Hypertension in pregnancy: pre-eclampsia - antenatal care

Assessment

Arrange for a healthcare professional trained in management of hypertensive disorders of pregnancy to assess the woman at each consultation.

Place of care

Carry out a full clinical assessment at each antenatal appointment and offer admission to hospital for surveillance and any interventions needed if there are concerns for the wellbeing of the woman or baby.

Concerns could include any of the following:

- Sustained systolic BP of 160 mmHg or more.
- Any maternal biochemical or haematological investigations that cause concern, for example a new and persistent:
  - rise in creatinine (90 micromol/l or more, 1 mg/100 ml or more), or
  - rise in alanine transaminase (over 70 IU/l, or twice upper limit of normal range), or
  - fall in platelet count (less than 150,000/microlitre).
- Signs of impending eclampsia, pulmonary oedema, or other signs of severe pre-eclampsia
- Suspected fetal compromise.
- Any other clinical signs that cause concern.

Use of risk-prediction tools

- Consider using either the fullPIERS or PREP-S validated risk prediction models to help guide decisions about the most appropriate place of care (such as the need for in utero transfer) and thresholds for intervention.
- When using a risk prediction model, take into account:
  - fullPIERS is intended for use at any time during pregnancy
  - PREP-S is intended for use only up to 34 weeks of pregnancy
  - fullPIERS and PREP-S models do not predict outcomes for babies.

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Factor	Hypertension: BP 140/90 to 159/109 mmHg	Severe hypertension: BP of 160/110 mmHg or more
Admission to hospital	Admit if clinical concerns for woman or baby or if high risk of adverse events suggested by the fullPIERS or PREP-S risk prediction models	Admit, but if BP falls below 160/110 mmHg then manage as for hypertension
Antihypertensive pharmacological treatment	Offer pharmacological treatment if BP is over 140/90 mmHg	Offer pharmacological treatment to all women
Target BP on antihypertensive treatment	Aim for BP of 135/85 mmHg or less	Aim for BP of 135/85 mmHg or less
BP measurement	At least every 48 hours, and more frequently if the woman is admitted to hospital	Every 15–30 minutes until BP is under 160/110 mmHg, then at least 4 times daily while the woman is an inpatient, depending on clinical circumstances
Dipstick proteinuria testing	Only repeat if clinically indicated, for example if new symptoms and signs develop or if there is uncertainty over diagnosis	Only repeat if clinically indicated, for example if new symptoms and signs develop or if there is uncertainty over diagnosis
Blood tests	Measure full blood count, liver function and renal function twice a week	Measure full blood count, liver function and renal function 3 times a week
Fetal heart auscultation	Offer fetal heart auscultation at every antenatal appointment	Offer fetal heart auscultation at every antenatal appointment
Fetal ultrasound	Carry out ultrasound assessment of the fetus at diagnosis and, if normal, repeat every 2 weeks	Carry out ultrasound assessment of the fetus at diagnosis and, if normal, repeat every 2 weeks
Cardiotocography (CTG)	Carry out a CTG at diagnosis and then only if clinically indicated	Carry out a CTG at diagnosis and then only if clinically indicated

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Antihypertensive treatment

Use labetalol, nifedipine or methyldopa. Base the choice on any pre-existing treatment, side-effect profiles, risks (including fetal effects) and the woman's preference.

Mode of birth

Choose mode of birth according to clinical circumstances and a woman's preference.

Timing of birth

- Involve a senior obstetrician in any birth timing decisions.
- Before 37 weeks: consider planned early birth in women with severe pre-eclampsia.
- After 37 weeks: initiate birth within 24 to 48 hours.
- If planned early birth offer antenatal corticosteroids and magnesium sulfate if indicated, in line with the NICE guideline on preterm labour and birth.

Planning birth

Record maternal and fetal thresholds for planned early birth before 37 weeks in women with pre-eclampsia.

Thresholds for considering planned early birth could include (but are not limited to) any of the following:

- inability to control maternal BP despite using 3 or more classes of antihypertensives in appropriate doses
- maternal pulse oximetry less than 90%
- progressive deterioration in liver function, renal function, haemolysis, or platelet count
- ongoing neurological features, such as severe intractable headache, repeated visual scotomata, or eclampsia
- placental abruption
- reversed end-diastolic flow in the umbilical artery Doppler velocimetry, a non-reassuring cardiotocograph, or stillbirth.

Other features not listed may also be considered in the decision to plan early birth.

Nifedipine: at the time of publication (June 2019), some brands of nifedipine were specifically contraindicated during pregnancy by the manufacturer in its summary of product characteristics (SPC). Refer to the individual SPCs for each preparation of nifedipine for further details.

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