ED QUICK QUIZ

WHAT IS THE DIAGNOSIS?

BACKGROUND

A 24 year old female presents following a 5 minute tonic-clonic seizure, which has now self-terminated. This is her first ever seizure & she is currently 35 weeks pregnant. She has no PMH, is on no medications & has NKDA. On arrival she is GCS 13 (E4M5V4) and her observations reveal:

BP 154/95

Pulse 112

RR 15

Oxygen sats 98% in RA

Temp 37.3^{o}C

This is her first pregnancy & has been uneventful to date. On looking at her red book, her booking BP was 110/82. Urinalysis shows protein+++.

QUESTIONS

1. What is the diagnosis?
2. What is the next step in management?
3. What are the risk factors of this condition?
4. List the maternal complications of this condition

ANSWERS & DISCUSSION

1. Diagnosis

This is a case of eclampsia with a seizure in pregnancy, hypertension & heavy proteinuria.

The UK national incidence of eclampsia is 2.7 per 10,000 pregnancies with 38% occurring antepartum, 18% intrapartum & 44% postnatal.

2. Management

Manage in the resuscitation room with a senior doctor. Initial assessment comprises ABCDE. Decompress the IVC by manually pushing the uterus to the left (this will require a member of staff to commit & remain in this position). Insert & secure 2 large bore cannulas. Blood tests include FBC, U&Es, LFTs, CRP, urate, venous blood gas, coagulation screen & group and save. Ensure that a BM is checked.

Refer to Obstetrics, Anaesthetics & the Neonatal team immediately. The baby requires delivered.

Administer 4 g of IV $MgSO_4$ over 5 minutes. The $MgSO_4$ bolus should be followed by a maintenance infusion of 1g/hr. The infusion should be continued until 24 hours after delivery or after the last convulsion. Monitor respiration rate, urine output & tendon reflexes.

Signs of magnesium toxicity that require the magnesium infusion to be discontinued.

- Loss of reflexes
- Somnolence
- Respiratory depression
- Paralysis
- Cardiac arrest
- Foetal bradycardia
- Loss of variability on CTG

Consider antihypertensives if systolic BP >150mmHg, diastolic BP >110mmHg or MAP >125mmHg. The medication of choice is Labetolol & is given as a 50mg bolus dose over 5 minutes. An infusion is then commenced at 50mg/hr & increased by 50mg/hr every 15 minutes until BP is controlled (maximum dose 200mg/hr). The second line agent is Hydralazine.

Beware of giving too much IV fluid due to the increased risk of pulmonary oedema. Administer no more than 1ml/kg/hr & aim for a urine output of >25ml/hr.

3. Risk Factors

- Age =>40 years
- Primigravida
- Previous pre-eclampsia
- Previous severe IUGR
- Family history on maternal side
- Multiple pregnancy

- Central obesity
- Chronic hypertension

4. Maternal Complications

- DIC/HELLP syndrome
- Pulmonary oedema
- Placental abruption
- Acute renal failure
- Liver failure/rupture/haemorrhage
- Stroke
- Death