LETTER TO THE EDITOR

Necessity of antihypertensive therapy with alpha-methyldopa for pregnant women with hypertensive disorders after 36 weeks of gestation

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Dear Editor,

We read with interest the article by Muračević et al. regarding the effect of alpha-methyldopa on umbilical artery Doppler findings in pregnant women with hypertensive disorders (1). The authors described that there were no changes in fetal umbilical artery Doppler velocimetry in singleton pregnant women with hypertensive disorders between 36 and 40 weeks of gestation. However, even in consideration of circumstances in various countries, the use of antihypertensive agents after 36 gestational weeks is less beneficial to pregnant women with hypertensive disorders (2–5). We wish to discuss the usefulness or necessity of antihypertensive drugs for pregnant women depending on the severity of the hypertensive disease (≥36 gestational weeks). Further, we present the case of a pregnant woman with severe preeclampsia. A 38-year-old pregnant woman with severe hypertension (BP, 190/110 mmHg) and severe proteinuria (urinary protein, 8.2 g/day) was referred to our facility at 23 gestational weeks; hydralazine hydrochloride and magnesium sulphate combination therapy was immediately initiated. No abnormalities were observed on fetal umbilical artery Doppler velocimetry.

Sibai reported that expectant management of women with severe preeclampsia occurring at <32 gestational weeks may improve new-born outcomes but requires careful in-hospital maternal and fetal surveillance (2). Because severe preeclampsia is associated with increased rates of maternal morbidity and mortality, and with significant risks for the fetus (growth restriction, hypoxemia, and death), there is a universal agreement that all such patients should deliver if the disease develops after 34 gestational weeks; patients with gestational ages of 33–34 weeks are administered corticosteroids and then deliver after 48 hours (2). In addition, Vigil-De Gracia et al. have recently shown that expectant management of severe preeclampsia after treatment with corticosteroids in women at 28 to 33 weeks of pregnancy is ineffective in reducing perinatal mortality and morbidities, even in developing countries with limited health resources (3). They also concluded that severe preeclampsia occurring after 28 weeks of pregnancy should be managed with prompt delivery after corticoid administration (3). Therefore, in conclusion, we do not agree with the use of antihypertensive drug therapies for pregnant women with severe preeclampsia after 36 weeks of gestation.

National hypertension societies in the US and Canada have listed methyldopa, labetalol, and long-acting nifedipine as acceptable oral antihypertensive agents when drug therapy is required in pregnant women with mild-to-moderate hypertension (4). However, there is no clear consensus on the management of non-severe hypertension during pregnancy for optimizing pregnancy outcomes (4). Furthermore, the review of 46 trials involving 4282 women did not provide enough evidence to show the benefit of antihypertensive drugs for mild-to-moderate hypertension during pregnancy (5). Abalos concluded that it remains unclear whether antihypertensive drug therapy for mild-to-moderate hypertension during pregnancy is worthwhile (5). The use of antihypertensive agents in pregnant women with mild-to-moderate hypertension may not be feasible, especially after 36 weeks’ gestation (4,5).

We present the case of a pregnant woman with severe preeclampsia. A 38-year-old pregnant woman with severe hypertension (BP, 190/110 mmHg) and severe proteinuria (urinary protein, 8.2 g/day) was referred to our facility at 23 gestational weeks; hydralazine hydrochloride and magnesium sulphate combination therapy was immediately initiated. No abnormalities were observed on fetal umbilical artery Doppler velocimetry when the patient’s blood pressure (BP) decreased to 150/88 mmHg. However, when the patient’s BP further declined to 120/80 mmHg, the diastolic umbilical blood flow became absent.
Upon discontinuation of hydralazine therapy, the BP was restored to 150/100 mmHg, and fetal diastolic umbilical blood flow promptly improved. The use of hydralazine or labetalol is recommended in the expectant management of women with severe preeclampsia before 32 gestational weeks, because these drugs are not related to any significant changes in fetal Doppler findings; therefore, drugs such as alpha-methyldopa (1,4) are considered safe (2,6). Nevertheless, in the present case, the effect of hydralazine on maternal BP was reflected directly on fetal umbilical artery Doppler velocimetry. The use of hydralazine does not always appear safe for the fetus in patients with severe preeclampsia, where in the regulatory mechanism of uteroplacental and fetoplacental circulation is insufficient.

In conclusion, although we are academically interested in the effect of antihypertensive agents on umbilical artery Doppler findings in pregnant women with hypertensive disorders, the use of these drugs, including alpha-methyldopa, after 36 gestational weeks is not practical. Because the use of antihypertensive agents (including hydralazine, labetalol, or alpha-methyldopa) is not always safe for the fetus, careful attention is needed when administering those drugs to pregnant women.

REFERENCES