

<sup>1</sup>Keimyung University Dongsan Hospital

Yun-Kyeong Cho<sup>1</sup>, Hyung-Seob Park<sup>1</sup>, Hyuck-Jun Yoon<sup>1</sup>, Chang-Wook Nam<sup>1</sup>, Hyungseop Kim<sup>1</sup>, Seung-Ho Hur<sup>1</sup>, Yoon-Nyun Kim<sup>1</sup>, Kwon-Bae Kim<sup>1</sup>

**Background:** Drug eluting stents (DES) have recently been proven to improve angiographic and clinical outcomes compared with bare metal stents (BMS) in elective procedures. The aim of this study is to confirm the safety and effectiveness of DES in patients with STEMI undergoing primary percutaneous coronary intervention (PPCI). **Methods:** From March 2003 to July 2006, 139 consecutive patients undergoing PPCI in STEMI have been analyzed. Patients were retrospectively followed for the occurrence of major adverse cardiac events (MACE): cardiac death, non-fatal myocardial infarction, target lesion revascularization (TLR). **Results:** DES were used in 103 patients (74.1%) and BMS in 36 patients (25.9%) in infarct-related artery. In baseline characteristics, the rate of smoker was higher (19.4% vs. 44.7%,  $p=0.009$ ) and medication of triple anti-platelet agents (2.8% vs. 21.4%,  $p=0.016$ ) and statin (25.0% vs. 72.8%,  $pp<0.001$ ) was more common in DES group. The angiographic characteristics in DES group showed smaller diameter of vessels ( $3.46\pm 0.43$  mm vs.  $3.11\pm 0.35$  mm,  $p<0.001$ ). During 3 year follow-up, target lesion revascularization in patients with DES was significantly lower (1.9% vs. 11.1%,  $p=0.039$ ). However, there was no difference in MACE between two groups. The use of DES was only independent predictor of 3 year target lesion revascularization (hazard ratio 0.052, 95% CI 0.003~0.928,  $p=0.044$ ). **Conclusion:** During 3 year follow-up, PPCI with DES was safe and reduced the need of TLR in patients with STEMI. Further randomized trials are required for the definitive conclusion regarding the use of DES in patients with STEMI.