

¹Catholic University of Daegu College of Medicine

SP Hong¹, YS Lee¹, JB Lee¹, JK Ryu¹, JY Choi¹, SG Chang¹, KS Kim¹

Purpose: We investigated the natural history of angiographic progression in real world.

Methods: The study population comprised 1167 patients with one year follow-up angiography from May 2006 to June 2011, who were successfully treated with PCI with DES before. Reference diameter (RD) and minimal lesion diameter (MLD) were angiographically measured by QCA system. We defined culprit and non-culprit lesion restenosis as MLD/RD < 0.5.

Results: Mean follow up duration was 3.46 years. Of 1167 patients (mean age 63.1 years, 57.9% males, HTN: 44.3%, DM: 27.2%, ACS: 36.6%) treated with DES (Table 1), 174 patients (14.7%) presented with a definite culprit lesion restenosis and 170 patients (14.4%) presented with a definite non-culprit lesion stenosis. (Figure 1) There was no significant difference of MACE in culprit and non-culprit lesion group. (Figure 2, 3).

Conclusion: Angiographic progression of coronary stenosis occurring during follow-up could be evenly attributable to recurrence at the site of culprit lesions and to non-culprit lesions.

Table 1. Clinical, Angiographic and Echocardiographic characteristics

Variables	Non-Culprit Group (n=422)	Culprit lesion group (n=170)	P-value
Age (year)	62.3 ± 10.8	63.6 ± 13.5	0.432
Sex, male	55.4%	64.2%	0.077
BMI(kg/m ²)	24.2 ± 3.0	24.6 ± 3.0	0.231
HTN (%)	45.2%	38.8%	0.219
DM (%)	24.9%	25.9%	0.863
ACS (%)	32.5%	45.9%	0.009
Diameter, LAD	1.46 ± 0.31	1.49 ± 0.35	0.889
Stent diameter(mm)	3.15 ± 0.54	3.39 ± 0.65	0.001
Stent length(mm)	27.07 ± 12.98	27.95 ± 12.64	0.501
LAD MLD (mm)	1.64 ± 0.39	1.64 ± 0.42	0.429
LAD RD (mm)	2.64 ± 0.57	2.73 ± 0.73	0.011

*LAD: left anterior descending artery; MLD: minimal lesion diameter

Fig. 1. Angiographic progression of culprit atherosclerosis in Culprit and Non-culprit lesion

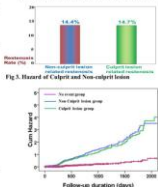


Fig. 2. Comparison of Culprit and Non-culprit lesion in MACE

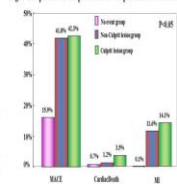


Table 1. Clinical ,Angiographical and Echocardiographic characteristics

Variables	No event Group (n=823)	Non-Culprit lesion group (n=170)	Culprit lesion group (n=174)	P value
Age (years)	62.3 ± 10.9	63.6 ± 13.5	65.1 ± 9.5	0.032
Sex, male	55.6%	64.3%	60.8%	0.077
BMI(kg/m ²)	24.3 ± 3.0	24.6 ± 3.0	24.6 ± 2.9	0.231
HTN (%)	45.2%	38.0%	45.5%	0.219
DM (%)	24.0%	35.5%	31.7%	0.003
ACS (%)	32.5%	48.5%	41.7%	0.000
Disease vessel, no	1.46 ± 0.91	1.69 ± 1.05	1.61 ± 0.99	0.009
Stent diameter (mm)	3.15 ± 0.54	3.10 ± 0.45	2.98 ± 0.35	0.001
Stent length (mm)	27.07 ± 12.98	27.09 ± 12.04	31.50 ± 18.01	0.001
LVMI (g/m ²)	144.7 ± 39.9	154.1 ± 44.2	142.7 ± 36.7	0.020
LAVI (ml/m ²)	33.6 ± 11.7	32.1 ± 11.9	37.3 ± 17.9	0.011

* LVMI: left ventricular mass index, LAVI: left atrial volume index

Fig 1. Angiographic progression of coronary atherosclerosis in Culprit and Non-culprit lesion

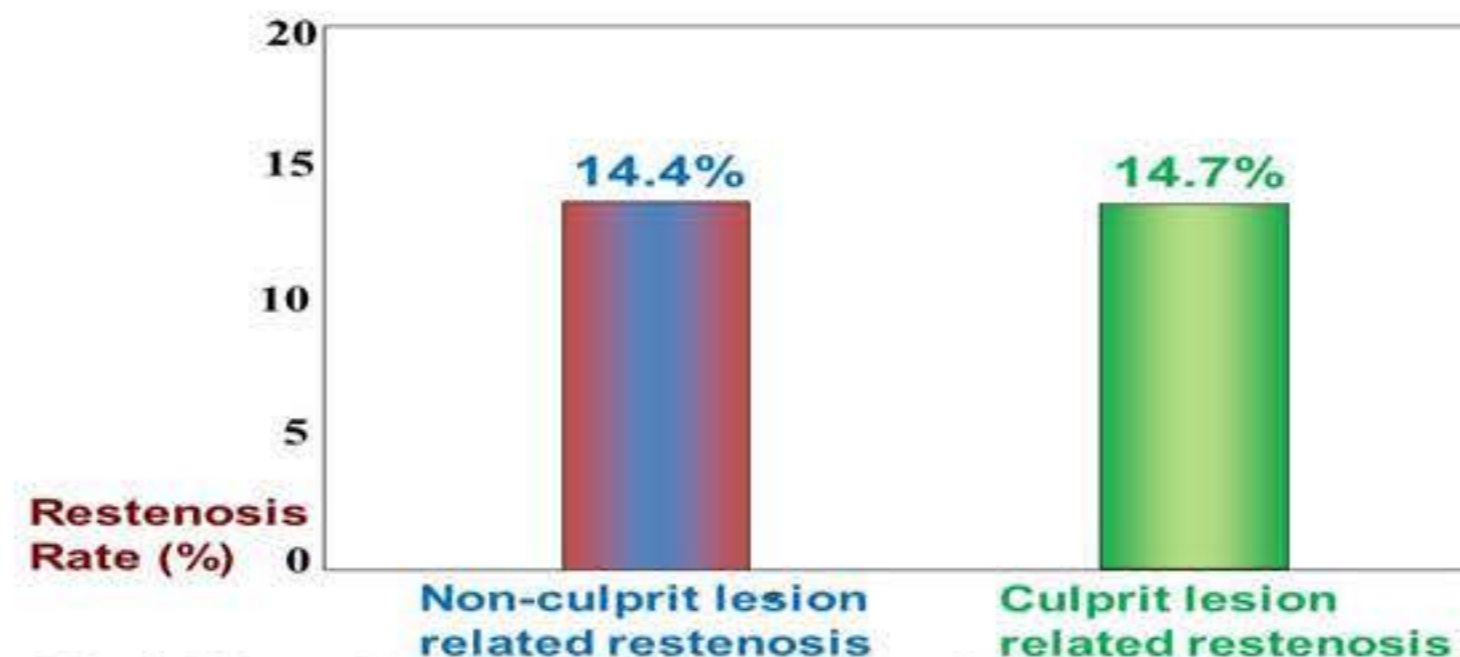


Fig 3. Hazard of Culprit and Non-culprit lesion

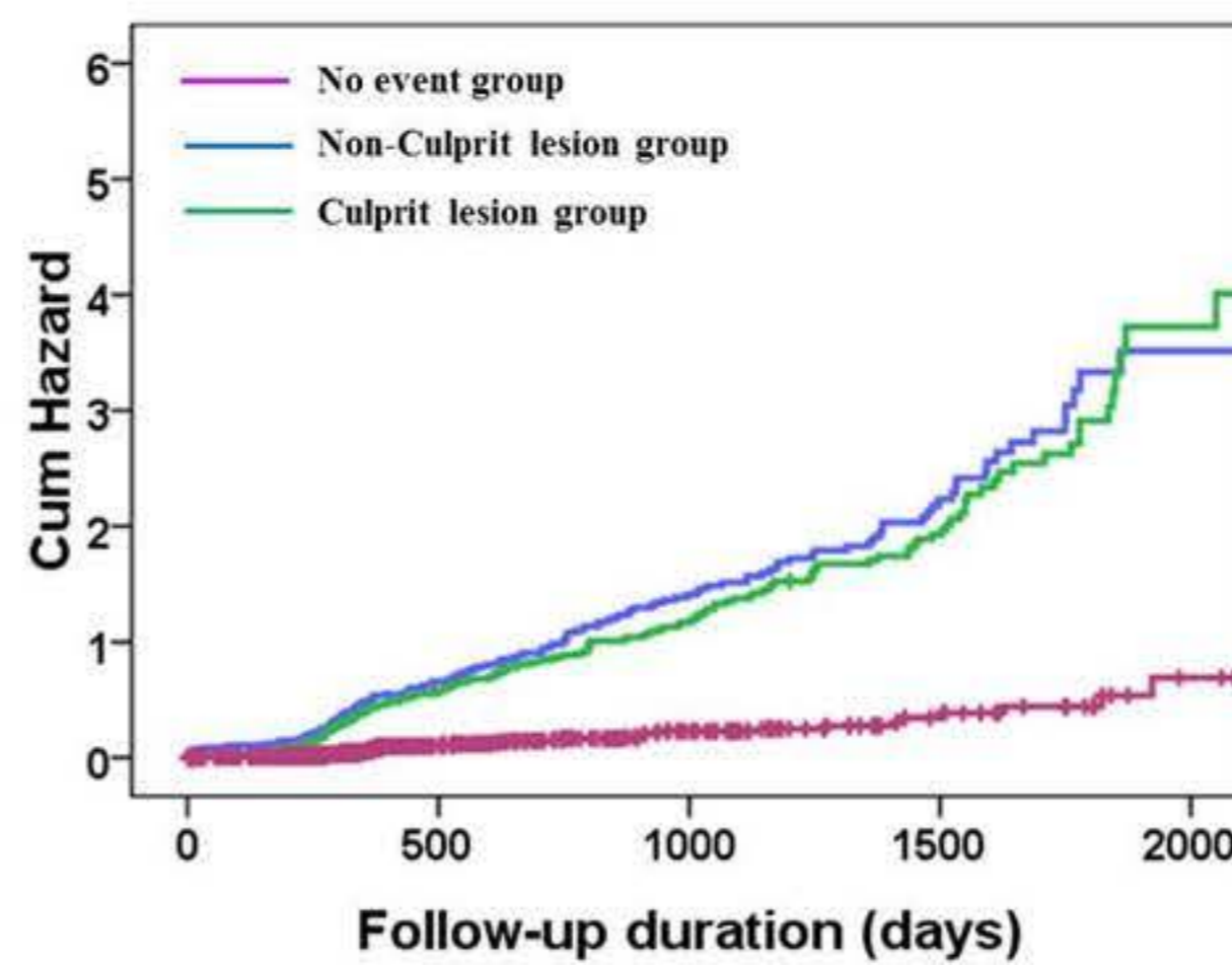


Fig 2. Comparison of Culprit and Non-culprit lesion in MACE

