

Assessment and diagnosis of hypertension in pregnancy

New onset hypertension after 20 weeks gestation

Maternal assessment

- Clinical history
- Physical examination
- Confirm BP with repeated measurement
- Routine blood tests (FBC, UEC, LFTs)
- Urine PCR
- Consider additional pre-eclampsia blood tests (coagulation studies, fibrinogen, blood film, LDH, haptoglobin, bilirubin, group and hold)

Fetal assessment

- CTG as indicated according to gestation and local hospital policy
- Recommend USS for fetal growth & wellbeing

BP measurement

Use standardised technique—calibrated aneroid (manual) device or validated automated device

Hypertension (non-severe)

- sBP ≥ 140 mmHg (< 160 mmHg) and/or dBP ≥ 90 mmHg (< 110 mmHg)
- Two elevated BP, 4 hours apart

Severe hypertension

- sBP ≥ 160 mmHg and/or dBP ≥ 110 mmHg
- Two elevated BP, 15 minutes apart (shorter interval of minutes can be used to facilitate timely management)

Signs and symptoms of pre-eclampsia

- Severe headache
- Visual disturbance
- Cerebral irritability
- Epigastric and/or right upper quadrant pain
- Chest pain
- Dyspnoea
- Sudden swelling of face, hands or feet

Pre-eclampsia end-organ dysfunction

Renal

- Spot urine PCR ≥ 30 mg/mmol
- Serum creatinine ≥ 90 micromol/L

Haematological

- Thrombocytopenia:
 - Platelets $< 150 \times 10^9$ /L
- Features of haemolysis
 - Elevated LDH
 - Decreased haptoglobin with or without fragmented red cells
- DIC

Neurological

- Seizure
- Features of cerebral irritability
- Stroke

Liver

- New onset raised serum transaminases
 - With or without epigastric or right upper quadrant pain

Cardiorespiratory

- Pulmonary oedema
- Chest pain/dyspnoea

Placental dysfunction

- FGR
- Reduced fetal growth and abnormal UAD
- Oligohydramnios
- Intrauterine fetal death

Assess for signs and symptoms of pre-eclampsia

Hypertension with end-organ involvement?

Yes

Diagnosis of pre-eclampsia,
Refer to flowchart:
[Management of pre-eclampsia](#)

No

Diagnosis of gestational hypertension,
Refer to flowchart:
[Management of hypertension in pregnancy](#)

BP: blood pressure; CTG: cardiotocograph; dBP: diastolic BP; DIC: disseminated intravascular coagulation; FBC: full blood count; FGR: fetal growth restriction; LDH: Lactate dehydrogenase; LFTs: liver function tests; PCR: protein to creatinine ratio; sBP: systolic BP; UEC: urea, electrolytes, creatinine test; UAD: Umbilical artery Doppler; USS: ultrasound scan; $\geq$: greater than or equal to; $<$: less than

