SASOG

South African Society of Obstetricians & Gynaecologists

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P17

SEVERE PET/IMMINENT ECLAMPSIA

DIAGNOSTIC CRITERIA

Blood Pressure:

- BP >140/90 on 2 occasions at least 4 hours apart after 20 weeks gestation previously normotensive
- BP >160/110 on 1 occasion

Proteinuria:

- >3+ on dipstix (Note: patients with isolated proteinuria require closer surveillance)
- 300mg or > in a 24 hour urine specimen
- Protein: Creatinine > 0.3

End Organ:

- CNS: Severe headache, altered mental status, visual disturbance, increased tendon reflexes & clonus
- GIT: Severe persistent RUQ pain, epigastric pain, raised transaminases (2x normal)
- Renal: Increasing serum creatinine (>100)
- Respiratory: Pulmonary oedema
- Haematology: Thrombocytopenia (<100)
- Foetus: Severe IUGR & oligohydramnios

HELLP (haemolysis, elevated liver enzymes, low platelets) syndrome (Tennessee Classification)

- Hemolysis as evidenced by abnormal peripheral smear in addition to either serum LDH >600IU/L or total bilirubin >20.5µmol/l
- Elevated liver enzymes (AST or ALT >70IU/L)
- Platelets <100x109/l

ECLAMPSIA

Seizures in the presence of pre-eclampsia or HELLP syndrome

PRE ECLAMPSIA WITH SEVERE FEATURES (1 or > of following):

- Symptoms of central nervous system dysfunction: cerebral or visual disturbance, severe headache, altered mental status
- Hepatic abnormality: severe persistent right upper quadrant pain or epigastric pain or serum transaminases > twice normal
- Severe blood pressure elevation: BP >160/110mmHg on 2 occasions 4 hours apart while patient on bedrest
- Thrombocytopenia: Platelets <100x109/l

INVESTIGTATIONS

Maternal:

- BP
- Urinalysis
- Pulse oximetry
- Biochem (basic): Hb, platelet count, serum, creatinine, AST. ALT, LDH.

Fetal:

- CTG monitoring in event of viability (6hrly)
- Ultrasound assessment for fetal growth, amniotic fluid deepest pocket
- Doppler studies of umbilical and middle cerebral arteries and ductus venosus

MANAGEMENT

<34 WEEKS GESTATION

1) Control BP:

- Oral methydopa – 250-500mg tds (max 2g/day)
- Nifedipine XL – 30-60mg bd (maximum 120mg/day)
- Oral labetalol – 100-400mg po bd or tds (maximum 1200mg/day)
- (Alternate, though minimal evidence in pregnancy: Amlodipine 5mg daily po; max. 10mg daily)
- 3rd line: Prazocin 1mg bd/tds; max. 6-15mg daily in divided doses OR Carvedilol 6.25mg bd; max 50mg daily in divided doses

2) Prevent seizures:
    a. Loading dose: 4g in 200ml stat ivi + 5g imi in each buttock
    b. Maintenance dose: 5g 4-hrly imi for 24 hours or 1g/hour ivi for 24 hours. OR
    c. Sibai regime: 6g ivi over 20 minutes followed by maintenance of 2g/hour for 24 hours
    d. Monitor urine output, deep tendon reflexes, respiratory rate
    e. Routine monitoring of serum Mg levels is not recommended
    f. Phenytoin and benzodiazepines should not be used for eclampsia prophylaxis or treatment, unless there is a contra-indication to MgSO4 or it is ineffective
    g. If repeat seizures on MgSO4 reload 2g MgSO4 in 200ml NaCl stat
    h. MAGNESIUM TOXICITY:

Signs: Decreased deep tendon reflexes,
decreased urine output,
decreased respiratory effort

Management: Omit dose of MgSO4.
Administer 10ml Calcium gluconate ivi. Ventilatory support as required

3) Steroids: Betamethasone 12mg IMI BD x2 or Dexamethasone 8mg IMI TDS x3

4) Assess severity: Mother – blood tests: FBC, U&E, Uric acid, LFT

- Urine: dipstix, 24 hr collection

Fetus - NST, Sonar, Dopplers

5) Delivery: within 24 hours

Inform paediatrician/ high care

Emergency caesarean section

6) Post delivery: nurse in high care

24 hours $MgSO_4$

Monitor end organs – renal, haematology, respiratory, CNS

>34 WEEKS: SAME AS ABOVE, OMIT STEROIDS

Postpartum treatment

- Continued BP measurements (3-6 post-delivery) for potential peaks during the postpartum period.
- Women with postpartum hypertension should be evaluated for pre-eclampsia (either arising de novo or worsening from the ante-natal period)
- Severe postpartum hypertension should be treated to keep BP <160/110mmHg
- Women with co-morbidities should be treated to keep BP <140/90mmHg
    - **Antihypertensives recommended:** ACE inhibitors e.g. Enalapril 5mg daily, increase to 10mg bd. Use only if normal renal function
    - Calcium channel blocker e.g. Nifedipine XL 30-60mg bd; max 120mg/day OR Amlodipine 5mg daily po; max. 10mg daily
    - Hydrochlorothiazide 12.5mg daily, increase to 25mg daily. Can be used as 1st line drug in chronic hypertension
    - Beta-blocker e.g. Atenolol 50mg daily, increase to 100mg daily. Avoid in pre-eclampsia
    - There should be confirmation that end-organ dysfunction of pre-eclampsia has resolved
- AVOID Non-steroidal anti-inflammatory drugs if hypertension is difficult to control - evidence of kidney injury (oliguria or elevated creatinine) or low platelets
- Postpartum thromboprophylaxis should be considered in women with pre-eclampsia, particularly in the presence of other risk factors