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### Preconception blood pressure and risk of preterm delivery in Chinese reproductive age women

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Preterm delivery (PTD) is an important adverse pregnancy outcome in pregnant women, which threatens maternal and child health. Preconception risk factors of PTD remain uncertain. We examined the relationship between preconception blood pressure (BP) and the risk of PTD in a prospective cohort of reproductive age women in Chinese rural population. Data on BP, height, weight, history of pregnancy and diseases, life style, fasting glucose level and other variables were obtained in a baseline examination of National Preconception Health Survey in 2010-2012. Follow-up evaluation was conducted from June 2010 to Oct 2013. Successful conception and pregnancy outcomes were documented during the follow-up period. During four years of follow-up period, 3579 PTD events were documented. After adjustment for age, cigarette smoking, alcohol consumption, body mass index, geographic region, history of diabetes and thyroid dysfunction, and history of adverse pregnancy outcome, the relative risk (RR) (95% confidence interval (CI)) of PTD were 1.32 (1.17-1.49), 1.88 (1.23-2.86), 3.05 (1.12-8.30), and 3.95 (0.53-29.26) for those with preconception systolic BP (SBP) 120-139, 140-159, 160-179 and  $\geq 180$  mmHg, compared to those with SBP < 120 mmHg. The RR (95%CI) of PTD were 1.32 (1.17-1.49), 1.62 (1.21-2.18), 2.36 (1.25-4.46) and 1.82 (0.45-7.42) for those with preconception diastolic BP (DBP) 80-89, 90-99, 100-109 and  $\geq 110$  mmHg, compared to those with DBP < 90 mmHg. Our results indicate that there is a strong linear and independent relationship between BP levels and the risk of PTD in Chinese reproductive age women. Increases in SBP were associated with a greater risk of PTD compared to corresponding increases in DBP.

#### Biography

Ying Yang has obtained her PhD degree in epidemiology from Peking Union Medical College in 2012. She is a key research staff in National Research Institute of Family Planning, with research interest in maternal and child health. She has participated in National Preconception Health Survey, Pregnancy Induced Hypertension Maternal-child cohort study, InterAsia, Gensalt, multi-center, multi-country clinical trials and epidemiology studies. She has published more than 10 papers in reputed journals.

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