Perinatal outcomes in fetal growth restriction according to types of hypertensive disorders in pregnancy

Yang JI, Son JH, Jeong BD, Kim HS
Department of Obstetrics and Gynecology, Ajou University School of Medicine, Suwon, South Korea

Objective
Fetal growth restriction (FGR) and hypertensive disorders in pregnancy (HDP) such as pre-eclampsia (PE) are major disease entities affecting perinatal outcomes. We investigated the perinatal outcomes of pregnancies with FGR according to types of HDP.

Methods
Medical records of 1,288 singleton births with fetal growth restriction from Ajou University Hospital between 1994 and 2014 were analysed retrospectively. Patients were divided into a normotensive (control group: FGR without HDP) and a hypertensive group (study group: FGR with HDP). HDP were categorized into five subgroups such as preeclampsia, superimposed preeclampsia, chronic hypertension, gestational hypertension and HELLP syndrome. Maternal characteristics and perinatal outcomes were compared between the two groups. The results were further evaluated by gestational weeks. Subgroup analysis was performed to investigate perinatal outcomes in each HDP. All data were statistically analysed using SPSS V. 20 (p < 0.05).

Results
After 34 weeks, there were statistical differences in perinatal outcomes of HDP. Preeclampsia was associated with high neonatal intensive care unit (NICU) admission, lower birth weight and higher intraventricular haemorrhage rate. Gestational hypertension was only associated with high NICU admission rate. Superimposed PE and chronic hypertension were not statistically different from normotensive FGR. HELLP syndrome was associated with higher perinatal mortality.

Conclusion
Hypertensive FGR was associated with poor perinatal outcomes compared to the normotensive group in singleton birth. After 34 weeks of gestation, there were significant differences according to types of HDP in terms of perinatal outcomes. PE and HELLP syndrome were associated with worse perinatal outcomes. Therefore, delivery should be considered in the subgroup of HDP after 34 weeks of gestation.