

## Review: Antihypertensive drugs improve maternal outcomes in mild chronic and pregnancy-induced hypertension

### To the Editor:

The *ACP Journal Club* abstract for the review by Magee and colleagues (1) concluded that “drug treatment of mild chronic hypertension during pregnancy improves maternal outcomes.” We recently completed a systematic review addressing this topic and concluded that trial data on antihypertensive treatment for mild chronic hypertension during pregnancy are inadequate to establish beneficial or harmful effects for either the mother or the fetus.

In reading the original review in *BMJ* on which the abstract in *ACP Journal Club* is based, we note that the trials addressing mild hypertension that were included in the review are not cited. We cannot assess which trials were combined to yield particular results. The primary outcomes that the authors based their conclusions on were decreased maternal hospitalizations, less severe maternal hypertension, and less additional antihypertensive treatment. The 1 trial used to make the conclusion about decreased hospitalizations was an unblinded 1979 study (2) without a placebo-controlled group that involved 58 women and used hospital admission parameters that are not relevant today (1). The outcomes of less severe hypertension and need for treatment are intermediate outcomes that were assessed in only a few trials in varying manners and that were possibly confounded by clinician opinion as trials usually were not blinded.

We believe that the conclusions in the abstract and commentary are incorrect. We need large-scale trials with clinical outcomes in this area, not propagation of the unproven belief that treatment benefits mothers.

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### References

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2. Arias F, Zamora J. Antihypertensive treatment and pregnancy outcome in patients with mild chronic hypertension. *Obstet Gynecol*. 1979;53:489-94.

### In response:

We agree with Drs. Mulrow and Sibai that the trial data are currently inadequate to definitely address how mild chronic hypertension in pregnancy should be managed, both in terms of when antihypertensive therapy should be started and what the blood pressure treatment goal should be.

Because of the space limitations set by the editors of *BMJ*, we were unable to reference the 7 trials of antihypertensive therapy for chronic hypertension in pregnancy (1–6) (1 of which [3] had 2 treatment groups). Therefore, we referenced the review that cited 5 trials and then Steyn and Odendaal [5] separately.

The data do show maternal benefit for the outcomes examined, but although of some interest to clinicians, we agree with others that these outcomes are inadequate. We specifically cited the remote publication date of the 1 trial that examined maternal hospitalization (6) and the fact that the advent of obstetrical day units has changed admission practices in many institutions.

Maternal blood pressure of 160/100 to 110 mm Hg is indeed an intermediate outcome, and when nonsustained, hypertension of this magnitude is associated with a very low risk for adverse maternal events. Stroke, eclampsia, or maternal death, however, occur so rarely that it would require extremely large trials to show whether normalization of blood pressure improves maternal outcomes.

We believe that the real question is at what level of maternal blood pressure is perinatal outcome optimized (7). We have inadequate data to answer this question, and we are currently organizing a multicenter, international, randomized, controlled trial to address whether “less tight” control of maternal blood pressure improves fetal growth and other perinatal outcomes more than does normalization of blood pressure.

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### References

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