Second generation drug-eluting stents are safe and effective in treatment of left main coronary artery disease

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A study found that second-generation drug-eluting stents are safe and effective in the treatment of left main coronary artery lesions. Results of the ISAR-LEFT MAIN 2 trial were presented at the 24th annual Transcatheter Cardiovascular Therapeutics (TCT) scientific symposium. Sponsored by the Cardiovascular Research Foundation (CRF), TCT is the world's premier educational meeting specializing in interventional cardiovascular medicine.

Patients undergoing invasive treatment of unprotected left main coronary artery (uLMCA) lesions are often considered at high-risk of adverse cardiovascular events. The use of first generation drug-eluting stents in these lesions has previously been shown to be feasible, safe, and effective. The second-generation zotarolimus-eluting (ZES) and everolimus-eluting stents (EES), used more widely in clinical practice at present, perform very similarly in nearly all coronary artery lesions. However, their performance in uLMCA lesions has not yet been assessed.

The ISAR-LEFT MAIN 2 trial is the first and largest performed randomized, multicenter comparison trial between ZES and EES in uLMCA lesions. The study was designed to assess the non-inferiority of ZES to EES regarding the primary end-point: incidence of major adverse cardiac events (MACE), which was defined as the composite of death, myocardial infarction or target lesion revascularization at one-

year follow-up. Secondary endpoints included the incidence of definite/probable stent thrombosis at one-year follow-up and angiographic restenosis at six-nine month follow-up.

In total, 650 patients with ischemic symptoms or evidence of myocardial ischemia in the presence of at least one ≥ 50 percent de novo stenosis located in the LMCA who were unable or unwilling to undergo surgery were randomly assigned to receive ZES (n= 324) or EES (n=326).

The incidence of MACE was 17.5 percent in the ZES group and 14.3 percent in the EES group (p=0.25). The incidence of definite stent thrombosis was 0.6 percent in both groups, while probable stent thrombosis occurred in 0.3 percent of the ZES group and 0 percent of the EES group. Angiographic restenosis occurred in 21.5 percent of the ZES group and 16.8 percent of the EES group.

"Results of this trial indicate that the use of second generation drug-eluting stents in unprotected left main coronary artery lesions in relatively unselected patients is feasible, safe and effective," said lead investigator, Julinda Mehilli, MD. Prof. Dr. Mehilli is Director of Catheterization Laboratories at the Medizinische Klinik I, Klinikum der Universitaet Munich and Co-Director of Clinical Research and Data Coordinating in the Intracoronary Stenting and Antithrombosis Research (ISAR) Center at the German Heart Center in Munich.

"Both zotarolimus and everolimus stents provide similar clinical and angiographic outcomes at one-year follow-up in this high-risk patient population," said Dr. Mehilli.

Provided by Cardiovascular Research Foundation

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