

PODCAST No. 11 Pre-eclampsia

INTRODUCTIONS:

FEEDBACK:

TOPIC: Pre-eclampsia

TIP: Remember to ask about medical problems in previous pregnancies to allow for possible prevention and early detection

DISCUSSION:

Case study

Emma is a 28-year-old who is now 34 weeks pregnant. She has pre-eclampsia in a previous pregnancy with a premature delivery at 35 weeks. She is not overweight and her BP has been normal in this pregnancy.

She comes to see you in your surgery with worsening swelling of her ankles and some upper abdominal pain.

O/E she has ankle oedema

BP is 162/102mmHg

Protein on dip of her urine

FH 30 cm, FHHR normal

Pre-eclampsia is defined as pregnancy-induced hypertension (BP >140/90mmHg in the second half of pregnancy), in association with proteinuria ($\geq 1+$ proteinuria on reagent stick testing or >0.3g in 24 hours) with or without oedema.

Clinical features of severe pre- eclampsia may include headache, sudden swelling of face or hands, epigastric pain, vomiting, liver tenderness and/or visual disturbance.

Virtually any organ system may be affected; it can become life-threatening for the mother and her foetus.

Severe pre-eclampsia is defined as:

- Diastolic BP of at least 110mmHg
- Or systolic BP of at least 160mmHg
- And/or symptoms
- And/or biochemical impairment
- And/or haematological impairment

Eclampsia is the occurrence of one or more convulsions superimposed on pre-eclampsia.

Pre-eclampsia can be associated with fetal growth restriction, low birthweight, preterm delivery,

small for gestational age infants and respiratory distress syndrome.

Women who have had pre-eclampsia are at an increased risk of hypertension and heart disease in later life.

Who is at risk?

The incidence of severe pre-eclampsia is about one in 200 pregnancies in the UK. Although severe pre-eclampsia and eclampsia are relatively rare, they are the second leading cause of direct maternal deaths in the UK.

The following women are at increased risk of pre-eclampsia:

- First pregnancy or first pregnancy with a new partner
- Pre-eclampsia or eclampsia in any previous pregnancy
- 10 years or more since last baby
- Age 40 years or more
- BMI 35 or more at presentation
- Pre-eclampsia in mother or sister
- Existing hypertension
- Existing renal disease
- Existing diabetes
- Antiphospholipid antibodies

Investigations

Urine-for proteinuria (check for infection, and check 24hr urine if possible)

FBC, LFTs, renal function, electrolytes and serum urate (to watch for rising values)

Clotting studies (watching for falling platelet count)

Assessing the foetus involves ultrasound assessment of growth (*Emma already showing reduced growth*), volume of amniotic fluid and Doppler velocimetry of umbilical arteries.

HELLP syndrome

HELLP can occur in 10-20% of women with severe pre-eclampsia. This group of symptoms is characterised by haemolysis, elevated liver enzymes and low platelets.

Management

Delivery of the fetus and the placenta is the only cure for pre-eclampsia. However weigh up risk of premature delivery vs risk PET

Women should be admitted to hospital for further investigations if they have BP $\geq 160/100$ mmHg, raised BP with proteinuria or any clinical symptoms or signs of pre-eclampsia.

However, many women can be managed conservatively (by Obstetrician) if they are less than 34

weeks, haemodynamically stable, without coagulation abnormalities and in the absence of HELLP.

Antihypertensive treatment should be started in women with a systolic BP >160mmHg or a diastolic BP >110mmHg. Labetalol (oral or IV), oral nifedipine or IV hydralazine are usually given for the acute management of severe hypertension.

Antihypertensive medication should be continued after delivery and in most cases can be reduced fairly quickly in the postpartum period.

In some women it may be necessary for up to three months.

Magnesium sulfate should be considered when there is concern about the risk of eclampsia.

Emma was referred to hospital and blood tests were found to be slightly abnormal. She was started on Labetolol and her BP was controlled at BP130/80.

At 36 weeks due to worsening blood tests and concerns re foetal growth, the baby was delivered. Emma's BP remained stable and she was discharged on labetolol. The baby stayed in special care for 1 week and is doing well on discharge.

Prevention

Aspirin 75mg in future pregnancies in women with a history of pre-eclampsia (such as in Emma's case)

Regular monitoring of BP to detect HTN early

GOODBYES: