**Supplementary Table 1.** Pooled odds ratios (OR) of the risk of the different outcomes in fetuses with abnormal CPR compared to those without abnormal CPR in pregnancies with diabetes mellitus

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Studies** | **Fetuses** | **Pooled OR (95% CI)** | **I2 (%)** | **p-value** |
|  | ***Women treated with insulin*** | | | | |
| Composite adverse perinatal outcome | 2 | 22/40 vs 134/380 | 2.43 (1.16-5.11) | 0 | 0.019 |
| Vaginal delivery | 2 | 22/40 vs 234/380 | 0.56 (0.14-2.23) | 63.8 | 0.412 |
| Cesarean delivery | 2 | 18/40 vs 146/380 | 1.78 (0.45-7.09) | 63.8 | 0.412 |
| Emergency cesarean delivery | 2 | 5/40 vs 65/380 | 0.33 (0.05-1.98) | 57.7 | 0.224 |
| Preterm birth <37 weeks | - | - | - | - | - |
| Birthweight <10° percentile | - | - | - | - | - |
| Birthweight >90° percentile | - | - | - | - | - |
| Perinatal death | - | - | - | - | - |
| Respiratory distress syndrome | - | - | - | - | - |
| Apgar score <7 at 5 minutes | - | - | - | - | - |
| Abnormal acid base status | - | - | - | - | - |
| Admission to neonatal intensive care unit | - | - | - | - | - |
| Neonatal hypoglycemia | - | - | - | - | - |
|  | ***Women treated with diet*** | | | | |
| Composite adverse perinatal outcome | 2 | 33/63 vs 149/540 | 2.98 (1.73-5.07) | 0 | <0.001 |
| Vaginal delivery | 2 | 47/63 vs 368/540 | 1.33 (0.74-2.41) | 0 | 0.341 |
| Cesarean delivery | 2 | 17/63 vs 172/540 | 0.79 (0.44-1.42) | 0 | 0.341 |
| Emergency cesarean delivery | 2 | 9/63 vs 86/540 | 0.88 (0.42-1.85) |  | 0.735 |
| Preterm birth <37 weeks | - | - | - | - | - |
| Birthweight <10° percentile | - | - | - | - | - |
| Birthweight >90° percentile | - | - | - | - | - |
| Perinatal death | - | - | - | - | - |
| Respiratory distress syndrome | - | - | - | - | - |
| Apgar score <7 at 5 minutes | - | - | - | - | - |
| Abnormal acid base status | - | - | - | - | - |
| Admission to neonatal intensive care unit | - | - | - | - | - |
| Neonatal hypoglycemia | - | - | - | - | - |
|  | ***Women treated with oral hypoglycemic agents*** | | | | | - | - | - | - |
| Composite adverse perinatal outcome | 2 | 11/20 vs 62/195 | 3.32 (1.12-8.90) | 0 | 0.02 |
| Vaginal delivery | 2 | 11/20 vs 114/195 | 0.82 (0.32-2.11) | 0 | 0.686 |
| Cesarean delivery | 2 | 9/20 vs 81/195 | 1.21 (0.47-3.12) | 0 | 0.686 |
| Emergency cesarean delivery | 2 | 7/20 vs 39/1950 | 2.52 (0.91-6.90) | 0 | 0.074 |
| Preterm birth <37 weeks | - | - | - | - | - |
| FGR or SGA fetus | - | - | - | - | - |
| Birthweight >90° percentile | - | - | - | - | - |
| Perinatal death | - | - | - | - | - |
| Respiratory distress syndrome | - | - | - | - | - |
| Abnormal acid base status | - | - | - | - | - |
| Admission to neonatal intensive care unit | - | - | - | - | - |
| Neonatal hypoglycemia | - | - | - | - | - |

**Supplementary Table 2.** Pooled mean difference (MD) for gestational age at birth and neonatal birthweight in fetuses with abnormal CPR compared to those without abnormal CPR

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Studies** | **Fetuses** | **Pooled MD (95% CI)** | **I2 (%)** | **p-value** |
|  | ***Women treated with insulin*** | | | | |
| Gestational age at birth (weeks) | 2 | 39 vs 380 | -0.450 (-0.74 to -0.16) | 0 | 0.003 |
| Neonatal birthweight (grams) | 2 | 39 vs 380 | -502.64 (-650.14 to -355.15 | 0 | 0.001 |
|  | ***Women treated with diet*** | | | | |
| Gestational age at birth (weeks) | 2 | 63 vs 540 | -0.09 (-2.528 to 2.331) | 95.9 | 0.937 |
| Neonatal birthweight (grams) | 2 | 63 vs 540 | -353.06 (-1119.5 to413.91) | 90.0 | 0.367 |
|  | ***Women treated with oral hypoglycemic agents*** | | | | |  | - | - |
| Gestational age at birth (weeks) | 2 | 20 vs 195 | -0.651 (-1.952 to 0.651) | 57.04 | 0.327 |
| Neonatal birthweight (grams) | 2 | 20 vs 195 | -471.82 (-1064.97 to 121.38) | 29.7 | 0.119 |

**Supplementary Table 3.** Diagnostic accuracy of CPR in predicting perinatal outcome in women with gestational diabetes mellitus. Because less than 4 studies were included, a pooled data synthesis (meta-analysis) was not performed.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Outcome** | **Studies** | **Fetuses** | | **Sensitivity** | | **Specificity** | **LR+** | **LR-** | **PPV** | **NPV** | **DOR** |
|  | ***All GDM (CPR<10th centile)*** | | | | | | | | | | |
| **PTB<37 weeks** | 3 | 1519 | | 17.93  (13.9-22.5) | | 92.61  (91.0-94.0) | 2.42  (1.78-3.28) | 0.89  (0.84-0.93) | 40.14  (33.04-47.67) | 80.32  (79.47-81.15) | 2.73  (1.88-3.96) |
| **BW <10th percentile** | 2 | 1238 | | 36.13  (27.5-45.5) | | 92.85  (91.2-94.3) | 5.05  (3.65-6.89) | 0.69  (0.59-0.78) | 34.96  (28.10-42.51) | 93.18  (92.27-94.00) | 7.35  (4.60-11.60) |
| **Perinatal death** | 3 | 1519 | | 40.00  (5.2-85.3) | | 96.82  (95.8-97.7) | 12.57  (3.60-26.68) | 0.62  (0.24-0.91) | 1.36  (0.46-3.92) | 99.78  (99.55-99.89) | 20.28  (1.64-180.1) |
| **Admission to NICU** | 3 | 1519 | | 21.50  (16.0-27.9) | | 92.12  (90.5-93.5) | 2.73  (1.97-3.74) | 0.85  (0.78-0.91) | 27.39  (21.54-34.13) | 88.56  (87.78-89.29) | 3.20  (2.10-4.80) |
|  |  | |  | | ***GDM on insulin*** ***therapy*** ***(CPR<10th centile)*** | | | | | | |
| **Composite adverse outcome** | 2 | 420 | | 14.10  (9.1-20.6) | | 93.18  (89.4-95.9) | 2.07  (1.15-3.70) | 0.92  (0.85-0.98) | 55.00  (40.37-68.81) | 64.74  (63.09-66.35) | 2.24  (1.10-4.60) |
|  |  | |  | | ***GDM on diet*** ***(CPR<10th centile)*** | | | | | | |
| **Composite adverse outcome** | 2 | 603 | | 18.13  (12.82-24.51) | | 92.87  (89.98-95.14) | 2.54  (1.60-4.02) | 0.88  (0.81-0.94) | 52.38  (40.91-63.60) | 72.41  (70.92-73.85) | 2.87  (1.64-5.08) |
|  |  | |  | | ***GDM on OHA (CPR<10th centile)*** | | | | | | |
| **Composite adverse outcome** | 2 | 215 | | 15.07  (7.77-25.36) | | 93.66  (88.31-97.06) | 2.38  (1.05-5.34) | 0.91  (0.80-0.99) | 55.00  (34.66-73.79) | 68.21  (65.87-70.45) | 2.61  (0.93-7.53) |