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Supplemental Material

Associations between Blood Lead Levels and Coronary Artery Stenosis Measured Using Coronary Computed Tomography Angiography

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Table S1. Blood lead levels (μg/dL) by variables (n = 2,193).

Variables	n	Arithmetic mean ± SD	p-value[a]
Age (years)			0.016
<40	80	2.38 ± 0.93	
≥40, <50	641	2.72 ± 1.27	
≥50, <60	962	2.78 ± 1.24	
≥60	510	2.62 ± 1.33	
Sex			<0.001
Men	1,461	2.98 ± 1.26	
Women	732	2.18 ± 1.08	
BMI (kg/m^2)			0.002
<25	1,291	2.64 ± 1.24	
≥25	902	2.81 ± 1.29	
Smoking			<0.001
Non-smoker	1,053	2.37 ± 1.14	
Ex-smoker	529	2.97 ± 1.29	
Current smoker	611	3.08 ± 1.28	
Alcohol drinking			<0.001
No	760	2.22 ± 1.08	
Yes	1,433	2.97 ± 1.28	
Regular exercise			0.532
No	999	2.72 ± 1.25	
Yes	1,194	2.71 ± 1.28	
Hypertension			0.224
No	1,554	2.68 ± 1.22	
Yes	639	2.79 ± 1.35	
Dyslipidemia			0.899
No	1,691	2.70 ± 1.24	
Yes	502	2.75 ± 1.35	
Diabetes mellitus			0.027
No	1,817	2.73 ± 1.25	
Yes	376	2.62 ± 1.31	
MSCAS[b]			<0.001
No	1,943	2.67 ± 1.23	
Yes	250	3.02 ± 1.44	

Note: BMI, body mass index; MSCAS, moderate to severe coronary artery stenosis; GSD, geometric standard deviation; SD, standard deviation.

[a]Comparison by Student's t-test or analysis of variance (ANOVA).

[b]Moderate to severe coronary artery narrowing (≥25% stenosis) was defined as MSCAS in this table.

Table S2. Moderate to severe coronary artery stenosis (MSCAS) by variables.

Variables	Total, *n* = 2,193			Men, *n* = 1,461			Women, *n* = 732		
	n	MSCAS *n* (%)	*p*-value[a]	*n*	MSCAS *n* (%)	*p*-value[a]	*n*	MSCAS *n* (%)	*p*-value[a]
Age (years)			<0.001			<0.001			<0.001
<40	80	1 (1.3)		54	1 (1.9)		26	0 (0.0)	
≥40, <50	641	38 (5.9)		480	33 (6.9)		161	5 (3.1)	
≥50, <60	962	102 (10.6)		624	87 (13.9)		338	15 (4.4)	
≥60	510	109 (21.4)		303	79 (26.1)		207	30 (14.5)	
BMI (kg/m^2)			0.013			0.314			0.040
<25	1,291	129 (10.0)		786	101 (12.8)		505	28 (5.5)	
≥25	902	121 (13.4)		675	99 (14.7)		227	22 (9.7)	
Smoking			0.001			0.722			0.847
Non-smoker	1,053	92 (8.7)		344	43 (12.5)		709	49 (6.9)	
Ex-smoker	529	72 (13.6)		526	72 (13.7)		3	0 (0.0)	
Current smoker	611	86 (14.1)		591	85 (14.4)		20	1 (5.0)	
Smoking (PYRS)			<0.001			<0.001			0.847
<15	1,370	120 (8.8)		648	71 (11.0)		722	49 (6.8)	
≥15, <30	382	46 (12.0)		375	45 (12.0)		7	1 (14.3)	
≥30	441	84 (19.0)		438	84 (19.2)		3	0 (0.0)	
Alcohol drinking			0.008			0.128			0.346
No	760	68 (8.9)		308	34 (11.0)		452	34 (7.5)	
Yes	1,433	182 (12.7)		1,153	166 (14.4)		280	16 (5.7)	
Regular exercise			0.030			0.077			0.196
No	999	130 (13.0)		668	103 (15.4)		331	27 (8.2)	
Yes	1,194	120 (10.1)		793	97 (12.2)		401	23 (5.7)	
Hypertension			<0.001			<0.001			<0.001
No	1,554	127 (8.2)		1,019	106 (10.4)		535	21 (3.9)	
Yes	639	123 (19.2)		442	94 (21.3)		197	29 (14.7)	
Dyslipidemia			0.003			0.001			0.021
No	1,691	168 (9.9)		1,126	136 (12.1)		565	32 (5.7)	
Yes	502	82 (16.3)		335	64 (19.1)		167	18 (10.8)	
Diabetes mellitus			<0.001			<0.001			0.008
No	1,817	173 (9.5)		1,185	136 (11.5)		632	37 (5.9)	
Yes	376	77 (20.5)		276	64 (23.2)		100	13 (13.0)	

Note: BMI, body mass index; MSCAS, moderate to severe coronary artery stenosis; PYRS, pack-years. Moderate to severe coronary artery narrowing (≥25% stenosis) was defined as MSCAS in this table.

[a]Comparison by Pearson chi-square test.

Table S3. Odds ratios for moderate to severe coronary artery stenosis (≥25% stenosis) in association with a 1 μg/dL increase in blood lead, after replacing smoking (ever/never) with pack-years of smoking (continuous) in models 2 and 3.

Variables	Total, n	Cases, n (%)	Model	Odds ratio	95% CI	*p*-value
All subjects	2,193	250 (11.4)	Unadjusted	1.22	1.11–1.34	<0.001
			Model 1[a]	1.16	1.05–1.29	0.004
			Model 2[b]	1.12	1.01–1.24	0.042
			Model 3[c]	1.13	1.02–1.26	0.024
Men	1,461	200 (13.7)	Unadjusted	1.17	1.05–1.30	0.006
			Model 1[a]	1.18	1.05–1.32	0.005
			Model 2[b]	1.12	0.99–1.25	0.070
			Model 3[c]	1.13	1.01–1.27	0.046
Women	732	50 (6.8)	Unadjusted	1.09	0.85–1.40	0.502
			Model 1[a]	1.09	0.86–1.39	0.477
			Model 2[b]	1.10	0.85–1.42	0.475
			Model 3[c]	1.11	0.86–1.44	0.433

Note: CI, confidence interval. Sex was a covariate in models for all subjects only.

[a]Model 1: adjusted for age and sex.

[b]Model 2: adjusted for age, sex, body mass index, regular exercise, pack-years of smoking, and alcohol drinking.

[c]Model 3: adjusted for age, sex, hypertension, diabetes mellitus, dyslipidemia, body mass index, regular exercise, pack-years of smoking, and alcohol drinking.