中文題目：生物可吸收支架用於冠狀動脈心臟病的長期預後追蹤：單一醫學中心的經驗分享

英文題目：The Long Term Outcome of Bioresorbable Vascular Scaffold in Patients with Coronary Artery Disease: A Single Center Experience

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Background: The bioresorbable vascular scaffold (BVS) has been widely used in Taiwan previously . The short term clinical outcome has been reported in the literature, however, the long term outcome has not been investigated.

Methods: This retrospective single center study included **153** patients with coronary artery disease and a total of **231** lesions who received BVS implantation from **May, 2014** to **April, 2017.** We investigated the clinical outcomes from the clinical records. The study's primary endpoint was major adverse cardiac event (MACE), such as cardiovascular death, non-fatal myocardial infarction (MI), non-fatal stroke, and target lesion revascularization (TLR).

Results: The average age of the patients was **62.4** year-old, and **76**% were male. Within the implanted patients, we performed total **168** procedures (2 failed, success rate 98.7%; 14 patients underwent two PCI and one received 3 PCI) and **231** BVSs were implanted under different scenario (124 cases (82%) were scheduled PTCA, 12 (8%) cases were AMI, 8 (5%) cases were CTO, and 7 (4.6%) cases were ISR). The lesions distribution were 115 (50%) lesions in the LAD, 75 (32.5%) in the RCA , 40 (17%) in the LCX and one in the vein graft, while bifurcation lesions accounted for 40%. We used intravascular ultrasound (IVUS) to prepare the lesions in 76% and 68% of the scaffolds were post-dilated with non-compliant (NC) balloon. Acute procedure related complications occurred during or immediately after the procedure including 3 acute stent edge dissection, two coronary artery perforation and one MI. After a mean follow-up period of 46.2 months (1 month to 72 months), 15 patients (10%) experienced a MACE including 1 CV death , 2 myocardial infarction and 12 target lesion revascularization. During the follow-up period, 75 patients (total 107 BVS) who had undergo follow-up CAG, 14 (19%) patients with 15 (14%) BVS had ISR, 11 lesions treated with DES, 3 with DEB, one without intervention.Of these ISR lesions, 7 (47%) occurred >36 months, 5 (33%) happened between 25-36 months, 2 (13%) between 13-24 months, and 1 (7%) <12 months. .

Conclusion: The long term clinical outcome (mean follow up 46.2 months) of BVS in our

single center is acceptable, including 10% MACE and 14% ISR. Half of the ISR occurred 3 years later after the BVS is resorbable.

Keyword: bioresorbable vascular scaffold (BVS), clinical outcome,coronary artery disease, major adverse cardiac event (MACE), myocardial infarction, percutaneous coronary intervention (PCI), percutaneous transluminal coronary angioplasty (PTCA), in-stent restenosis (ISR)