STANDARD OPERATING PROCEDURE

Severe Pre-eclampsia & Eclampsia

Special Region (1)

Union of Myanmar

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Management of Severe Pre-eclampsia and Eclampsia

Diagnosis

Criteria for Severe Pre-eclampsia (one or more)

- Blood Pressure: SBP ≥ 160 mmHg, DBP ≥ 110 mmHg on at least two occasions at least 4

hours apart with patient at rest

- Proteinuria: > 5 gm in 24 hours, over 3+ urine dip

Symptoms

- Oliguria: less than 400 ml in 24 hours
- Epigastric or RUQ Pain: Usually indicates liver involvement
- CNS: Visual changes, headache, scotomata, mental status change

Signs

- Vomiting and generalized headache
- Increase jerks and clonus
- Pulmonary Oedema
- Impaired Liver Function tests
- Thrombocytopenia (< 100,000/cumm)
- Intrauterine Growth Restriction: with or without abnormal Doppler assessment
- Oligohydramnios

Definition of eclampsia

- Occurrence of tonic clonic seizures superimposed on pre-eclampsia

Immediate management

- Turn onto her side with lateral position

- Ensure the airway is protected
- Give oxygen
- Never leave the woman alone
- Observe vital signs, reflexes, fetal heart rate hourly
- Indwelling catheter to monitor urine output and proteinuria
- Close monitoring of fluid intake & urine output
- Monitor for the development of pulmonary oedema
- Auscultate the lung bases hourly for crepitations indicating pulmonary oedema. If rales are

heard, withhold fluids & give furosemide 40 mg IV once

- Assess clotting status with a bedside clotting test
- Call for help: Senior obstetric and anaesthetic staff must be involved.

1.2.1. Treatment and Prophylaxis of Convulsions Drug of choice - Magnesium Sulphate (MgSO4) For Basic Doctors

- Loading dose: Deep IM MgSO4 10 G (50% Solution) with 1 ml of 2% Lignocaine, 5 G in

each buttock and refer to hospital immediately.

- Maintenance dose: Deep IM MgSO4 5 G (50% Solution) with 1 ml of 2% Lignocaine every

4 hours in alternate buttocks if it takes time to arrive at hospital For use in hospital

- Loading dose: IV MgSO4 4 G (20 ml/ampoule of 20% Solution) over 5 - 10 minutes.
- Maintenance dose: N/S 500 ml + 8 G of MgSO4 x 15 drops/min = 1 g/hr for at least 24

hours from last fits For recurrent fits

- Further bolus dose of 2-4 G or increase in the infusion rate to 1.5 G or 2.0 G/hour
- For repeated fits, IV diazepam 10 mg or IV thiopentone 50 mg

Monitor MgSO4 toxicity

- No need to monitor blood level routinely
- Magnesium sulphate is mostly excreted in the urine. Urine output should be closely
- bserved
- Clinical monitoring: Respiratory rate, patellar reflexes and urine output

Withhold the drugs:

- If respiratory rate is < 16/min,
- If patellar reflexes are absent,

- If urine output is < 30 ml per hour for the preceding 4 hours

In case of respiratory arrest,

- Assist ventilation
- Give calcium gluconate 1 G (10 ml of 10% solution) IV slowly until respiration begins and the

effects of MgSO4 are antagonized. Second choice - IV Diazepam

- Loading dose: IV diazepam 10 mg slowly over 2 mins
- Maintenance dose: Diazepam 40 mg in N/S 500 ml titrated to keep the woman sedated but

arousal

- Is used in cases when MgSO4 is contraindicated such as
- Acute renal failure
- Cardiac diseases

Exclude other causes of fits (epilepsy, encephalitis, cerebral malaria, etc) 1.2.2. Treatment for acute / severe hypertension

- SBP ≥ 160 mmHg and/or DBP ≥ 110 mmHg

Labetalol - Drug of choice

- If BP still uncontrolled, give labetalol 20 mg IV
- If response is inadequate, give IV labetalol 40 mg 10 min later
- Increase dose to 80 mg and then 80 mg if satisfactory response is not obtained after 10

mins of each dose

- Cumulative dose of up to 300 mg can be given
- The goal is to decrease DBP to 90 to 100 mmHg

Hydralazine - second line drug

- Bolus dose 5-10 mg IV slowly after dilution with 10 cc Sodium chloride 0.9%
- Repeat doses 5-10 mg IV at 20 minutes intervals may be given if necessary
- The goal is to decrease DBP to 90 to 100 mmHg
- Monitor BP every 5 minutes
- If no lasting effect with boluses (assess over 20 mins), consider an infusion at 2.0 mg/hour

increasing by 0.5 mg/hour as required (2-20 mg/hour usually required) Nifedipine - third choice

- Nifedipine 10 mg oral (not rapid acting, not sublingual)

- There is concern regarding a possibility for an interaction with magnesium sulphate that

can lead to hypotension and profound muscle weakness (to use with caution) 1.2.3. Fluid therapy

- Close monitoring of fluid intake and urine output is mandatory
- Fluid therapy should be limited to maintenance crystalloid 85 ml/hr or urine output in

preceding hour + 30 ml. 1.2.4. Corticosteroids to improve fetal lung maturity

- Inj. Dexamethasone 6 mg IM four doses 12 hrs apart if the gestation is less than 34 weeks
- Inj. Betamethasone 12 mg two doses 24 hours apart 2 doses

1.2.5. Investigations and Monitoring

- Monitoring of haemoglobin, platelet count, transaminases, urea, creatinine, uric acid, clotting

profile

Delivery

- The definite treatment of eclampsia is “Delivery”.
- Delivery should take place as soon as the woman’s condition has stabilized (once seizures

are controlled, severe hypertension treated, and hypoxia corrected).

- Vaginal delivery should be considered.
- But caesarean section is likely to be required in primigravidae, remote from term with

unfavorable cervix.

Postpartum care

- After delivery, high dependency care should be continued for a minimum of 24 hrs.
- Anticonvulsant therapy should be maintained for 24 hrs after delivery or the last convulsion

(which is longer).

- Continue antihypertensive therapy for 2 weeks after delivery.
- Continue to monitor urine output

Standards

- All patient assessment areas should have supplies, equipment, and drugs to provide emergency

care to women with severe PE and Eclampsia.

- Magnesium sulphate should be available at every facility that provides EmOC.
- All midwifes and doctors who provide care to pregnant women should have the skill to detect

severe PE and Eclampsia and to provide basic emergency care before referral to higher level care.

- All pregnant women should have
- BP measured and urine tested for the presence of protein at every antenatal visit
- BP measured at prescribed intervals throughout labour and after child birth and urine tested if

a diastolic BP of 90 mmHg or higher

References

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