

UNIVERSITY *of* WASHINGTON

Management of Acute Severe Hypertension in Pregnancy

Obstetric Consensus Statement

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MANAGEMENT OF ACUTE SEVERE HYPERTENSION IN PREGNANCY

RATIONALE

Severe hypertension in pregnancy places a woman at risk for significant morbidity and potential mortality. Adverse outcomes include hemorrhagic stroke, cerebral edema, pulmonary edema, renal failure, placental abruption, fetal growth restriction and fetal demise. Identification of hypertension in pregnancy and prompt, effective treatment reduces the risk of adverse outcomes for mothers and infants.

PREVENTION

Antenatal treatment of blood pressure decreases the incidence of severe hypertension by 70%. Tight control of blood pressure to a target diastolic pressure 85 mmHg compared to 90 mmHg reduces the risk of severe hypertension without adverse impact on the fetus. Prevention of severe hypertension through early treatment should be encouraged. The absolute “best blood pressure” is not known and likely varies from patient to patient. A minimum target for diastolic pressure should be 85 mmHg with systolic at 135, corresponding to the blood pressures achieved in the “tight control” arm of the CHIPS Trial.

DIAGNOSIS

Blood pressure is measured at each obstetrical encounter. A systolic blood pressure ≥ 160 mmHg or a diastolic blood pressure ≥ 110 mmHg requires immediate management and ongoing assessment.

After a single severe range blood pressure is identified:

- *An obstetrical provider should be notified and preparations made for treatment.*
 - *BP should be assessed frequently in the next 15 minutes and ongoing until medically stable.*
 - *Depending on gestational age, continuous fetal monitoring should be initiated.*
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MANAGEMENT

Treatment of acute severe hypertension should be initiated promptly (within one hour) after confirmed diagnosis. Choice of therapy may depend on ease of obtaining intravenous access, goals for prolonging the pregnancy and individual patient characteristics such as maternal heart rate, other maternal hemodynamic parameters, and oxygen saturation.

Efficacy of antihypertensive treatment should be assessed continuously. Although treatment should be initiated urgently, rapid lowering of blood pressure may be counterproductive.

If severe hypertension is confirmed by a second severe-range blood pressure:

- *The attending obstetrical provider and OB charge nurse should be notified.*
- *Intravenous access should be obtained and appropriate laboratory studies drawn.*
- *Intravenous magnesium sulfate should be initiated with a 4-6g bolus followed by 1-2g/hr infusion rate. Adjustment is required for high serum creatinine.*

** Medical treatment should be initiated promptly, within one hour of confirmed diagnosis.*

Maintenance treatment, after acute management, should be anticipated and initiated. The patient should also be recognized as at risk for severe hypertension postpartum

Fetal well-being should be continuously assessed during the acute phase of treatment. If appropriate for gestational age, betamethasone should be administered. If appropriate, contingency planning should be initiated for delivery including review of lab results, ordering blood products and consultation with the OB Anesthesia team.

POSTPARTUM HYPERTENSION

The postpartum period remains the time during pregnancy of greatest maternal risk. Approximately 80% of maternal deaths from hypertension occur postpartum. Immediately postpartum, blood pressure may appear to normalize. This is likely due to the residual effects of anesthesia, magnesium related vasodilation and volume loss associated with bleeding. Over the first 2-5 days postpartum, blood pressure elevations should be recognized and ongoing treatment should be escalated promptly if hypertension becomes more refractory.

Magnesium sulfate for seizure prophylaxis should continue through 24 hours postpartum or potentially longer if postpartum pre-eclampsia is suspected. For women with chronic hypertension, in general, antihypertensive medications given during pregnancy should not be discontinued postpartum although dose modification may be needed.

Early intervention and treatment of elevated blood pressure postpartum will decrease the need to treat acute severe hypertension. The development of severe hypertension postpartum should be responded to with urgency as described above.

REFERENCES

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CITATION

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