

Comparison of Outcomes in patients with versus without DM after Revascularization with Biomime stent

성가롤로병원 내과

*김승희, 조장현, 김수현, 이민구, 강원유, 김재민, 김경환

Background/Aims: Drug-eluting stents significantly improved angiographic and clinical outcomes compared with bare metal stents in diabetic patients. However, a comparison of clinical effect of Sirolimus-eluting stents(Biomime) with versus without diabetic patients has not been evaluated. Therefore we compared clinical effectiveness of Biomime stents in patients with versus without Diabetes Mellitus. **Methods:** From OCT 2015 to JAN 2019, this prospective, randomized study compared angiographic in-segment late loss and clinical effectiveness of Biomime stents in treating patients with ($n=118$, total lesion number=178) versus without Diabetes Mellitus($n=61$, total lesion number=103) in Saint Carollo Hospital. **Results:** The primary end point was non-inferiority of angiographic in-segment late loss at 12 months. Clinical events were also monitored for at least 12 months. Diabetes patients were noninferior to non-Diabetes patients for 12-month in-segment late loss (0.03 ± 0.18 versus 0.02 ± 0.06 mm; $p=0.856$, 95% confidence interval, $p<0.05$ for non-inferiority). At 12 months, Major adverse cardiac events, including death, myocardial infarction, and ischemic-driven target lesion revascularization were not statistically different between the 2 groups. **Conclusions:** Sirolimus-Eluting Stents(Biomime) in treating patients with diabetes mellitus were noninferior in reducing in-segment late loss and angiographic restenosis at 12 months compared to non-diabetic patients with coronary artery disease.

Table 1. Baseline characteristics and coronary angiographic findings

	Without DM (n=117)	With DM (n=61)	p-value
Age	63.5±10.2	63.9±11.3	0.868
HbA1c(%)	5.61±0.39	7.12±1.45	<0.001
Male	71.2%	65.7%	0.585
Smoking	31.3%	26.2%	0.587
Diagnosis			
Stable angina	60.3%	67.3%	0.263
Unstable angina	9.7%	4.9%	0.485
NSTEMI	8.8%	4.9%	0.580
STEMI	21.2%	22.9%	0.640
Target lesion			
LAD	63.8%	69.7%	0.403
LCX	25.4%	15.7%	0.342
RCA	32.5%	45.2%	0.295
Angiographic results			
Lesion length(mm)	22.2±8.1	21.5±7.4	0.683
Stent length(mm)	24.9±7.9	24.0±7.4	0.609
MLD(prePCI)(mm)	0.66±0.56	0.81±0.55	0.206
MLD(postPCI)(mm)	3.1±0.4	3.2±0.5	0.180
MLD(F/U at 12 months)	3.0±0.5	3.2±0.5	0.194
Acute gain(mm)	2.4±0.7	2.4±0.8	0.880
Late loss(mm)	0.03±0.18	0.02±0.06	0.856

DM : Diabetes mellitus; NSTEMI : non ST segment elevation myocardial infarction; STEMI : ST segment elevation myocardial infarction; LAD : left anterior descending artery; LCX : left circumflex artery; RCA : right coronary artery; MLD : minimal luminal diameter; PCI : percutaneous coronary intervention; F/U : follow up