

**Different association of atherogenic index of plasma with the risk of high platelet reactivity according to the presentation of acute myocardial infarction**

**Running title:**

Association between AIP and HPR according to AMI

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**Supplementary table 1.** Baseline characteristics according to HPR and AIP status in non-AMI and AMI patients

	Non-HPR + Low AIP	Non-HPR + High AIP	HPR + Low AIP	HPR + High AIP	P
Non-AMI (n = 7599)	n = 3067	n = 1971	n = 1654	n = 907	
Age, years	64.3 ± 10.0	61.5 ± 10.4	67.6 ± 9.5	65.8 ± 9.8	<0.001
Male	2181 (71.1)	1490 (75.6)	899 (54.4)	490 (54.0)	<0.001
LVEF, %	60.8 ± 10.2	60.9 ± 9.6	60.7 ± 10.1	61.3 ± 9.2	0.579
Hypertension	1838 (59.9)	1222 (62.0)	1148 (69.4)	617 (68.0)	<0.001
Diabetes mellitus	996 (32.5)	758 (38.5)	605 (36.6)	413 (45.5)	<0.001
Dyslipidemia	1682 (54.8)	1727 (87.6)	913 (55.2)	789 (87.0)	<0.001
Obesity	1211 (39.5)	1077 (54.6)	680 (41.1)	484 (53.4)	<0.001
Smoking	717 (23.4)	646 (32.8)	246 (14.9)	182 (20.1)	<0.001
Chronic kidney disease	489 (15.9)	377 (19.1)	389 (23.5)	254 (28.0)	<0.001
Peripheral artery disease	290 (9.5)	197 (10.0)	193 (11.7)	122 (13.5)	0.002
Previous PCI	482 (15.7)	286 (14.5)	254 (15.4)	129 (14.2)	0.562
Previous CVA	224 (7.3)	126 (6.4)	119 (7.2)	57 (6.3)	0.510
Multivessel disease	1067 (34.8)	760 (38.6)	591 (35.7)	394 (43.4)	<0.001
Bifurcation lesion	343 (11.2)	221 (11.2)	189 (11.4)	115 (12.7)	0.643
CTO lesion	228 (7.4)	170 (8.6)	106 (6.4)	53 (5.8)	0.019
Number of stents	1.6 ± 0.8	1.6 ± 0.8	1.6 ± 0.8	1.7 ± 0.8	0.151
Length of stent, mm	35.5 ± 22.9	36.1 ± 23.2	34.8 ± 22.9	37.5 ± 23.9	0.031
Minimal diameter of stent, mm	2.99 ± 0.43	3.02 ± 0.44	2.99 ± 0.41	2.97 ± 0.41	0.014
Beta blocker	1513 (49.3)	1027 (52.1)	856 (51.8)	479 (52.8)	0.114
Angiotensin blockade	1617 (52.7)	1076 (54.6)	918 (55.5)	502 (55.3)	0.220

Calcium channel blocker	826 (26.9)	558 (28.3)	471 (28.5)	239 (26.4)	0.471
Statin	2669 (87.0)	1764 (89.5)	1461 (88.3)	802 (88.4)	0.064
AMI (n = 3136)	n = 1308	n = 736	n = 725	n = 367	
Age, years	64.4 ± 11.9	59.0 ± 12.9	68.5 ± 11.0	64.8 ± 12.1	<0.001
Male	951 (72.7)	590 (80.2)	416 (57.4)	235 (64.0)	<0.001
LVEF, %	54.2 ± 10.6	55.7 ± 9.5	53.2 ± 11.3	54.7 ± 10.4	<0.001
Hypertension	664 (50.8)	369 (50.1)	412 (56.8)	207 (56.4)	0.012
Diabetes mellitus	348 (26.6)	207 (28.1)	225 (31.0)	162 (44.1)	<0.001
Dyslipidemia	726 (55.5)	680 (92.4)	404 (55.7)	333 (90.7)	<0.001
Obesity	404 (30.9)	362 (49.2)	188 (25.9)	144 (39.2)	<0.001
Smoking	511 (39.1)	353 (48.0)	212 (29.2)	154 (42.0)	<0.001
Chronic kidney disease	259 (19.8)	123 (16.7)	207 (28.6)	126 (34.3)	<0.001
Peripheral artery disease	194 (14.8)	113 (15.4)	134 (18.5)	62 (16.9)	0.166
Previous PCI	127 (9.7)	61 (8.3)	75 (10.3)	31 (8.4)	0.499
Previous CVA	78 (6.0)	43 (5.8)	65 (9.0)	33 (9.0)	0.017
Multivessel disease	572 (43.7)	321 (43.6)	374 (51.6)	165 (45.0)	0.004
Bifurcation lesion	156 (11.9)	74 (10.1)	115 (15.9)	45 (12.3)	0.007
CTO lesion	80 (6.1)	40 (5.4)	42 (5.8)	28 (7.6)	0.534
Number of stents	1.6 ± 0.8	1.6 ± 0.7	1.6 ± 0.8	1.6 ± 0.7	0.388
Length of stent, mm	35.7 ± 21.0	36.4 ± 21.6	37.3 ± 22.5	36.2 ± 21.4	0.459
Minimal diameter of stent, mm	3.04 ± 0.45	3.13 ± 0.49	3.03 ± 0.46	3.07 ± 0.47	<0.001
Beta blocker	949 (72.6)	581 (78.9)	537 (74.1)	263 (71.7)	0.008
Angiotensin blockade	889 (68.0)	521 (70.8)	536 (73.9)	257 (70.0)	0.044
Calcium channel blocker	201 (15.4)	111 (15.1)	116 (16.0)	59 (16.1)	0.951
Statin	1173 (89.7)	683 (92.8)	648 (89.4)	322 (87.7)	0.029

Values are given as absolute number (%).

*AIP* atherogenic index of plasma; *AMI* acute myocardial infarction; *CVA* cerebrovascular accident; *HPR* high platelet reactivity; *MI* myocardial infarction

**Supplementary table 2.** C statics for evaluating the risk of primary endpoint regarding HPR alone and consecutively added models of clinical risk factors, HF, and AIP in non-AMI and AMI patients

Model	C-statics	P compared with model 1 (NRI P/ IDI P)	P compared with model 2 (NRI P/ IDI P)	P compared with model 3 (NRI P/ IDI P)
<b>Non-AMI</b>				
Model 1: HPR only	0.545	–	–	–
Model 2: Model 1 + clinical risk factors of age, hypertension, diabetes, obesity, smoking, and chronic kidney disease	0.691	<0.001 (<0.001/<0.001)	–	–
Model 3: Model 2 + HF	0.702	<0.001 (<0.001/<0.001)	0.059 (0.065/0.005)	–
Model 4: Model 3 + high AIP	0.702	<0.001 (<0.001/<0.001)	0.068 (0.136/0.004)	0.760 (0.235/0.718)
<b>AMI</b>				
Model 1: HPR only	0.547	–	–	–
Model 2: Model 1 + clinical risk factors of age, hypertension, diabetes, obesity, smoking, and chronic kidney disease	0.685	<0.001 (<0.001/<0.001)	–	–
Model 3: Model 2 + HF	0.705	<0.001 (<0.001/<0.001)	0.034 (0.053/<0.001)	–
Model 4: Model 3 + high AIP	0.705	<0.001	0.045	0.958

		(<0.001/<0.001)	(0.059/<0.001)	(0.571/0.226)
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HF was defined as a reduced LVEF less than 40%.

*AIP* atherogenic index of plasma; *AMI* acute myocardial infarction; *HF* heart failure; *HPR* high platelet reactivity; *IDI* integrated discrimination index; *LVEF* left ventricular ejection fraction; *NRI* net reclassification index



Supplementary figure 1. Association between BMI and AIP in non-AMI and AMI patients

