Drug-eluting stents in acute myocardial infarction: updated meta-analysis of randomized trials.

Use of drug-eluting stents in patients with acute myocardial infarction (AMI) remains an "off label" indication due to concerns regarding their performance in this patient subset. We searched Medline, the Cochrane Central Register of Controlled Trials, and Internet-based sources of information on clinical trials in cardiology for randomized trials comparing drug-eluting stents with bare-metal stents in patients with AMI. Hazard ratios for the composite of death or recurrent myocardial infarction, (primary safety endpoint), reintervention (primary efficacy endpoint), death, recurrent myocardial infarction, and stent thrombosis were calculated performing a meta-analysis of 14 randomized trials with 7,781 patients. There was no difference in the hazard of death or recurrent myocardial infarction (hazard ratio, 0.91; [95% CI 0.75-1.09]) between patients treated with drug-eluting stents versus patients treated with bare-metal stents. Treatment with drug-eluting stents resulted in a significant reduction in the hazard of reintervention (0.41 [95% CI 0.32-0.52]). The hazards of death (0.90 [95% CI 0.71-1.15]), myocardial infarction (0.81 [95% CI 0.63-1.04]), and stent thrombosis (0.84 [95% CI 0.61-1.17]) were not significantly different between patients treated with drug-eluting stents versus patients.
treated with bare-metal stents. Use of drug-eluting stents in patients with AMI is safe and markedly reduces the need for reintervention as compared to bare-metal stents.