

Ob-Gyn: Treatment of Chronic Hypertension in Pregnancy

NICaS provides highly accurate real-time data of the patient's cardiovascular status in 3 minutes



Directed anti-hypertensive therapy improves growth restriction and perinatal mortality in women with chronic hypertension

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INTRODUCTION

Normal hemodynamic adaptations during pregnancy include increased cardiac output and decreased systemic vascular resistance. Pathologic alterations in these adaptations can lead to adverse pregnancy outcomes. As the hemodynamic alterations are heterogeneous, we sought to describe the perinatal outcomes when antihypertensive therapy was targeted to the specific hemodynamic alteration.

METHODS

A prospective longitudinal cohort study of 961 women referred for chronic hypertension between 2005 and 2014 was conducted. Serial assessment of maternal hemodynamics (cardiac output (CO), mean arterial pressure (MAP), and systemic vascular resistance (SVR)) was obtained using impedance cardiography (NiCas). Vasodilators were initiated for increased SVR; elevated CO was treated with beta blockade.

RESULTS

Initial blood pressure was stratified into 3 groups (<140/90, 140-149/90-99, 150-159/100-109) and perinatal mortality previously published by the MFMU Network (n=759). Rates of IUGR and perinatal mortality were improved in each group, regardless of the severity of preexisting hypertension.

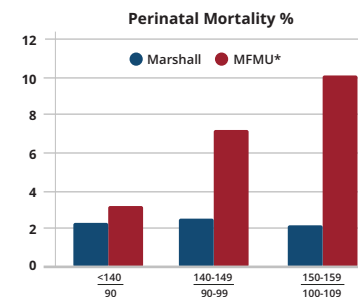
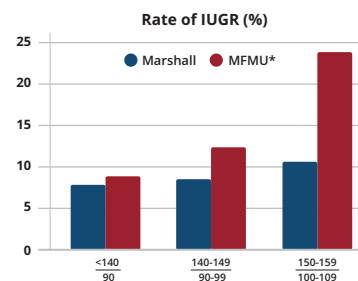
DISCUSSION

Impedance cardiography directed antihypertensive therapy allows for informed initiation and titration of blood pressure medications. This low cost and non-invasive test should be considered for optimizing outcomes in pregnancies complicated by maternal chronic hypertension.

Treatment of Chronic Hypertension in Pregnancy

Vasoconstriction = vasodilators
High cardiac output = beta blockade

The only way to know is to measure



*Ankumah, et al. Obstet Gynecol 2014;123:966-72

