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Heart

Table S1. Variables used to define cohort entry and exclusion criteria, study exposures, outcomes and adjustment variables.

Assessment	Timing	Disease, procedure or measure	ICD-9 [ICD-10-CA] diagnostic codes in DAD, SDS and NACRS	CCP [CCI] procedural codes in DAD, SDS, NACRS	Diagnostic codes in OHIP	Other sources
Inclusion criteria	At the delivery	Any obstetrical hospital livebirth or stillbirth from 20 weeks' gestation onward. Only include women aged 16-50 years, with a valid health insurance number.	MOMBABY (see link at https://datadictionary.ices.on.ca/Applications/DataDictionary/Library.aspx?Library=MOMBABY)	--	--	--
Exclusion criteria (any dxtype, exclude suspect diagnoses)	≤ 3 years before the index birth hospitalization discharge date, or < 42 days after the index birth hospitalization discharge date	Coronary artery disease	410, 411, 413, 414.0, 429.2 [I20, I21, I22 , I24, I25.0, I25.1, I51.3]	48 [1HZ80, 1IJ50, 1IJ54, 1IJ55, 1IJ57, 1IJ76, 1IJ80, 1IK80, 1IK87, 1IL35, 2IL70, 3IP10]	410, 412, 413, 429	--
	Same	Heart failure	428 [I50]	--	428	--
	Same	Pericardial disease, endocarditis, myocarditis, cardiomyopathy or peripartum cardiomyopathy, valvular heart disease	420-425 [I30-I43], 674.5 [O90.3], 390-392 [I00-I02, I05-I09]	--	398	--
	Same	Coronary angiography	--	--	--	CCN
	< 42 days after the index birth hospitalization discharge date	Death	--	--	--	RPDB

Assessment	Timing	Disease, procedure or measure	ICD-9 [ICD-10-CA] diagnostic codes in DAD, SDS and NACRS	CCP [CCI] procedural codes in DAD, SDS, NACRS	Diagnostic codes in OHIP	Other sources
Main study exposures	<u>One</u> delivery hospitalization was randomly chosen as the index birth for each woman (Main exposure)	Preeclampsia or eclampsia in the randomly selected index birth	642.4-642.7 [O11, O14, O15]	--	--	--
	<u>First</u> delivery hospitalization in the study period (Additional analysis #2a)	Preeclampsia or eclampsia as a time-varying exposure	Same	--	--	--
	<u>Any</u> delivery hospitalization in the study period, starting at the first delivery (Additional analysis #2b)	Preeclampsia or eclampsia as a time-varying exposure, assessing the number of times preeclampsia or eclampsia occurred (0, 1 or ≥ 2 times)	Same	--	--	--
Study outcomes **If multiple sequential coronary angiographies, first was used**	≥ 42 days after the index birth (delivery) discharge date ("time zero")	1) Coronary artery stenosis at coronary angiography	--	--	--	CCN - Having <u>any</u> of the following: a) Left main (LM) ≥ 50% stenosis, or b) Proximal left anterior descending (LAD) ≥ 70% stenosis, or c) Mid or distal LAD ≥ 70% stenosis, or d) Circumflex ≥ 70% stenosis, or e) Right coronary artery (RCA) ≥ 70% stenosis

Assessment	Timing	Disease, procedure or measure	ICD-9 [ICD-10-CA] diagnostic codes in DAD, SDS and NACRS	CCP [CCI] procedural codes in DAD, SDS, NACRS	Diagnostic codes in OHIP	Other sources
	Same	2) Multi-vessel obstructive coronary artery stenosis at coronary angiography	--	--	--	CCN - Exclusively having <u>one</u> of the following: a) No disease: < 50% stenosis in all coronary artery branches, or b) 1-vessel disease: ≥ 50% stenosis in one coronary artery, or c) 2-vessel disease: ≥ 50% stenosis in two coronary arteries (or ≥ 50% stenosis of the LM), or d) 3-vessel disease: ≥ 50% stenosis in three coronary arteries (or ≥ 50% stenosis in the LM <u>and also</u> ≥ 70% stenosis in the RCA).

Assessment	Timing	Disease, procedure or measure	ICD-9 [ICD-10-CA] diagnostic codes in DAD, SDS and NACRS	CCP [CCI] procedural codes in DAD, SDS, NACRS	Diagnostic codes in OHIP	Other sources
		3) Stenotic coronary artery disease with concomitantly reduced left ventricular function stenosis at coronary angiography	--	--	--	CCN - Having any of the following: a) Left main (LM) ≥ 50% stenosis, or b) Proximal left anterior descending (LAD) ≥ 70% stenosis, or c) Mid or distal LAD ≥ 70% stenosis, or d) Circumflex ≥ 70% stenosis, or e) Right coronary artery (RCA) ≥ 70% stenosis and concomitantly left ventricular ejection fraction < 50%
	Same	Death				RPDB
Covariates	At the index birth hospitalization discharge date	Neighbourhood income quintile (1/missing, 2, 3, 4, 5)		--	--	RPDB, Statistics Canada census data
	Same	Residence (rural, urban/missing)		--	--	RPDB, Statistics Canada census data
	< 365 d before the index birth hospitalization discharge date	Diabetes mellitus	250, 648.8 [E10, E11, E13, E14, O244]	--	250	--
	Same	Chronic hypertension	401, 405, 642.0-642.2, 642.7 [I10, I15, O10, O11]	--	401	--
	Same	Dyslipidemia	272.0, 272.1, 272.2, 272.3, 272.4, 272.5 [E78]	--	272	--

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Heart

Assessment	Timing	Disease, procedure or measure	ICD-9 [ICD-10-CA] diagnostic codes in DAD, SDS and NACRS	CCP [CCI] procedural codes in DAD, SDS, NACRS	Diagnostic codes in OHIP	Other sources
	Same	Renal disease	669.3, 958.5 634.3, 635.3, 636.3, 637.3, 638.3, 639.3, 250.4x, 274.1x, 403.xx, 404.xx, 405.01, 405.11, 405.91, 440.1, 446.21, 581.xx, 582.xx, 583.xx, 584.5-584.9, 585.x, 586, 587.x, 588.0, 588.8x, 588.9, 590.0x, 593.7x, 791.0, 794.4 [O08.4, T79.5, O90.4, E10.20, E10.21, E10.23, E11.20, E11.21, E11.23, M10.39, I12, I13, I15.0, I70.1, M31.0, N01.x, N03.x, N04.x, N05.x, N06.x, N07.x, N08.x, N11.x, N12, N13.7, N13.8, N13.9, N14.x, N15.x, N16.x, N17.x, N18.x, N19.x, N25.0, N25.8, N25.9, N26, R80, R94.4]	--	403, 581, 585	--
	Same	Drug dependence or tobacco use	291, 292, 2940, 303, 304, 305, 648.3, 649.0, 6555, 980 [F10-F19, F55, G312, O354, O355, T51, T652, Z720, Z721, Z722]	--	291, 292, 303, 304, 305	--
	At the index birth	Pre-pregnancy body mass index				BORN

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Heart

Assessment	Timing	Disease, procedure or measure	ICD-9 [ICD-10-CA] diagnostic codes in DAD, SDS and NACRS	CCP [CCI] procedural codes in DAD, SDS, NACRS	Diagnostic codes in OHIP	Other sources
Censoring variables	From 42 days after the index birth hospitalization discharge date	Date of outward migration or loss of OHIP eligibility	--	--	--	RPDB
	December 31, 2020	End of study	--	--	--	--
Variables for additional exposures occurring in conjunction with preeclampsia	Any delivery hospitalization	Preterm livebirth < 37 weeks' gestation	Before 2002: 644.2, 765 [O60, P07.2, P07.3] Since 2002: Gestational age < 37 completed weeks	--	--	--
	Any delivery hospitalization	Stillbirth at 20+ weeks' gestation	--	--	--	MOMBABY: m_stillbirth='T'

BORN Better Outcomes Registry and Network; CCP Canadian Classification of Diagnoses and Procedures; CCI Canadian Classification of Interventions; DAD Discharge Abstract Database; ICD-9 International Classification of Diseases, 9th Revision; ICD-10-CA International Classification of Diseases, 10th Revision, Canada; NACRS National Ambulatory Care Reporting System; OHIP Ontario Health Insurance Plan; RPDB Registered Persons Database; SDS Same Day Surgery Database; CCN Cardiac Care Network of Ontario.

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Heart

Table S2 (Additional analysis #1). Risk of developing obstructive coronary artery stenosis among women with vs. without a history of preeclampsia, January 2002 to March 2020, further adjusted for pre-pregnancy body mass index (BMI). The time zero index date starts 42 days after the index birth hospitalization discharge date. This analysis is limited to 286,836 women in whom pre-pregnancy BMI was known.

Exposure group	Number of women with obstructive coronary artery stenosis (incidence rate per 10,000 person years, 95% CI)	Unadjusted hazard ratio (95% CI)	Adjusted hazard ratio (95% CI)[a]	Fully adjusted hazard ratio (95% CI)[b]
Women without preeclampsia (N = 278,841)	127 (0.52, 0.43 to 0.62)	1.00 (Referent)	1.00 (Referent)	1.00 (Referent)
Women with preeclampsia (N = 7995)	19 (2.72, 1.64 to 4.25)	5.28 (3.26 to 8.57)	3.30 (1.90 to 5.72)	1.94 (1.17 to 3.21)

[a]Adjusted for maternal age, parity, neighbourhood income quintile (1 or missing, 2, 3, 4, 5), residence (rural, urban or missing) at the time of the index delivery, pre-pregnancy BMI, as well as diabetes mellitus, chronic hypertension, renal disease, illicit drug/tobacco use, and dyslipidemia within 365 days preceding the index date.

[b]Further adjusted for time-varying diabetes mellitus, chronic hypertension, renal disease, drug dependence or tobacco use, and dyslipidemia – each arising at time zero onward, up to the day before the coronary angiography.

Table S3. Risk of developing obstructive coronary artery stenosis in relation to a history of preeclampsia as a time-varying exposure, starting at each woman's first birth in the study period, January 2002 to March 2020. Preeclampsia is modelled in a time-varying manner as absent or present (Additional analysis #2a [upper]), or as absent, occurring once, or occurring at least twice (Additional analysis 2b [lower]). The time zero index date starts 42 days after the first birth hospitalization discharge date.

Time-varying exposure group (number of person-years of follow-up)	Number of women with obstructive coronary artery stenosis (incidence rate per 10,000 person years, 95% CI)	Fully adjusted hazard ratio (95% CI)
Women without a history of preeclampsia (14,198,019 person-years)	1124 (0.79, 0.75 to 0.84)	1.00 (Referent)
Women with a history of preeclampsia (286,879 person-years)	108 (3.76, 3.09 to 4.55)	1.72 (1.40 to 2.11)[a]
Women without preeclampsia (14,198,019 person-years)	1124 (0.79, 0.75, 0.84)	1.00 (Referent)
Women with preeclampsia once (275,802 person-years)	102 (3.70, 3.02 to 4.49)	1.65 (1.34 to 2.04)[b]
Women with preeclampsia at least twice (11,077 person-years)	6 (5.42, 1.99 to 11.79)	1.63 (0.73 to 3.64)[b]

[a]Adjusted for maternal age, parity, neighbourhood income quintile (1 or missing, 2, 3, 4, 5), residence (rural, urban or missing) at the time of the first delivery, as well as time-varying diabetes mellitus, chronic hypertension, renal disease, drug dependence or tobacco use, and dyslipidemia – each arising at time zero onward, up to the day before the coronary angiography.

[b]Adjusted for maternal age, neighbourhood income quintile (1 or missing, 2, 3, 4, 5), residence (rural, urban or missing) at the time of the first delivery, as well as time-varying parity, diabetes mellitus, chronic hypertension, renal disease, drug dependence or tobacco use, and dyslipidemia – each arising at time zero onward, up to the day before the coronary angiography.

Figure S1. Risk of multi-vessel obstructive coronary artery stenosis[a] associated with a history of preeclampsia. Shown are unadjusted (*black squares*) and adjusted (*red diamonds*) hazard ratios[b] among women with preeclampsia, relative to those without preeclampsia (*black circles*)
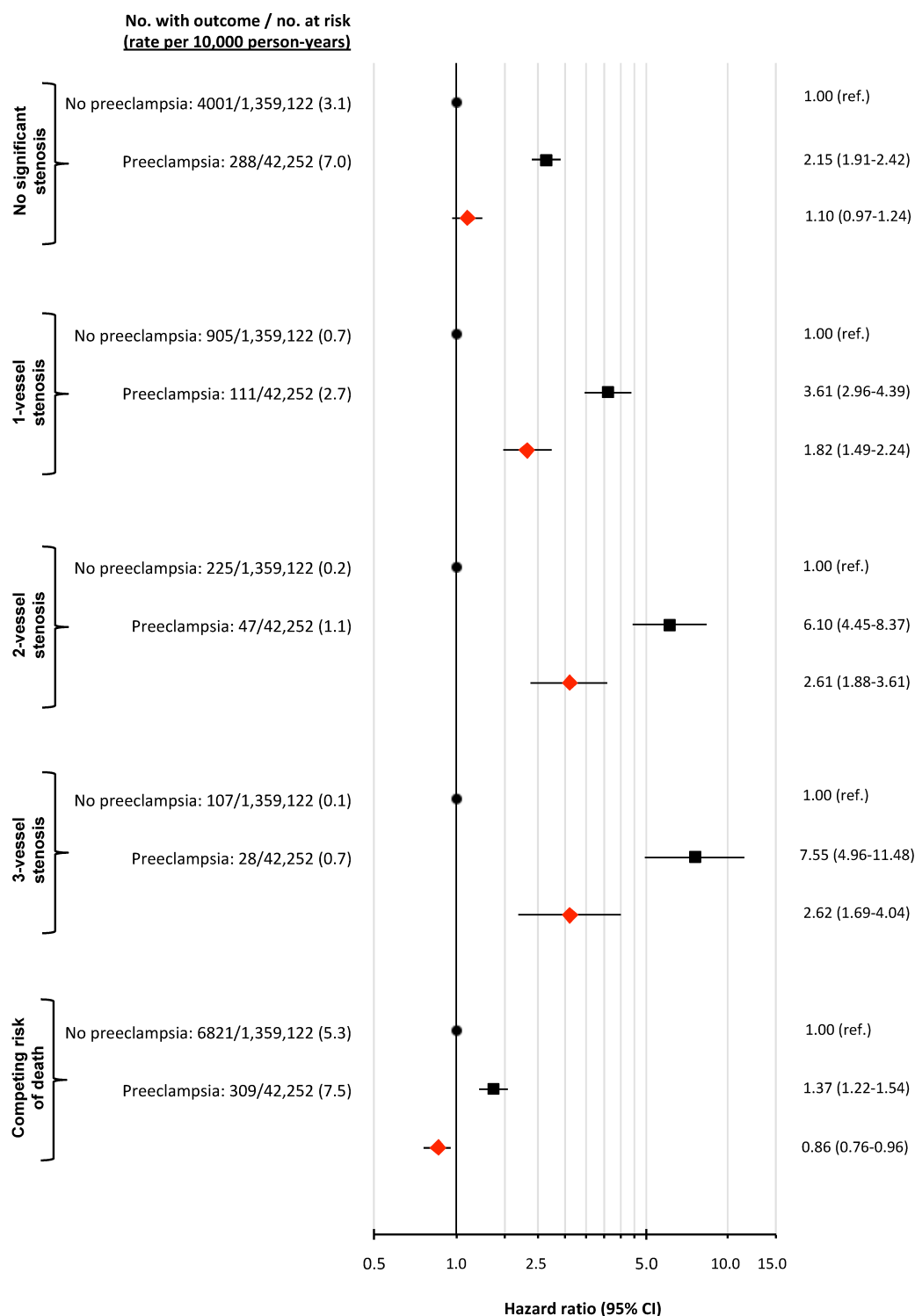
[a] a) No stenotic disease: < 50% stenosis in all coronary arteries, b) 1-vessel disease: ≥ 70% stenosis in one coronary artery, excluding left main coronary artery, c) 2-vessel disease: ≥ 70% stenosis in two coronary arteries (or ≥ 50% stenosis of left main coronary artery, or d) 3-vessel disease: ≥ 70% stenosis in three coronary arteries (or ≥ 50% stenosis in left main coronary artery + ≥ 70% stenosis in right coronary artery).

[b] Hazard ratios were generated using a competing risk model, and adjusted for maternal age, parity, income quintile, urban/rural residence, diabetes mellitus, chronic hypertension, renal disease, illicit drug/tobacco use, and dyslipidemia – each within 365 days preceding the index date, and further adjusted for time-varying type 1 or type 2 diabetes mellitus, chronic hypertension, renal disease, drug dependence or tobacco use, and dyslipidemia – each arising at 42 days after the index birth up to the day before the coronary angiography.