

HYPERTENSION

Tight control of hypertension is safe in pregnant women

Hypertension affects 1 in 10 pregnant women, and is associated with increased risk of perinatal and maternal complications. However, blood-pressure targets for women with mild hypertension during pregnancy remain unclear and much debated. Investigators of the CHIPS trial, published in *The New England Journal of Medicine*, compared the effect of less-tight control versus tight control of nonproteinuric, nonsevere hypertension in pregnancy on prenatal and maternal outcomes.



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CHIPS was an unblinded, multicentre, randomized, controlled trial involving women at 14 weeks to 33 weeks 6 days of gestation with pre-existing or gestational hypertension, office diastolic blood pressure

of 90–105 mmHg, and a live fetus. Women were randomly allocated to less-tight control (target diastolic blood pressure 100 mmHg) or tight-control (target diastolic blood pressure 85 mmHg).

In total, 987 women from 94 sites in 16 countries were included in the study; 74.6% had pre-existing hypertension. The primary outcome of pregnancy loss or high-level neonatal care for >48 h in the first 28 postnatal days was not significantly different between the women assigned to less-tight control and those assigned to tight control (31.4% versus 30.7%; adjusted OR 1.74, 95% CI 0.77–1.35). The frequency of the secondary outcome of serious maternal complications was also not significantly different between the two groups (3.7% versus 2.0%; adjusted OR 1.74, 95% CI 0.79–3.84). However, the frequency of severe hypertension ($\geq 160/110$ mmHg) was higher with less-tight control than with tight control (40.6% versus 27.5%; $P < 0.001$).

According to the CHIPS investigators, this “trial is substantially larger than

previous trials that have examined the effects of lower versus higher blood-pressure targets during pregnancy... [These] findings are consistent with a meta-analysis of previous trials (29 trials involving 3,350 women) that showed that less-tight versus tight control increases the incidence of severe maternal hypertension.” However, their findings do not support the “potential benefits or risks of less-tight versus tight control” on perinatal outcomes that have been observed in previous studies.

In an accompanying editorial, Caren G. Solomon and Michael F. Greene comment that although “tight control of hypertension conferred no apparent benefits to the fetus ... [the trial] does, however, provide valuable reassurance that tight control, as targeted in this study, does not carry major risks for the fetus or newborn”.

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Original article Magee, L. A. *et al.* Less-tight versus tight control of hypertension in pregnancy. *N. Engl. J. Med.* 372, 407–417 (2015)