Management of hypertension in pregnancy

Risk factors for preeclampsia
- Previous history of preeclampsia
- Family history of preeclampsia
- Inter-pregnancy interval > 10 years
- Nulliparity
- Pre-existing medical conditions
  - APLS
  - Pre-existing diabetes
  - Renal disease
  - Chronic hypertension
  - Chronic autoimmune disease
- Age > 40 years
- BMI > 35 kg/m^2
- Multiple pregnancy
- Elevated BP at booking
- Gestational trophoblastic disease
- Fetal triploidy

Hypertension
sBP ≥ 140 mmHg
and/or
dBP ≥ 90 mmHg

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Maternal investigations and fetal assessment

Maternal investigations
- Urine dipstick for proteinuria
- Spot urine protein to creatinine ratio if:
  - ≥ 2+ or recurrent 1+ on dipstick
- Full blood count
- Urea, creatinine electrolytes and urate
- LFT including LDH

Fetal assessment
- CTG
- USS for fetal growth & wellbeing

Initiate antihypertensives
Commence if:
- sBP ≥ 160 or dBP ≥ 100 mmHg

Consider if:
- sBP ≥ 140 or dBP ≥ 90 mmHg
- Choice of antihypertensive drug as per local preferences/protocols

Oral antihypertensive (initial dose – adjust as clinically indicated)
- *Methyldopa 125–250 mg bd
- *Labetalol 100 mg bd
- *^Oxprenolol 40–80 mg bd
- "Hydralazine 25 mg bd
- "Nifedipine (SR) 20–30 mg daily
- "Prazosin 0.5 mg bd
- "Clonidine 50–150 micrograms bd

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Is birth indicated? — Yes → **Birth**; No ↓

Indications for birth
- Non-reassuring fetal status
- Severe fetal growth restriction
- ≥ 37 weeks
- Eclampsia
- Placental abruption
- Acute pulmonary oedema
- Uncontrollable hypertension
- Deteriorating platelet count
- Deteriorating liver and/or renal function
- Persistent neurological symptoms
- Persistent epigastric pain, nausea or vomiting

Inpatient or outpatient care

Outpatient care
- If mild hypertension without preeclampsia
- Frequency of appointments should be individualised

Consider admission if:
- Fetal wellbeing is of concern
- sBP > 140 mmHg or
- dBP > 90 mmHg or
- Symptoms of preeclampsia, or proteinuria or abnormal bloods

Inpatient monitoring
- BP 4 hourly if stable
- CTG daily
- Daily ward urine analysis
- Maintain accurate fluid balance
- Daily review (minimum) by obstetrician
- Normal diet
- Bed rest is not usually required
- Consider VTE prophylaxis

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Worsening maternal or fetal condition? — No → back to "Is birth indicated?"; Yes ↓

Severe hypertension/ preeclampsia
- Multidisciplinary team approach
- High dependency or birth suite
- Strict control of BP
- Maternal and fetal assessments
- Continuous CTG
- Consider Magnesium Sulfate
- Strict fluid management
- Full blood count
- ELFTS including urate & LDH
- Coagulations screen
- Urine for protein to creatinine ratio

Birth

Stabilise prior to birth
- Control hypertension
- Correct coagulopathy
- Consider eclampsia prophylaxis
- Attention to fluid status

Postpartum
- Close clinical surveillance
- VTE prophylaxis
- Consider timing of discharge
- Arrange follow up
- Maternal screening as indicated

ALPS: antiphospholipid syndrome, **BMI:** body mass index, **BP:** blood pressure, **CTG:** cardiotocograph, **dBP:** diastolic BP, **ELFT:** electrolytes and liver function test, **FHR:** fetal heart rate, **LDH:** Lactate dehydrogenase, **sBP:** systolic BP, **USS:** ultrasound scan, **VTE:** venous thromboembolism, **>:** greater than, **<:** less than, **≥:** greater than or equal to, **≤:** less than or equal to, *****:First line drugs, **^:** Not on QH List of approved medicines (LAM), **"**: Second line drugs

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