Management of hypertension in pregnancy

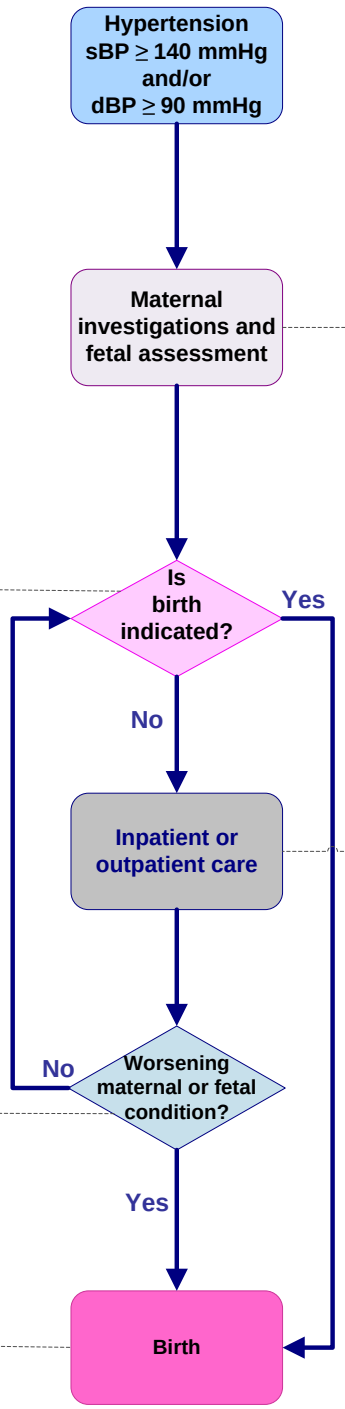
Risk factors for pre-eclampsia
- Previous history of pre-eclampsia
- Family history of pre-eclampsia
- Inter-pregnancy interval ≥ 10 years
- Nulliparity and/or multiple pregnancy
- Pre-existing medical conditions
  - o Congenital heart defects
  - o Pre-existing diabetes
  - o Renal disease
  - o Chronic hypertension
  - o Chronic autoimmune disease
- Age ≥ 40 years
- BMI ≥ 30 kg/m^2
- Maternal depression or anxiety
- Assisted reproductive technology
- Gestational trophoblastic disease
- Fetal triploidy

Indications to consider birth
- Non-reassuring fetal status
- Severe fetal growth restriction
- Uncontrollable pre-eclampsia
- Eclampsia
- Uncontrollable hypertension
- Placental abruption
- Acute pulmonary oedema
- Deteriorating platelet count, liver and/or renal function
- Persistent neurological symptoms
- Persistent epigastric pain, nausea or vomiting with abnormal liver function tests

Severe hypertension/pre-eclampsia
- Multidisciplinary team approach
- Manage in birth suite/HDU
- Strict control of BP
- Maternal and fetal assessments
- Continuous #CTG
- Consider magnesium sulfate
- Consider corticosteroids if preterm labour anticipated
- Strict fluid management
- FBC, ELFT including urate & LDH
- Coagulations screen
- Urine for protein to creatinine ratio
- Consider transfer to higher level facility, if required

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

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



Maternal investigations
- Urine dipstick for proteinuria
- Spot urine protein to creatinine ratio if:
  - o ≥ 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 ≥ 110 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
- Nifedipine (SR) 20–30 mg daily
- Hydralazine 25 mg bd
- ^Nifedipine (IR) 10–20 mg bd
- Prazosin 0.5 mg bd
- Clonidine 50–100 micrograms bd

Outpatient care
- If mild-moderate hypertension without preeclampsia
- Individualise of appointments

Consider admission if:
- Fetal wellbeing is of concern
- sBP ≥ 140 mmHg or
- dBP ≥ 90 mmHg or
- Symptoms of pre-eclampsia, or proteinuria or pathology results abnormal

Inpatient monitoring
- BP 4 hourly if stable
- #CTG daily
- Ward urinalysis, as required
- Maintain accurate fluid balance
- Daily review (minimum) by obstetrician
- Normal diet
- Bedrest is not usually recommended
- Consider VTE prophylaxis

ALPS: antiphospholipid syndrome, BMI: body mass index, BP: blood pressure, CTG: cardiotocograph, dBP: diastolic BP, ELFT: electrolytes and liver function test, FBC: full blood count, FHR: fetal heart rate, HDU: high dependence unit, 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, ^Nifedipine formulations available with SAS authority, #interpret CTG with caution when gestational age less than 28 weeks

Queensland Clinical Guideline. *Hypertension and pregnancy.* Flowchart: F21.13-2-V9-R26