

Recurrence of hypertensive disorders of pregnancy: an individual patient data metaanalysis

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Objective

We performed an individual participant data (IPD) metaanalysis to calculate the recurrence risk of hypertensive disorders of pregnancy (HDP) and recurrence of individual hypertensive syndromes.

Study Design

We performed an electronic literature search for cohort studies that reported on women experiencing HDP and who had a subsequent pregnancy. The principal investigators were contacted and informed of our study; we requested their original study data. The data were merged to form one combined database. The results will be presented as percentages with 95% confidence interval (CI) and odds ratios with 95% CI.

Results

Of 94 eligible cohort studies, we obtained IPD of 22 studies, including a total of 99,415 women. Pooled data of 64 studies that used published data (IPD where available) showed a recurrence rate of 18.1% ($n = 152,213$; 95% CI, 17.9–18.3%). In the 22 studies that are included in our IPD, the recurrence rate of a HDP was 20.7% (95% CI, 20.4–20.9%). Recurrence manifested as preeclampsia in 13.8% of the studies (95% CI, 13.6–14.1%), gestational hypertension in 8.6% of the studies (95% CI, 8.4–8.8%) and hemolysis, elevated liver enzymes and low platelets (HELLP) syndrome in 0.2% of the studies (95% CI, 0.16–0.25%). The delivery of a small-for-gestational-age child accompanied the recurrent HDP in 3.4% of the studies (95% CI, 3.2–3.6%). Concomitant HELLP syndrome or delivery of a small-for-gestational-age child increased the risk of recurrence of HDP. Recurrence increased with decreasing gestational age at delivery in the index pregnancy. If the HDP recurred, in general it was milder, regarding maximum diastolic blood pressure, proteinuria, the use of oral antihypertensive and anticonvulsive medication, the delivery of a small-for-gestational-age child, premature delivery, and perinatal death. Normotensive women experienced chronic hypertension after pregnancy more often after experiencing recurrence (odds ratio, 3.7; 95% CI, 2.3–6.1).

Conclusion

Among women that experience hypertension in pregnancy, the recurrence rate in a next pregnancy is relatively low, and the course of disease is milder for most women with recurrent disease. These reassuring data should be used for shared decision-making in women who consider a new pregnancy after a pregnancy that was complicated by hypertension.