

SUPPLEMENTAL MATERIAL

Table S1. Patient Characteristics of PCIs by NOAC versus VKA Use

	NOAC Use (N=66)	VKA Use (N=771)	P Value
Age (years), mean ± SD	70.5 ± 11.6	71.8 ± 11.2	0.36
Male (%)	52 (78.8)	569 (73.8)	0.37
White (%)	63 (95.5)	715 (92.7)	0.41
BMI (kg/m²), mean ± SD	29.6 ± 7.44	29.1 ± 6.19	0.56
Current/recent smoking (within 1 year) (%)	2 (3.03)	73 (9.47)	.078
Hypertension (%)	59 (89.4)	691 (89.6)	0.95
Dyslipidemia (%)	61 (92.4)	732 (94.9)	0.38
Family history of CAD (%)	11 (16.7)	121 (15.7)	0.84
Renal failure (currently on dialysis or creatinine >2) (%)	0 (0)	76 (9.86)	<0.01
Cerebrovascular disease (%)	11 (16.7)	234 (30.4)	0.019
Peripheral artery disease (%)	9 (13.6)	186 (24.1)	0.053
Chronic lung disease (%)	6 (9.09)	166 (21.5)	0.016
Diabetes mellitus (%)	24 (36.4)	318 (41.3)	0.44
Prior heart failure (%)	23 (34.9)	321 (41.6)	0.28
Prior myocardial infarction (%)	34 (51.5)	373 (48.4)	0.62
Prior valve surgery (%)	3 (4.55)	112 (14.5)	0.023
Prior PCI (%)	28 (42.4)	305 (40.0)	0.65
Prior CABG (%)	19 (28.8)	259 (33.6)	0.43

Anemia at presentation (%)	29 (43.9)	392 (50.8)	0.28
Indication for oral anticoagulant (%)			
Atrial fibrillation/flutter	55 (83.3)	598 (77.6)	0.28
Venous thromboembolism	7 (10.6)	130 (16.9)	0.19
Left ventricular dysfunction, aneurysm or thrombus	2 (3.03)	74 (9.60)	0.075
Valvular heart disease	2 (3.03)	37 (4.80)	0.51
Cardio-embolic stroke	2 (3.03)	12 (1.56)	0.37
Hypercoaguable syndrome	7 (10.6)	42 (5.45)	0.086
Other	2 (3.03)	35 (4.54)	0.57
Type of oral anticoagulant (%)			
Warfarin	---	771 (100)	---
Dabigatran	39 (60.0)	---	---
Rivaroxaban	20 (30.8)	---	---
Apixaban	3 (4.62)	---	---
Other	3 (4.62)	---	---
P2Y12 inhibitor at admission (%)	10 (15.2)	168 (21.8)	0.21
Type of P2Y12 inhibitor			0.96
Clopidogrel	10 (100)	163 (97.0)	0.96
Ticagrelor	0 (0)	1 (0.60)	
Prasugrel	0 (0)	3 (1.79)	
Other	0 (0)	1 (0.60)	

Aspirin at admission (%)	47 (71.2)	545 (70.7)	0.93
Bridging therapy among elective PCIs (%)	3/24 (12.5)	65/283 (23.0)	0.24
Oral anticoagulant among survivors to discharge (%)	61/66 (92.4)	672/750 (89.6)	0.47
P2Y12 inhibitor among survivors to discharge (%)	63/66 (95.5)	727/750 (96.9)	0.51
Type of P2Y12 inhibitor			
Clopidogrel	59/63 (93.6)	714/727 (98.2)	0.029
Ticagrelor	3/63 (4.76)	7/727 (0.96)	
Prasugrel	1/63 (1.59)	6/727 (0.83)	
Aspirin among survivors at discharge (%)	66/66 (100)	734/750 (97.9)	0.23
Triple therapy among survivors at discharge (%)	58/66 (87.9)	635/750 (84.7)	0.48
Abbreviations: BMI, body mass index; CABG, coronary artery bypass graft; CAD, coronary artery disease; NOAC, non-vitamin K antagonist oral anticoagulant; PCI, percutaneous coronary intervention; SD, standard deviation; VKA, vitamin K antagonist			

Table S2. Presentation and Procedural Characteristics of PCIs by NOAC versus VKA Use

	NOAC Use (N=66)	VKA Use (N=771)	P Value
Presentation type (%)			0.30
STEMI	6 (9.09)	40 (5.19)	---
NSTEMI	12 (18.2)	159 (20.6)	---
Unstable angina	17 (25.8)	219 (28.4)	---
Stable angina	17 (25.8)	140 (18.2)	---
Other	14 (21.2)	213 (27.6)	---
Cardiogenic shock w/in 24 hours (%)	2 (3.03)	17 (2.20)	0.67
Cardiac arrest w/in 24 hours (%)	2 (3.03)	16 (2.08)	0.61
Cardiomyopathy or LV systolic dysfunction (%)	17 (25.8)	324 (42.0)	<0.01
Arterial access (%)			
Femoral	39 (59.1)	505 (65.5)	0.29
Radial	27 (40.9)	244 (31.7)	0.12
Procedure anticoagulants (%)			
Unfractionated heparin	55 (83.3)	631 (81.8)	0.76
Low molecular weight heparin	1 (1.52)	13 (1.69)	0.92
Glycoprotein IIb/IIIa inhibitor	0 (0)	26 (3.37)	0.13
Bivalirudin	22 (33.3)	270 (35.0)	0.78
Highest risk lesion class (%)			
SCAI class II/III vs I	20 (30.3)	217 (28.2)	0.71
SCAI class IV vs I	3 (4.55)	50 (6.49)	0.53

Highest risk lesion (%)			
pLAD (vs other)	9 (13.6)	109 (14.1)	0.91
Left main (vs other)	5 (7.58)	59 (7.65)	0.98
DES placed (%)	31 (47.0)	310 (40.2)	0.28
BMS placed (%)	32 (48.5)	395 (51.2)	0.67
IABP (%)	4 (6.06)	22 (2.85)	0.15
Other mechanical support (%)	2 (3.03)	15 (1.95)	0.55
Number of diseased vessels			
1	21 (31.8)	299 (38.8)	0.26
2+	43 (65.2)	455 (59.0)	
Number of lesions, mean ± SD	1.50 ± 0.71	1.39 ± 0.69	0.21
Total number of stents during lab visit, mean ± SD	1.55 ± 0.76	1.57 ± 0.88	0.88
Thrombus present (%)	10 (15.2)	115 (14.9)	0.96
In-stent restenosis (%)	6 (9.09)	109 (14.1)	0.25
Pre-procedure hemoglobin (g/dL), mean ± SD	12.7 ± 2.11	12.3 ± 2.22	0.17
Post-procedure hemoglobin (g/dL), mean ± SD	11.8 ± 2.20	11.3 ± 2.03	0.10
Pre-procedure creatinine (mg/dl), mean ± SD	1.05 ± 0.30	1.44 ± 1.28	0.012
Post-procedure creatinine (mg/dl), mean ± SD	1.08 ± 0.42	1.55 ± 1.49	0.018
Predicted risk of post-PCI bleeding, mean ± SD	0.023 ± 0.016	0.029 ± 0.026	0.071
Predicted risk of in-hospital mortality, mean ± SD	0.012 ± 0.034	0.024 ± 0.078	0.22
Abbreviations: BMS, bare metal stent; DES, drug eluting stent; GFR, glomerular filtration rate; IABP, intra-aortic balloon pump; LV, left ventricular; NSTEMI, non-ST-elevation myocardial infarction; NOAC, non-vitamin K antagonist oral anticoagulant; pLAD, proximal left anterior descending; SCAI, society for cardiac angiography and interventions; SD, standard deviation; STEMI, ST elevation myocardial infarction; VKA, vitamin K antagonist			

Table S3. Unadjusted Rates of Outcomes by NOAC versus VKA Use

	NOAC Use (N=66)	VKA Use (N=771)	Absolute Risk Difference with NOAC Use	Number Needed to Harm	P value
Primary					
In-hospital major bleeding (%)	7 (10.6)	81 (10.5)	+0.10	---	0.98
In-hospital mortality (%)	0 (0)	21 (2.72)	-2.72	---	0.17
Secondary					
Access-site bleeding (%)	2 (3.03)	17 (2.20)	+0.83	---	0.67
Nonaccess-site bleeding (%)	5 (7.58)	64 (8.30)	-0.72	---	0.84
RBC transfusion (%)	6 (9.09)	54 (7.00)	+2.09	---	0.53
In-hospital stent thrombosis (%)	0 (0)	3 (0.39)	-0.39	---	0.61
Post-PCI MI (%)	2 (3.03)	19 (2.46)	+0.57	---	0.78
CVA/Stroke (%)	0 (0)	4 (0.52)	-0.52	---	0.56
Post-PCI length of stay (days), mean \pm SD	3.09 \pm 4.80	4.02 \pm 5.55	---	---	0.19
30-day readmissions within index healthcare system (%)	4 (6.06)	82 (10.6)	-4.57	---	0.24
90-day readmissions within index healthcare system (%)	9 (13.6)	176 (22.8)	-9.19	---	0.08

Abbreviations: CVA, cerebrovascular accident; MI, myocardial infarction; NOAC, non-vitamin K antagonist oral anticoagulant; PCI, percutaneous coronary intervention; RBC, red blood cell; SD, standard deviation; VKA, vitamin K antagonist

Table S4. Unadjusted and Adjusted Risks of Outcomes with Vitamin K Antagonist Oral Anticoagulant Use

	Unadjusted			Adjusted by Propensity Score		
	Risk Ratio	95% Confidence Interval	P value	Risk Ratio	95% Confidence Interval	P value
Long-term mortality	9.09	1.27, 65.1	0.028	6.76	0.93, 49.2	0.059
In-hospital major bleeding	0.99	0.44, 2.24	0.98	0.72	0.30, 1.74	0.46
Access-site bleeding	0.72	0.16, 3.19	0.67	0.40	0.08, 1.99	0.26
Nonaccess-site bleeding	1.10	0.43, 2.85	0.84	1.00	0.38, 2.71	0.99
90-day readmission within index healthcare system	1.87	0.91, 3.86	0.089	1.63	0.77, 3.46	0.20

Figure S1. Temporal Trends in Antithrombotic Regimens at Admission and Discharge among Patients on Chronic Oral Anticoagulant Therapy

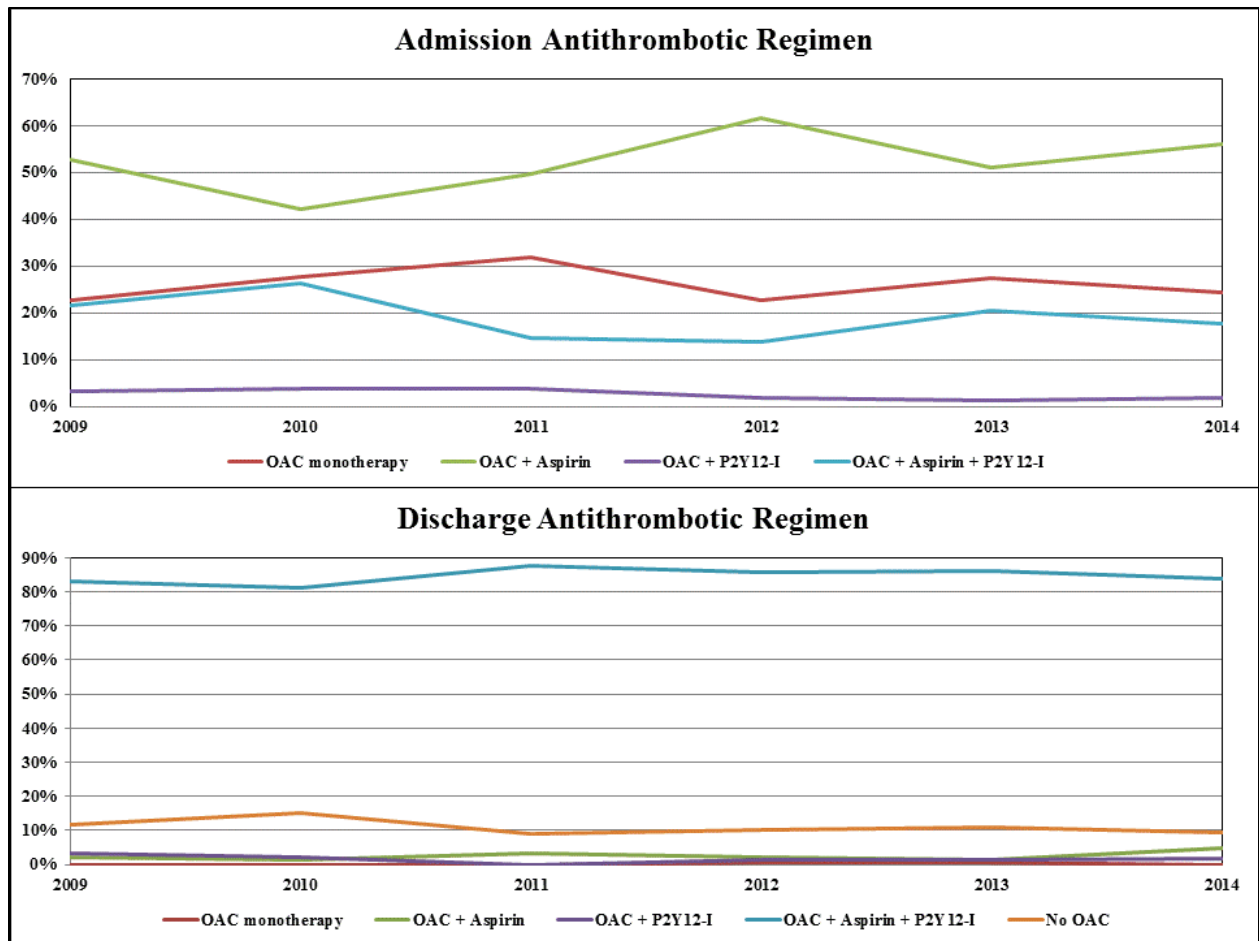


Figure Legend:

Figure S1. Temporal changes in use of antithrombotic agents at admission and discharge among patients on chronic oral anticoagulant therapy undergoing percutaneous coronary intervention during the study period. OAC, oral anticoagulant therapy; P2Y12-I, P2Y12 receptor inhibitor.