THE USE OF BARE-METALS STENTS IN PRIMARY PERCUTANEOUS CORONARY INTERVENTION FOR ACUTE MYOCARDIAL INFARCTION: IS THERE A DIFFERENCE IN CLINICAL OUTCOME BETWEEN COBALT CHROMIUM VERSUS STAINLESS STEEL STENTS?

i2 Poster Contributions
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Authors: Angela Koh, Lok Man Choi, Lay Wai Khin, Ling Ling Sim, Terrance SJ Chua, Tian Hai Koh, Jack WC Tan, Stanley Chia, National Heart Centre, Singapore, Singapore

Background: The use of DES results in lower risk of target vessel revascularization (TVR) compared to bare metal stents (BMS) following primary PCI for patients with acute ST-elevation myocardial infarction (STEMI). However, BMS are more commonly implanted compared to DES due to concerns of poor compliance to dual antiplatelet therapy, risk of late stent thrombosis and increased cost. Newer generation BMS based on cobalt chromium alloy have thinner stent struts, better deliverability and potentially lower rates of TVR compared with conventional stainless steel BMS. Therefore we aim to determine the clinical outcome and rates of TVR in patients undergoing primary PCI for STEMI who were treated with cobalt-chromium stents compared to stainless steel stents.

Methods: Prospective data on consecutive patients undergoing primary PCI for STEMI between 2002 and 2008 who were treated with BMS were collected. Baseline characteristics and data were obtained from medical records or telephone follow-up. Primary outcome was combined major adverse cardiovascular events (MACE) of all-cause death, nonfatal MI and clinically-driven TVR at six months.

Results: 1353 patients (84% males) with mean age of 59±12 years were analysed. Overall procedural success rate was 98%. Stainless steel stents were inserted in 75% of patients (stainless steel, n=1014 vs cobalt chromium, n=339). There were no significant differences in age, gender, hypertension, hyperlipidemia, diabetes mellitus, smoking history and ethnicity between the two groups (p=ns). Usage of glycoprotein-IIbIIIa inhibitors or distal embolic protective devices during PCI was similar between the two groups (p=ns). There was no significant difference in overall MACE at 6 months between the stainless steel or cobalt chromium groups (8.2% vs 10.6%, p=0.17). The incidence of TVR after six months was 4.7% in the stainless steel group and 5.9% in the cobalt chromium group (p=0.40).

Conclusions: In this observational analysis of patients undergoing primary PCI for STEMI who were treated with BMS, the overall MACE was similar at 6-months. In particular, both cobalt-chromium and stainless steel stents were associated with similar rates of clinically-driven TVR.