Diagnosis and Management of Preeclampsia

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The American College of
Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

Hypertension in Pregnancy

Report of the American College of Obstetricians and Gynecologists' Task Force on Hypertension in Pregnancy

Executive Summary

Task force comprised 17 clinician-scientists

- Obstetrics
- Maternal-Fetal Medicine
- Hypertension
- Internal Medicine
- Nephrology
- Anesthesiology
- Physiology
- Patient Advocacy

Classification of Hypertension During Pregnancy

Four Categories:

1. Preeclampsia/eclampsia
2. Chronic hypertension
3. Chronic hypertension with superimposed preeclampsia
4. Gestational hypertension

*NOTE: There is NO category entitled PIH.

Definitions

- Chronic hypertension: hypertension prior to pregnancy or elevated BP prior to 20 weeks
- Chronic hypertension with superimposed preeclampsia: BP significantly higher than baseline with new or worsening proteinuria
- Gestational hypertension: BP elevation after 20 weeks without proteinuria or systemic findings

Preeclampsia: Hypertension + Proteinuria

TABLE E-1. Diagnostic Criteria for Preeclampsia

Blood pressure	• Greater than or equal to 140 mm Hg systolic or greater than or equal to 90 mm Hg diastolic on two occasions at least 4 hours apart after 20 weeks of gestation in a woman with a previously normal blood pressure • Greater than or equal to 160 mm Hg systolic or greater than or equal to 110 mm Hg diastolic, hypertension can be confirmed within a short interval (minutes) to facilitate timely antihypertensive therapy
and	
Proteinuria	• Greater than or equal to 300 mg per 24-hour urine collection (or this amount extrapolated from a timed collection) or • Protein/creatinine ratio greater than or equal to 0.3* • Dipstick reading of 1+ (used only if other quantitative methods not available)

Preeclampsia: Now also hypertension + _____

Or in the absence of proteinuria, new-onset hypertension with the new onset of any of the following:	
Thrombocytopenia	• Platelet count less than 100,000/microliter
Renal insufficiency	• Serum creatinine concentrations greater than 1.1 mg/dL or a doubling of the serum creatinine concentration in the absence of other renal disease
Impaired liver function	• Elevated blood concentrations of liver transaminases to twice normal concentration
Pulmonary edema	
Cerebral or visual symptoms	

*Each measured as mg/dL.

No more MILD or SEVERE preeclampsia, only severe features

BOX E-1. Severe Features of Preeclampsia (Any of these findings)

- Systolic blood pressure of 160 mm Hg or higher, or diastolic blood pressure of 110 mm Hg or higher on two occasions at least 4 hours apart while the patient is on bed rest (unless antihypertensive therapy is initiated before this time)
- Thrombocytopenia (platelet count less than 100,000/microliter)
- Impaired liver function as indicated by abnormally elevated blood concentrations of liver enzymes (to twice normal concentration), severe persistent right upper quadrant or epigastric pain unresponsive to medication and not accounted for by alternative diagnoses, or both
- Progressive renal insufficiency (serum creatinine concentration greater than 1.1 mg/dL or a doubling of the serum creatinine concentration in the absence of other renal disease)
- Pulmonary edema
- New-onset cerebral or visual disturbances

What's missing? Proteinuria > 5gm in 24 hours and fetal growth restriction are not longer criteria for diagnosis of severe disease

Management: Gestational HTN/preeclampsia *without* severe features

- At or beyond 37 weeks → DELIVERY
- Less than 37 weeks and no other indication for delivery → expectant management with maternal and fetal monitoring

Management: Gestational HTN or preeclampsia *without* severe features

- Serial assessment of maternal symptoms
- Daily assessment of fetal movement (kick counts)
- Serial measurements of BP (2x/week)
- Assessment of platelet counts and liver enzymes (weekly)
- Ultrasound to assess fetal growth
- Antenatal surveillance (twice weekly)

What not to do: Gestational HTN/preeclampsia *without* severe features

- NO antihypertensive treatment unless BP persistently >/= 160/110
- NO bedrest
- NO magnesium

Management: Preeclampsia *with* severe features

- Before 23-24 weeks
  - Delivery shortly after maternal stabilization
- At 24-34 weeks
  - Consider expectant management to improve neonatal outcome if maternal and fetal status is stable.
  - Administer steroids
  - Control hypertension - antihypertensive treatment is appropriate for BP >/= 160/110
- 34 weeks or greater
  - Delivery shortly after maternal stabilization

Expectant management of preeclampsia *with* severe features

Not appropriate	Appropriate for 48 hours	Appropriate for 48 hours or LONGER
Uncontrolled severe hypertension	Thrombocytopenia or HELLP	Ruptured membranes
Eclampsia	Renal dysfunction	Preterm labor
Pulmonary edema		Fetal growth restriction
Significant placental abruption		Oligohydramnios
DIC		Controlled hypertension with normal labs and reassuring fetal testing
Nonreassuring fetal testing		
Fetal demise		

What to do: Preeclampsia *with* severe features

- Inpatient care is appropriate for these patients, whether for delivery or expectant management
- Serial assessment of maternal symptoms
- Serial measurements of BP
- Assessment of platelet counts and liver enzymes
- Ultrasound to assess fetal growth
- Antenatal surveillance
- Control hypertension
- Magnesium should be used intrapartum and for 24 hours postpartum

What to do: Preeclampsia AFTER delivery

- Monitor BP (outpatient or inpatient) for 72 hours and again in 7-10 days or sooner prn.
- If persistent postpartum HTN (BP>150 mm Hg systolic or 100 mm Hg diastolic), antihypertensive therapy is suggested.
- If persistent BP of >160 mm Hg systolic or 110 mm Hg diastolic, treat within 1 hour.
- Patients presenting AFTER DELIVERY with new-onset HTN with HA or blurred vision or preeclampsia with severe HTN, administer magnesium

Management: Chronic hypertension

- If no additional maternal or fetal complications
  - Delivery before 38 weeks is not recommended
- If superimposed preeclampsia without severe features and stable maternal and fetal conditions
  - Expectant management until 37 weeks is suggested.

Prevention: the next frontier

- For women with a history of early-onset preeclampsia and preterm delivery at less than 34 0/7 weeks' gestation, or preeclampsia in more than one prior pregnancy, daily low-dose aspirin beginning in the first trimester can reduce the risk of preeclampsia.
- Do not administer Vitamin C or Vitamin E
- Do not recommend salt restriction or bedrest or other restriction of physical activity

QUESTIONS?

THANK YOU