

SUPPLEMENTAL MATERIAL

Table S1. Hazard ratios (95% CI) of pharmacologically-treated hypertension* by preeclampsia/eclampsia and gestational hypertension stratified by gestational age and weight-for-gestational age categories: MoBa Cohort Study (60,027 women with deliveries 2004-2009 in Norway).

| Risk Factor | Preeclampsia/eclampsia or gestational hypertension | | | | | | | |
|--|--|-------|----------------------|----------------------|-----------|-------|----------------------|----------------------|
| | <u>Yes</u> | | | | <u>No</u> | | | |
| | N | Cases | Model 1 [†] | Model 2 [‡] | N | Cases | Model 1 [†] | Model 2 [‡] |
| Gestational age (weeks) | | | | | | | | |
| < 32 | 106 | 22 | 14.33 (9.03-22.70) | 12.68 (7.70-20.89) | 341 | 14 | 2.27 (1.33-3.85) | 2.15 (1.24- 3.74) |
| 32 – 36 | 490 | 72 | 9.25 (7.22-11.86) | 7.94 (5.97-10.56) | 2,361 | 62 | 1.45 (1.12-1.87) | 1.42 (1.07-1.88) |
| ≥ 37 | 2,766 | 345 | 8.01 (7.08-9.06) | 6.19 (5.38-7.13) | 53,700 | 956 | 1.00 (reference) | 1.00 (reference) |
| Weight-for-gestational age categories [§] | | | | | | | | |
| < 2.5% | 159 | 18 | 6.69 (4.19-10.70) | 5.26 (3.03-9.13) | 695 | 12 | 0.93 (0.53-1.63) | 0.80 (0.41-1.55) |
| 2.5 – 9.9% | 392 | 45 | 6.91 (5.11-9.37) | 6.14 (4.42-8.52) | 2,986 | 36 | 0.68 (0.48-0.94) | 0.67 (0.46-0.98) |
| ≥ 10% | 2,811 | 376 | 8.24 (7.31-9.29) | 6.38 (5.56-7.31) | 52,688 | 984 | 1.00 (reference) | 1.00 (reference) |

CI indicates confidence interval.

* Identified through antihypertensive medications dispensed following pregnancy where hypertension listed as indication for treatment. When medication dispensed only during the post-partum period of < 3 months individuals were coded normotensive.

†Adjusted for maternal age (yrs).

‡Adjusted for maternal age (yrs), prepregnancy body mass index (kg/m^2), educational level (primary, secondary/vocational, and any college/university), physical activity (<3 times, and 3 or more times/week), daily smoking (yes v. no), alcohol consumption frequency (less than monthly, monthly, weekly), duration of prepregnancy oral contraceptive use (never, < 4 years, 4 or more years), poor diet quality (yes v. no), energy intake (Kcal/d), and multiple birth pregnancy.

§Using national birth weight by gestational age and sex growth curves (very small, < 2.5%, moderate small 2.5-9.9%, and not small $\geq 10\%$).¹

Table S2. Pregnancy-related events hazard ratios (95% CI) for pharmacologically-treated hypertension* within 10 years following delivery among women with a healthy prepregnancy body mass index: MoBa Cohort Study (38,559 women with deliveries 2004-2009 in Norway).

| Women with prepregnant body mass index 18.5 – 24.9 kg/m ² | | | | |
|--|--------|--------|----------------------|----------------------|
| Risk Factor | N | Cases* | Model 1 [†] | Model 2 [‡] |
| <i>De novo</i> hypertensive disorders of pregnancy | | | | |
| None | 36,908 | 406 | 1.00 (reference) | 1.00 (reference) |
| PE | 1,037 | 77 | 7.61 (5.95-9.74) | 8.40 (6.49-10.88) |
| GH | 614 | 66 | 11.55 (8.90-14.98) | 12.07 (9.09-16.03) |
| DM/GDM | | | | |
| No | 38,200 | 530 | 1.00 (reference) | 1.00 (reference) |
| Yes | 359 | 19 | 3.89 (2.47-6.15) | 3.36 (2.05-5.51) |
| Preterm delivery | | | | |
| No | 36,410 | 490 | 1.00 (reference) | 1.00 (reference) |
| Yes (<37 weeks) | 1,983 | 55 | 2.05 (1.55-2.71) | 2.19 (1.59-3.02) |
| < 32 weeks | 263 | 9 | 2.49 (1.28-4.83) | 2.64 (1.28-5.47) |
| 32-36 weeks | 1,720 | 46 | 2.00 (1.48-2.71) | 2.15 (1.53-3.01) |
| Weight-for-gestational age and sex [§] | | | | |
| All small (<10%) | 2,902 | 44 | 1.14 (0.83-1.55) | 0.70 (0.48-1.00) |
| <2.5% | 569 | 14 | 1.82 (1.07-3.09) | 0.92 (0.50-1.66) |
| 2.5-9.9% | 2,333 | 30 | 0.97 (0.67-1.40) | 0.62 (0.40-0.95) |
| Average (10-90%) | 32,078 | 440 | 1.00 (reference) | 1.00 (reference) |
| Large (>90%) | 3,392 | 61 | 1.24 (0.95-1.62) | 1.01 (0.74-1.37) |

CI indicates confidence interval; PE, preeclampsia/eclampsia; GH, gestational hypertension; DM/GDM, pregestational and gestational diabetes mellitus or type not specified.

*Identified through antihypertensive medications dispensed following pregnancy where hypertension listed as indication for treatment. When medication dispensed only during the post-partum period of < 3 months individuals were coded normotensive.

†Adjusted for maternal age.

‡Adjusted for maternal age, prepregnancy body mass index (kg/m^2), educational level (primary, secondary/vocational, and any college/university), physical activity (<3 times, and 3 or more times/week), daily smoking (yes v. no), alcohol consumption frequency (less than monthly, monthly, weekly), duration of prepregnancy oral contraceptive use (never, < 4 years, 4 or more years), and a low dietary intake of minerals (yes v. no), energy intake (Kcal/d), and multiple birth pregnancy. For all non-hypertensive pregnancy risk factors, adjusts for hypertensive disorders of pregnancy.

§Using national birth weight by gestational age and sex growth curves.¹

Table S3. Pregnancy-related event hazard ratios (95% CI) for pharmacologically-treated hypertension* within 5 years following delivery in nulliparous women at baseline: MoBa Cohort Study (26,023 women with deliveries 2004-2009 in Norway).

| Follow-up \leq 5 years for nulliparous women at baseline | | | | |
|--|--------|--------|----------------------|----------------------|
| Risk Factor | N | Cases* | Model 1 [†] | Model 2 [‡] |
| <i>De novo</i> hypertensive disorders of pregnancy | | | | |
| None | 23,964 | 176 | 1.00 (reference) | 1.00 (reference) |
| PE | 1,346 | 107 | 9.31 (7.39-11.72) | 6.97 (5.31-9.14) |
| GH | 713 | 44 | 5.50 (4.01-7.55) | 4.31 (3.05-6.08) |
| DM/GDM | | | | |
| No | 25,625 | 303 | 1.00 (reference) | 1.00 (reference) |
| Yes | 398 | 24 | 4.87 (3.22-7.38) | 3.22 (2.07-5.02) |
| Preterm delivery | | | | |
| No | 24,152 | 268 | 1.00 (reference) | 1.00 (reference) |
| Yes (all <37 weeks) | 1,726 | 57 | 2.93 (2.20-3.91) | 1.88 (1.35-2.63) |
| < 32 weeks | 265 | 15 | 5.03 (2.97-8.52) | 2.62 (1.45-4.73) |
| 32-36 weeks | 1,461 | 42 | 2.55 (1.84-3.54) | 1.73 (1.19-2.52) |
| Weight-for-gestational age and sex [§] | | | | |
| All small (< 10%) | 2,644 | 42 | 1.26 (0.91-1.74) | 0.92 (0.65-1.29) |
| <2.5% | 548 | 12 | 1.71 (0.96-3.04) | 0.89 (0.48-1.67) |
| 2.5 – 9.9% | 2,096 | 30 | 1.14 (0.78-1.66) | 0.93 (0.67-1.37) |
| Average (10-90%) | 21,507 | 263 | 1.00 (reference) | 1.00 (reference) |
| Large (>90%) | 1,714 | 20 | 0.97 (0.61-1.52) | 0.60 (0.35-1.01) |

CI indicates confidence interval; PE, preeclampsia/eclampsia; GH, gestational hypertension;

DM/GDM, pregestational and gestational diabetes mellitus or type not specified.

*Identified through antihypertensive medications dispensed following pregnancy where hypertension listed as indication for treatment. When medication dispensed only during the post-partum period of < 3 months individuals were coded normotensive.

†Adjusted for maternal age.

‡Adjusted for maternal age, prepregnancy body mass index (kg/m²), educational level (primary, secondary/vocational, and any college/university), physical activity (<3 times, and 3 or more times/week), daily smoking (yes v. no), alcohol consumption frequency (less than monthly, monthly, weekly), duration of prepregnancy oral contraceptive use (never, < 4 years, 4 or more years), and a low dietary intake of minerals (yes v. no), energy intake (kilocalories/d), and multiple birth pregnancy. For all non-hypertensive pregnancy risk factors, adjusts for hypertensive disorders of pregnancy.

§Using national birth weight by gestational age and sex growth curves.¹

Table S4. Hazard ratios (95% CI) of pharmacologically-treated hypertension* with respect to pregnancy-related risk factors by sequentially longer lengths of follow-up: MoBa Cohort (60,027 women with deliveries 2004-2009 in Norway).

| Risk Factors | Length of follow-up | | | |
|-------------------------------|---------------------|-------------------|------------------|------------------|
| | 4 yrs | 6 yrs | 8 yrs | 10 yrs |
| PE/GH combined | | | | |
| Model 1 [†] | 11.39 (9.88-13.13) | 9.26 (8.17-10.49) | 8.38 (7.47-9.41) | 8.13 (7.27-9.09) |
| Model 2 [‡] | 9.40 (8.00-11.04) | 7.45 (6.46-8.58) | 6.62 (5.80-7.55) | 6.38 (5.62-7.26) |
| DM/GDM | | | | |
| Model 1 [†] | 4.34 (3.29-5.74) | 4.23 (3.32-5.39) | 4.22 (3.39-5.26) | 4.08 (3.29-5.06) |
| Model 2 ^{‡,§} | 2.45 (1.82-3.31) | 2.43 (1.86-3.16) | 2.44 (1.90-3.12) | 2.43 (1.91-3.10) |
| Preterm delivery ^l | | | | |
| Model 1 [†] | 3.14 (2.59-3.81) | 2.55 (2.13-3.04) | 2.39 (2.03-2.81) | 2.25 (1.92-2.64) |
| Model 2 ^{‡,§} | 1.89 (1.51-2.36) | 1.60 (1.30-1.97) | 1.56 (1.29-1.90) | 1.45 (1.19-1.76) |
| Combined group [#] | | | | |
| Model 1 [†] | 6.88 (5.99-7.91) | 5.68 (5.04-6.40) | 5.23 (4.69-5.83) | 5.02 (4.52-5.57) |
| Model 2 [‡] | 5.94 (5.08-6.95) | 4.77 (4.16-5.46) | 4.36 (3.85-4.93) | 4.17 (3.70-4.70) |

CI indicates confidence interval; PE, preeclampsia/eclampsia; GH, gestational hypertension; DM/GDM, pregestational and gestational diabetes mellitus or type not specified.

*Identified through antihypertensive medications dispensed following pregnancy where hypertension listed as indication for treatment. When medication dispensed only during the post-partum period of < 3 months individuals were coded normotensive.

†Adjusted for maternal age (yrs).

‡Adjusted for maternal age, prepregnancy body mass index (kg/m^2), educational level (primary, secondary/vocational, and any college/university), physical activity (<3 times, and 3 or more times/week), daily smoking (yes v. no), alcohol consumption frequency (less than monthly, monthly, weekly), duration of prepregnancy oral contraceptive use (never, < 4 years, 4 or more years), poor diet quality (yes v. no), energy intake (kilocalories/d), and multiple birth pregnancy.

§Additional adjustment for PE/GH.

¹Less than 37 weeks gestational age.

[#]Having one or more of the following: PE/GH, DM/GDM, or preterm delivery.

Supplemental Reference:

1. Skjaerven R, Gjessing HK, Bakketeig LS. Birthweight by gestational age in Norway.
Acta Obstet Gynecol Scand. 2000;79:440-9.