on a stress imaging test (nuclear, echocardiography or cardiac MR [CMR] or severe ischemia on a non-imaging exercise tolerance test [ETT]). Stress tests were interpreted at core laboratories.

ETT participants were required to have angina before, during or after the stress test, while stress imaging participants were not.

Most participants underwent coronary CT angiography (CCTA), also interpreted by a study core laboratory where readers were blinded to stress testing results. This analysis only includes participants who underwent CCTA.

Randomized participants underwent assessment of angina status using the Seattle Angina Questionnaire (SAQ).

For analysis of CAD vs. ischemia, enrolled participants who had an interpretable stress test and CCTA were included even if not randomized. Participants with history of prior coronary artery bypass grafting were excluded.

The primary angina analyses were restricted to participants who did not have anti-anginal medications changed in the last 3 months.

Results

Conclusions

CAD extent/severity and ischemia severity were correlated.

Anatomic CAD and ischemia severity were each significantly associated with poorer SAQ AF.

On multivariate analysis, poorer SAQ AF was associated with:
• Female sex (odds ratio [OR] 1.4, 95% CI 1.1-1.7)
• Younger age (OR 0.8 for 65 vs. 55y, CI 0.7-0.9)
• Baseline use of antianginals (OR 2.1, CI 1.7-2.5) and
• Severe ischemia (OR 1.4, CI 1.0-1.9), but not CAD.

Clinical factors and ischemia were more important than CAD as contributors to angina frequency.