UNC SCHOOL OF MEDICINE

Management of Chronic Hypertension in Pregnancy

Definition

Hypertension present pre-pregnancy or SBP of ≥ 140 or DBP ≥ 90 prior to 20 weeks' gestation

Antepartum Mangement

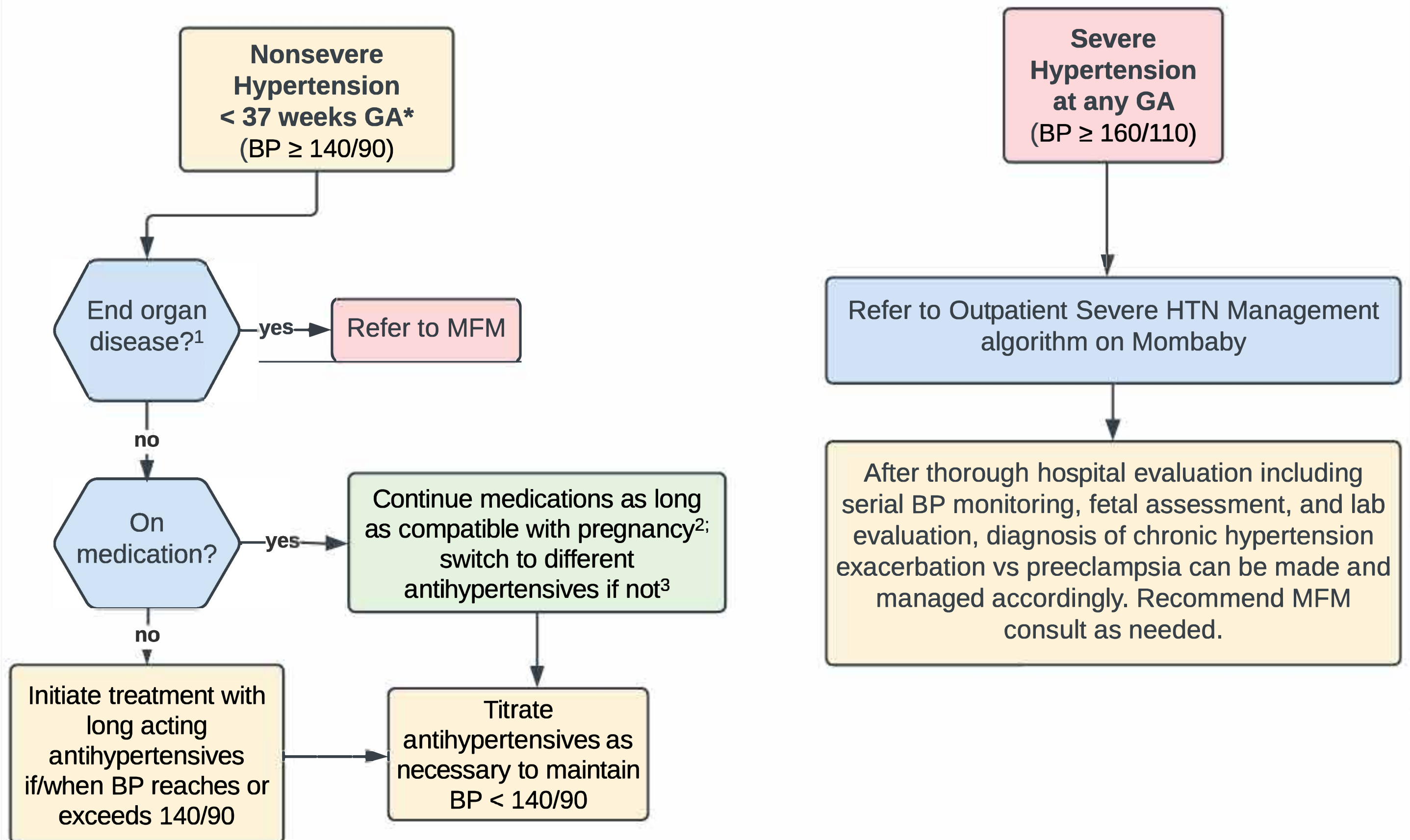
Baseline Evaluation

- Labs: CBC, AST, ALT, Cr, urine protein:Cr (UPC)
- EKG or echocardiogram

Preeclampsia Prevention

Low dose aspirin (81mg) nightly starting at 12 weeks' gestation, continue until delivery

Hypertension Management



***If ≥ 37 weeks GA, recommend against medication uptitration.**

[1] E.g. cardiac or renal disease

[2] See attached antihypertensive recommendations from ACOG (Table 2)

[3] Antihypertensives contraindicated in pregnancy include ACE inhibitors, ARBs, atenolol

Antepartum Management

Fetal Surveillance

Hypertensive Control	Antenatal Testing	Growth Ultrasounds
Well controlled on no medications	Individualize based on comorbidities	Once at 32 weeks or more frequently if comorbidities
Well controlled on medications	Weekly starting at 32 weeks	Every 4 weeks starting at 28 weeks
Poorly controlled	Individualize	Every 3-4 weeks starting at time of diagnosis

Delivery Timing[6]

Chronic hypertension with no evidence of preeclampsia

- 38w0d to 39w6d for patients not requiring medication
- 37w0d to 39w0d for patients with hypertension controlled with medication
- 37w0d for patients who required medication uptitration in the late preterm period (34w0d to 36w6d)

Chronic hypertension with superimposed preeclampsia

- 37w0d if no severe features
- 34w0d if severe features unless there are contraindications to expectant management[7] (should be managed inpatient)
- At diagnosis if there are contraindications to expectant management[7]

Postpartum Management

- BP check ~1 week postpartum (can be virtual visit if cuff previously validated with office cuff)
- Home BP monitoring for 2 weeks
- Titrate antihypertensives to goal BP < 150/100
- Refer to UNC Rex Women's Heart and Health clinic if poorly controlled chronic hypertension or developed superimposed preeclampsia with severe features

Table 2. Common Oral Antihypertensive Agents in Pregnancy

Drug	Dosage	Comments
Labetalol	200–2,400 mg/d orally in two to three divided doses. Commonly initiated at 100–200 mg twice daily	Potential bronchoconstrictive effects. Avoid in women with asthma, preexisting myocardial disease, decompensated cardiac function, and heart block and bradycardia.
Nifedipine	30–120 mg/d orally of an extended-release preparation. Commonly initiated at 30–60 mg once daily (extended-release)	Do not use sublingual form. Immediate-release formulation should generally be reserved for control of severe, acutely elevated blood pressures in hospitalized patients. Should be avoided in tachycardia.
Methyldopa	500–3,000 mg/d orally in two to four divided doses. Commonly initiated at 250 mg twice or three times daily	Safety data up to 7 years of age in offspring. May not be as effective as other medications, especially in control of severe hypertension. Use limited by side effect profile (sedation, depression, dizziness).
Hydrochlorothiazide	12.5–50 mg daily	Second-line or third-line agent

[6]Recommendations are for patients with no significant comorbidities such as diabetes or growth restriction. Refer patients with comorbidities to MFM for individualized delivery timing recommendations.

[7]See attached excerpt from ACOG regarding contraindications to expectant mangement (Box 4)

Box 4. Conditions Precluding Expectant Management

Maternal

- Uncontrolled severe-range blood pressures (persistent systolic blood pressure 160 mm Hg or more or diastolic blood pressure 110 mm Hg or more not responsive to antihypertensive medication
- Persistent headaches, refractory to treatment
- Epigastric pain or right upper pain unresponsive to repeat analgesics
- Visual disturbances, motor deficit or altered sensorium
- Stroke
- Myocardial infarction
- HELLP syndrome
- New or worsening renal dysfunction (serum creatinine greater than 1.1 mg/dL or twice baseline)
- Pulmonary edema
- Eclampsia
- Suspected acute placental abruption or vaginal bleeding in the absence of placenta previa

Fetal

- Abnormal fetal testing
- Fetal death
- Fetus without expectation for survival at the time of maternal diagnosis (eg, lethal anomaly, extreme prematurity)
- Persistent reversed end-diastolic flow in the umbilical artery

Abbreviation: HELLP, hemolysis, elevated liver enzymes, and low platelet count.

In some cases, a course of antenatal steroids can be considered depending on gestational age and maternal severity of illness.

Data from Balogun OA, Sibai BM. Counseling, management, and outcome in women with severe preeclampsia at 23 to 28 weeks' gestation. Clin Obstet Gynecol 2017;60:183–9.

References

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These algorithms are designed to assist the primary care provider in the clinical management of a variety of problems that occur during pregnancy. They should not be interpreted as a standard of care, but instead represent guidelines for management. Variation in practices should take into account such factors as characteristics of the individual patient, health resources, and regional experience with diagnostic and therapeutic modalities.

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