Absorbable stents prove non-inferior to metal in STEMI study

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A drug-eluting coronary stent made of absorbable material performed similarly to the gold-standard metal one in a non-inferiority trial among patients with the more serious type of heart attack known as ST-segment elevation myocardial infarction (STEMI), according to results of the ABSORB STEMI TROFI II trial.

"This is the first randomised controlled trial to compare the stent coverage between these two types of stents in the STEMI setting," said senior investigator Patrick W Serruys, MD, PhD, who presented the findings at ESC Congress 2015, with simultaneous publication in *The Lancet* (to be confirmed).

Unlike metallic stents which remain permanently in place, absorbable stents also known as "bioresorbable vascular scaffolds" (BVS) eventually biodegrade restoring the natural physiology of coronary vessels – "a factor which may be more important in STEMI patients, who tend to have delayed arterial healing as compared to patients with stable coronary artery disease," explained Professor Serruys, from the International Centre for Circulatory Health, Imperial College, London, UK.

The study included 191 STEMI patients (mean age 58.6 years) undergoing primary percutaneous coronary intervention at 8 medical centres.

Patients were randomised to receive either a BVS (n=95) or metallic

stent (n=96), both types being "drug-eluting", meaning coated in everolimus, a drug to reduce the risk of vessel reblockage.

The primary endpoint of the study was a 6-month score assessing stent coverage and restenosis of the vessel using coronary optical coherence tomography (OCT) imaging.

Given the chosen criteria for non-inferiority, the score was similar (1.74 in the BVS arm and 2.80 in the metallic stent arm), indicating almost complete arterial healing in both groups and meeting the criteria for non-inferiority (P