Abstract: P3584

Optimal medical therapy improves survival in patients with ischaemic cardiomyopathy: an analysis of the STICH trial

Authors:
N. Wolfe1, J.D. Mitchell1, D.L. Brown1, 1Washington University School of Medicine, Cardiovascular Division - St. Louis - United States of America,

Topic(s):
Coronary Artery Disease: Pharmacotherapy

Citation:
European Heart Journal (2019) 40 (Supplement), 2190

Background: Prior studies have demonstrated underuse of optimal medical therapy (OMT) in patients with coronary artery disease (CAD) after revascularization. However, there are limited studies assessing compliance with OMT on long-term survival in patients with CAD and no studies evaluating the impact of OMT in patients with severe CAD and reduced left ventricular (LV) function. The Surgical Treatment for Ischaemic Heart Failure (STICH) Trial was a randomized clinical trial that compared coronary-artery bypass grafting (CABG) with medical therapy versus medical therapy alone in the treatment of ischemic cardiomyopathy.

Purpose: This study sought to determine compliance with OMT over time and the impact of OMT compliance on survival in patients with or without revascularization.

Methods: STICH was a multicenter, randomized clinical trial of patients with an LV ejection fraction of 35% or less and CAD amenable to CABG who were randomized to CABG plus medical therapy (N=610) or medical therapy alone (N=602). A medication history was obtained at hospital discharge or 30 days after enrollment, 1 year, 5 years, and 10 years. OMT was defined as the combination of at least 1 antiplatelet drug, a statin, a beta-blocker, and an angiotensin-converting enzyme inhibitor/angiotensin receptor blocker. The primary outcome was all-cause mortality. Comparison of mortality between the OMT and non-OMT groups was performed using multivariate Cox regression modeling with OMT as a time-dependent covariate.

Results: Of the 1212 patients randomized, at a median follow-up of 9.8 years, all-cause mortality was 58.9% in the CABG group and 66.1% in the medical therapy group. In the CABG arm, 63.6% of patients were on OMT throughout the study period compared to 66.5% of patients in the medical therapy arm (p=0.3). Those on OMT were younger (59.6 vs. 61.4 years, p<0.001); were more often in NYHA class I-II (67.4% vs. 56%, p<0.001); and lower rates of atrial fibrillation (9.4% vs. 18.1%, p<0.001), current smoking (18.6% vs. 24.5%, p=0.015), and depression (4.8% vs. 8.8%, p=0.005). Those on OMT had higher rates of hyperlipidemia (63.8% vs. 54.4%, p=0.001) and prior myocardial infarction (79.4% vs. 73.1%, p=0.01). There was no difference in sex, diabetes, and hypertension between those on OMT and non-OMT. In multivariate survival analysis, OMT was associated with a significant reduction in mortality (adjusted hazard ratio, 0.69; 95% confidence interval, 0.58–0.81; p<0.001). The treatment effect with OMT (31% relative reduction in mortality over 10 years) was numerically greater than the treatment effect of CABG (24% relative reduction in mortality with CABG versus medical therapy alone).

Conclusions: OMT improves long-term survival in patients with ischaemic cardiomyopathy regardless of revascularization status. Strategies to improve OMT use and adherence in this population is needed to maximize survival.