

Table 4. Predictors of Late-Acquired Stent Malapposition

	Univariate Analysis		P Value
	Late-Acquired Stent Malapposition Lesions (n=54)	No Late-Acquired Stent Malapposition Lesions (n=302)	
Follow-up optical coherence tomography			
Time intervals after index procedure, days	173±43	175±63	0.841
Late-acquired malapposed struts, %	3.8±4.5	0	...
Maximum late-acquired stent malapposition cross-sectional area, mm ²	0.95±0.90	0	...
Late-acquired stent malapposition volume, mm ³	2.06±3.24	0	...
Late-acquired stent malapposition volume, % (of stent volume)	1.7±3.1	0	...
Late-acquired stent malapposition within stent body	33 (61%)	0	...
Acute coronary syndrome*	18 (33%)	88 (30%)	0.586
Dyslipidemia*	34 (63%)	155 (52%)	0.144
B2- or C-type lesion	24 (44%)	132 (44%)	0.745
Baseline diameter stenosis, %	69±20	65±14	0.299
Stent diameter, mm	3.22±0.37	3.14±0.36	0.178
Stent length, mm	19.0±5.4	18.9±5.1	0.955
Poststent optical coherence tomography			
Plaque/thrombus prolapse	38 (70%)	128 (42%)	<0.001

*Analyzed in patient level.

implantation. Neointimal healing reduces the volume of acute stent malapposition with many acute stent malapposition struts becoming completely integrated into the vessel wall. However, cases of acute stent malapposition with a large volume or acute stent malapposition located within the edges of the stent were not resolved in most cases. Thus, acute stent malapposition volume and location within stent edges were identified as independent predictors of late-persistent stent malapposition. Our results indicate that an acute stent malapposition with a larger volume or area is more likely to persist at follow-up examinations, which is consistent with findings from previous studies.^{4,6,8} Late-persistent stent malapposition could be differentiated from resolved acute stent malapposition by an acute

stent malapposition area >1.2 mm² according to an IVUS study.⁶ A strut-to-vessel distance ≤260 μm on poststent OCT images was suggested as a cut-off value for resolved acute stent malapposition.¹⁸ A volume of acute stent malapposition >2.56 mm³ best separated late-persistent stent malapposition lesions from resolved acute stent malapposition lesions in the present study.

Late-Acquired Stent Malapposition

The presence of a plaque/thrombus protrusion, which was most often (75%) located within the stent body on poststent IVUS images, was reported to be a predictor of late-acquired stent malapposition.⁶ Thus, it was suggested that plaque/

Table 5. Incidences of Clinical Events and Duration of Dual Antiplatelet Therapy During Follow-up

	Overall Patients (N=351)	Both Late-Persistent and Late-Acquired Stent Malapposition (n=23)	Late-Acquired Stent Malapposition Alone (n=31)	Late-Persistent Stent Malapposition Alone (n=45)	No Stent Malapposition (n=252)	P Value
Follow-up duration after PCI, mo	28.6±10.3	24.3±4.3	27.7±10.0	28.4±9.2	29.1±10.8	0.175
Follow-up duration after follow-up OCT, mo	22.8±10.4	18.4±4.4	22.0±10.4	22.6±8.9	23.3±10.9	0.180
Composite of clinical events	10 (2.9%)	0 (0%)	1 (3.2%)	1 (2.2%)	8 (3.2%)	1.0
Cardiovascular death	1 (0.3%)	0 (0%)	0 (0%)	0 (0%)	1 (0.4%)	1.0
Nonfatal myocardial infarction	1 (0.3%)	0 (0%)	0 (0%)	0 (0%)	1 (0.4%)	1.0
Stent thrombosis	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1.0
Target lesion revascularization	8 (2.3%)	0 (0%)	1 (3.2%)	1 (2.2%)	6 (2.4%)	0.900
Duration of dual antiplatelet therapy, mo	14.2±8.2	11.9±5.3	15.5±6.4	13.8±7.1	14.3±8.7	0.417
At least 12 mo of dual antiplatelet therapy	262 (75%)	15 (65%)	27 (87%)	36 (80%)	184 (73%)	0.199

OCT indicates optical coherence tomography; and PCI, percutaneous coronary intervention.