BLOOD PRESSURE MONITORING DURING PREGNANCY

I. DEFINITIONS:

A. Preeclampsia-Eclampsia: During pregnancy the development of an elevated blood pressure with proteinuria, or in the absence of proteinuria the client presents with elevated blood pressure and at least one of the following: Creatinine >1.1, platelets <100,000, doubling of liver enzymes, pulmonary edema, or new onset of cerebral or visual disturbances. Preeclampsia most often occurs near term and can occur in conjunction with other hypertensive disorders. Eclampsia involves the development of seizure activity.

B. Chronic Hypertension: Elevated blood pressure occurring prior to pregnancy or before the 20th week of gestation.

C. Chronic Hypertension with superimposed preeclampsia:
   1. Without severe features: BP <160 mmHg systolic and 110mm Hg diastolic and proteinuria.
   2. With severe features: BP > 160mm Hg systolic or >110 mm HG diastolic while the patient is on bed rest. Also includes the presence of organ dysfunction.

D. Gestational Hypertension: The development of an elevated blood pressure without proteinuria or above mentioned diagnostic changes, during pregnancy or within the first 24 hours postpartum in a previously normotensive woman who has no evidence of hypertensive vascular disease.

II. DIAGNOSTIC CRITERIA FOR PREECLAMPSIA:

A. Blood pressure >140 mm Hg systolic or >90 mm Hg diastolic on two occasions at least 4 hours apart, after 20 weeks gestation in a previously normotensive woman. A blood pressure > 160 mm Hg systolic or > 110 mm HG diastolic can be confirmed within a short interval (minutes) to facilitate timely antihypertensive therapy.

   AND

B. Proteinuria of 300mg or greater on a 24 hour urine collection, Protein/creatinine ratio of 0.3 or greater or if no other quantitative methods available:1+ or greater by urine dipstick.

C. Preeclampsia with severe features is defined as the presence of one or more of the following in addition to the diagnosis of preeclampsia:
   1. Systolic BP of 160 mmHg or higher or diastolic BP of 119 mm Hg or higher on two occasions at least four hours apart while on bedrest.
   2. Thrombocytopenia: Platelet count <100,000/ microliter.
   3. Renal Insufficiency: Serum creatinine greater than 1.1mg/dL or doubling of the serum creatinine concentration in the absence of other renal disease.
   4. Impaired Liver function: Elevated blood concentrations of liver transaminases to twice normal concentration, severe persistent RUQ or epigastric pain unresponsive to medication and not associated with an alternative diagnosis.
   5. Pulmonary edema
   6. Cerebral or visual symptoms
III. MANAGEMENT PLAN:

A. Alert client’s OB provider or have her alert OB provider immediately for blood pressure 140/90 or higher on two occasions at least 4 hours apart. If associated with any of the other associated signs and symptoms notify OB provider immediately and refer to the nearest healthcare facility for blood pressure management. Complete the ODH399 Referral Form per instructions on any referrals made.

B. Instruct client to decrease stimuli (dark room, decrease noise level) and lie on left side. Retake the blood pressure making sure to use appropriate size cuff with the arm at the same level as the heart, ideally in a sitting position.

C. If pressure greater than or equal to 160/110, notify OB provider immediately and refer to the nearest healthcare facility for blood pressure management.

D. Management of preeclampsia is dependant on the severity of disease as well as gestational age. Preeclampsia without severe features is treated with induction after 37 weeks’ gestation.

IV. CLIENT EDUCATION:

A. Watch for associated signs/symptoms:
   1. Headache
   2. Blurred vision or blindness
   3. Epigastric pain unrelieved by antacids
   4. Shortness of breath.
   5. Edema (especially hands and face)
      a. Dependent edema is common in pregnancy
      b. Assess for changes or edema that does not improve when extremities elevated
   6. Possibility of seizure associated with high blood pressure

B. Risk factors for development of gestational hypertension/preeclampsia
   1. First pregnancy
   2. Multiple gestation
   3. Chronic hypertension
   4. Chronic renal disease
   5. Obesity
   6. Diabetes Mellitus/obesity/insulin resistance
   7. Maternal age greater than 35
   8. History of gestational hypertension/preeclampsia in previous pregnancy
   9. African American

C. Possible Interventions and Testing
   1. Decrease environmental stimulation
   2. Bed rest
   3. Ultrasound to evaluate possibility of multiple gestation and fetal development
   4. 24 hour urine collection
   5. Daily low-dose (60-80mg) aspirin beginning late in the first trimester as a preventative measure for women with a history of preeclampsia resulting in a preterm delivery at less than 34 0/7 weeks or preeclampsia in more than one previous pregnancy.
6. For women with Gestation Hypertension or preeclampsia without severe features daily fetal movement or kick counts are recommended as well as twice weekly BP monitoring and weekly lab tests for platelet count and liver enzymes.

7. Women with preeclampsia with severe features at less than 34 0/7 weeks gestation should receive corticosteroids for fetal lung maturity.

REFERENCES:


