**Abstract**

**OBJECTIVE:** Our aim was to test the hypothesis that acetylsalicylate (aspirin) treatment reduces the incidence or severity of pregnancy-associated hypertension.

**STUDY DESIGN:** Patients were nulliparous, healthy, and with a singleton gestation at between 20 and 22 weeks' gestation. A sample size of 600 patients was calculated on the basis of $p \leq 0.05$ and 90% power of observation. A 2-week placebo-controlled "run-in" was used to select compliant patients. Randomization occurred at 24 weeks, with 60 mg of aspirin or placebo treatment from randomization to delivery.

**RESULTS:** Follow-up was maintained on 99% of the patients. The randomized patients had a 94% pill compliance index. At randomization, serum thromboxane medians were similar in both groups. Thromboxane B2 levels in the aspirin group decreased significantly from baseline at 29 to 31 weeks, 34 to 36 weeks, and at delivery as compared with an overall increase in the placebo group. Preeclampsia developed in five of 302 women (1.7%) who received aspirin versus 17 of 302 (5.6%) who received the placebo ($p = 0.009$). Preeclampsia was severe in one aspirin and in six placebo recipients ($p = 0.06$).

**CONCLUSION:** Daily ingestion of 60 mg of aspirin beginning at 24 weeks' gestation significantly reduced the occurrence of preeclampsia.