

Pregnancy Outcomes in Women of Advanced Maternal Age: a Retrospective Cohort Study from China

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Supplementary Table S1: Crude and adjusted relative risks of the association between maternal baseline BMI, parity and conceiving method with adverse pregnancy outcomes.

	Maternal overweight and obese		Primiparity		ART	
	Crude OR [95% CI]	Adjusted OR ^a [95% CI]	Crude OR [95% CI]	Adjusted OR ^a [95% CI]	Crude OR [95% CI]	Adjusted OR ^a [95% CI]
Maternal Outcomes						
Selective CS	1.13 [0.90 1.41]	0.95 [0.75 1.23]	0.87 [0.75 1.01]	0.85 [0.70 1.02]	2.39 [1.79 3.18] ^b	1.780 [1.31 2.42] ^b
Emergency CS	1.54 [1.20 1.97] ^b	1.57 [1.22 2.02] ^b	1.06 [0.89 1.26]	1.36 [1.00 1.68]	0.74 [0.52 1.06]	0.74 [0.51 1.07]
ART	1.07 [0.73 1.58]	1.11 [0.73 1.70]	8.07 [5.39 12.08] ^b	7.20 [4.56 11.38] ^b		
Preeclampsia	3.80 [2.56 5.64] ^b	3.15 [2.09 4.73] ^b	0.85 [0.59 1.23]	1.09 [0.69 1.74]	1.42 [0.79 2.57]	0.86 [0.45 1.65]
Severe preeclampsia	3.88 [2.42 6.24] ^b	3.47 [2.13 5.67] ^b	0.93 [0.59 1.45]	1.39 [0.80 2.44]	0.93 [0.4 2.17]	0.59 [0.24 1.46]
Early onset preeclampsia	3.81 [2.11 6.87] ^b	3.68 [2.01 6.76] ^b	1.13 [0.64 2.00]	1.71 [0.85 3.44]	1.30 [0.51 3.31]	0.83 [0.30 2.26]
Gestational Hypertension	2.69 [1.44 5.02] ^b	2.37 [1.25 4.49] ^b	0.75 [0.42 1.32]	0.72 [0.36 1.47]	1.30 [0.51 3.31]	1.02 [0.37 2.80]
GDM	1.73 [1.37 2.18] ^b	1.53 [1.20 1.95] ^b	1.01 [0.85 1.20]	1.06 [0.86 1.31]	1.83 [1.38 2.43] ^b	1.27 [0.94 1.73]
GDM [lifestyle intervention]	1.41 [1.10 1.83] ^b	1.23 [0.95 1.61]	1.23 [1.02 1.48] ^b	1.29 [1.02 1.62] ^b	1.96 [1.46 2.63] ^b	1.18 [0.86 1.62]
GDM [on insulin]	2.21 [1.49 3.26] ^b	2.19 [1.46 3.27] ^b	0.54 [0.39 0.76] ^b	0.58 [0.39 0.87] ^b	1.04 [0.58 1.86]	1.44 [0.76 2.72]
ICP	1.09 [0.68 1.75]	1.06 [0.66 1.71]	1.18 [0.86 1.62]	1.33 [0.91 1.95]	0.97 [0.54 1.74]	0.89 [0.48 1.65]
Placental abruption	0.80 [0.28 2.28]	0.81 [0.28 2.36]	0.85 [0.44 1.63]	0.81 [0.37 1.76]	0.65 [0.15 2.71]	0.70 [0.16 3.11]
Placenta Praevia and Vasa Praevia	1.36 [0.96 1.92]	1.15 [0.81 1.65]	0.55 [0.43 0.71] ^b	1.26 [1.16 1.36] ^b	1.23 [0.81 1.87]	1.50 [0.95 2.38]
PPH	1.42 [0.89 2.28]	1.27 [0.78 2.05]	0.44 [0.30 0.64] ^b	0.63 [0.40 0.98] ^b	0.91 [0.47 1.77]	1.37 [0.67 2.79]
Abnormality of fetal presentation [non-cephalic]	0.78 [0.48 1.28]	0.75 [0.46 1.24]	1.34 [0.99 1.82]	1.63 [1.00 2.36]	1.32 [0.8 2.2]	1.07 [0.62 1.83]
Fetal outcomes						
Preterm birth [<37 weeks]	1.44 [1.04 1.99] ^b	1.28 [0.91 1.78]	0.50 [0.39 0.63] ^b	0.62 [0.46 0.83] ^b	0.72 [0.45 1.16]	0.97 [0.58 1.61]
Low birthweight [<2500g]	1.75 [1.16 2.62] ^b	1.57 [1.04 2.37] ^b	0.63 [0.46 0.86] ^b	0.78 [0.54 1.14]	1.03 [0.60 1.78]	1.27 [0.71 2.30]
Macrosomia [>4000g]	1.28 [0.80 2.04]	1.32 [0.82 2.13]	0.81 [0.57 1.34]	0.78 [0.52 1.19]	0.88 [0.46 1.71]	1.02 [0.51 2.05]
IUGR	1.02 [0.35 2.97]	0.91 [0.31 2.67]	0.94 [0.46 1.91]	0.90 [0.33 2.51]	1.05 [0.61 1.82]	1.11 [0.31 3.98]
Apgar score <7 at 5 minute	0.80 [0.10 6.51]	0.75 [0.09 6.29]	1.20 [0.37 3.95]	3.13 [0.75 13.17]	N	N
NICU admission	1.24 [0.80 1.92]	1.11 [0.71 1.74]	0.57 [0.41 0.79] ^b	0.74 [0.50 1.10]	1.31 [0.78 2.2]	1.81 [1.00 3.20]
Respiratory complications	1.51 [0.79 2.88]	1.45 [0.75 2.80]	1.34 [0.81 2.22]	1.13 [0.62 2.06]	0.98 [0.39 2.47]	1.04 [0.39 2.77]

Note:

CI: confidence interval; OR = odds ratio; ART: assisted reproductive techniques; GDM: gestational diabetes mellitus; ICP: Intrahepatic cholestasis of pregnancy; PPH: postpartum haemorrhage; IUGR: Intrauterine growth restriction; NICU: neonatal intensive care unit.

^a Adjusted for gravidity parity maternal baseline BMI conceiving method insurance education and residence. In the comparison of “conceived by ART”, the aforementioned confounding factors were considered except for conceiving method. ^b Denotes significance with a CI that does not cross 1. N denotes no infants from ART pregnancies had low apgar score at 5 minute.

In comparison of the influence of maternal baseline BMI, patients of normal BMI were used as the reference group. Only the risks of patients of overweight and obese group was reported, for most of the ORs in patients of lower BMI had no statistical significance. In comparison of the influence of parity, multiparous women were used as the reference group. In comparison of the influence of conceiving method, women of spontaneous pregnancies were used as the reference group. In the analysis of fetal outcomes, 2796 patients were analysed excluding pregnancies ending in stillbirth.

Supplementary Table S2 : Crude and adjusted relative risks of the association between maternal educational level, residence and insurance with adverse pregnancy outcome.

	Educational level: low		Residence: rural		Insurance	
	Crude OR [95% CI]	Adjusted OR ^a [95% CI]	Crude OR [95% CI]	Adjusted OR ^a [95% CI]	Crude OR [95% CI]	Adjusted OR ^a [95% CI]
Maternal Outcomes						
Selective CS	1.33 [1.01 1.75] ^b	1.07 [0.80 1.44]	0.71 [0.57 0.87] ^b	0.77 [0.61 0.98] ^b	1.05 [0.91 1.23]	1.03 [0.88 1.22]
Emergency CS	1.08 [0.78 1.49]	1.07 [0.77 1.50]	1.13 [0.89 1.45]	1.12 [0.86 1.46]	0.98 [0.81 1.18]	0.98 [0.82 1.18]
ART	1.2 [0.68 2.13]	1.01 [0.54 1.89]	0.54 [0.34 0.84] ^b	1.39 [0.84 2.32]	1.18 [0.89 1.57]	1.01 [0.74 1.38]
Preeclampsia	2.92 [1.67 5.11] ^b	2.10 [1.16 3.80] ^b	1.98 [1.28 3.07] ^b	2.10 [1.29 3.43] ^b	0.61 [0.42 0.89] ^b	0.66 [0.45 0.98] ^b
Severe preeclampsia	3.27 [1.69 6.30] ^b	2.40 [1.20 4.79] ^b	3.12 [1.87 5.21] ^b	3.68 [2.07 6.54] ^b	0.80 [0.51 1.27]	0.91 [0.56 1.46]
Early onset preeclampsia	3.21 [1.36 7.58] ^b	2.51 [1.02 6.19] ^b	2.51 [1.32 4.78] ^b	3.23 [1.57 6.63] ^b	1.46 [0.79 2.69]	1.54 [0.81 2.92]
Gestational Hypertension	2.51 [1.15 5.49] ^b	1.82 [0.80 4.12]	1.03 [0.47 2.25] ^b	1.10 [0.48 2.52]	1.01 [0.56 1.80]	1.04 [0.58 1.90]
GDM	1.8 [1.34 2.42] ^b	1.48 [1.09 2.02] ^b	0.9 [0.71 1.14]	0.97 [0.74 1.26]	0.80 [0.67 0.95] ^b	0.78 [0.65 0.93] ^b
GDM [lifestyle intervention]	1.49 [1.07 2.06] ^b	1.21 [0.86 1.70]	0.85 [0.65 1.11]	0.97 [0.73 1.30]	0.80 [0.66 0.96] ^b	0.78 [0.64 0.95] ^b
GDM [on insulin]	2.24 [1.38 3.64] ^b	1.98 [1.19 3.32] ^b	1.12 [0.71 1.76]	1.02 [0.62 1.66]	0.89 [0.64 1.23]	0.84 [0.60 1.18]
ICP	1.07 [0.61 1.89]	0.99 [0.55 1.77]	1.37 [0.89 2.10]	1.42 [0.89 2.27]	0.73 [0.53 1.01]	0.78 [0.56 1.08]
Placental abruption	0.94 [0.28 3.19]	0.89 [0.23 3.14]	1.02 [0.42 2.51]	1.11 [0.42 2.91]	2.00 [0.94 4.26]	2.06 [0.95 4.47]
Placenta Praevia and Vasa Praevia	2.13 [1.44 3.16] ^b	1.68 [1.11 2.55] ^b	1.53 [1.11 2.11] ^b	1.34 [0.94 1.90]	0.93 [0.72 1.19]	0.97 [0.75 1.27]
PPH	2.99 [1.81 4.93] ^b	2.56 [1.51 4.35] ^b	2.01 [1.30 3.12] ^b	1.53 [0.94 2.48]	1.08 [0.75 1.54]	1.13 [0.77 1.64]
Abnormality of fetal presentation [non-cephalic]	1.01 [0.56 1.81]	0.98 [0.54 1.78]	0.89 [0.58 1.38]	1.00 [0.63 1.60]	0.83 [0.61 1.13]	0.80 [0.58 1.11]
Fetal outcomes						
Preterm birth [<37 weeks]	2.59 [1.80 3.73] ^b	2.13 [1.45 3.11] ^b	2.12 [1.58 2.84] ^b	1.47 [1.07 2.04] ^b	0.96 [0.78 1.22]	1.12 [0.87 1.43]
Low birthweight [<2500g]	2.78 [1.77 4.35] ^b	2.33 [1.45 3.72] ^b	1.80 [1.23 2.64] ^b	1.37 [0.90 2.09]	0.94 [0.69 1.28]	1.05 [0.76 1.45]
Macrosomia [>4000g]	0.58 [0.26 1.26]	0.61 [0.27 1.35]	0.91 [0.55 1.49]	0.87 [0.51 1.49]	0.93 [0.66 1.32]	0.87 [0.60 1.24]
IUGR	2.83 [0.86 9.25]	2.43 [0.71 8.33]	1.36 [0.54 3.41]	0.90 [0.32 2.51]	0.77 [0.38 1.57]	0.91 [0.44 1.88]
Apgar score <7 at 5 minute	1.05 [0.13 8.75]	0.56 [0.06 5.12]	5.40 [1.44 20.18] ^b	9.35 [2.08 42.09] ^b	1.71 [0.45 6.44]	2.29 [0.58 8.97]
NICU admission	2.50 [1.57 3.98] ^b	1.90 [1.17 3.09] ^b	2.59 [1.78 3.77] ^b	2.02 [1.34 3.05] ^b	1.01 [0.73 1.38]	1.19 [0.85 1.66]
Respiratory complications	1.30 [0.57 2.97] ^b	1.03 [0.44 2.45]	0.94 [0.45 1.94]	1.16 [0.53 2.50]	1.9 [1.07 3.37] ^b	1.84 [1.03 3.33] ^b

Note:

CI: confidence interval; OR = odds ratio; ART: assisted reproductive techniques; GDM: gestational diabetes mellitus; ICP: Intrahepatic cholestasis of pregnancy; PPH: postpartum haemorrhage; IUGR: Intrauterine growth restriction; NICU: neonatal intensive care unit.

^a Adjusted for gravidity parity maternal baseline BMI conceiving method insurance education and residence. In the comparison of "conceived by ART", the aforementioned confounding factors were considered except for conceiving method. ^b Denotes significance with a CI that does not cross 1.

In comparison of the influence of education, patients of high educational level were used as the reference group.

Only the risks of the low educational level group was reported, for most of the ORs of patients in middle educational level group had no statistical significance. In comparison of the influence of residence, patients living in metropolitan were used as the reference group. Only the risks of living in rural area was reported, for most of the ORs of patients living in remote area had no statistical significance. In comparison of the influence of insurance, patients who had no insurance was used as the reference group. In the analysis of fetal outcomes, 2796 patients were analysed excluding pregnancies ending in stillbirth.