Hypertensive disorders of pregnancy still remain a big problem to be tackled as far as maternal in neonatal mortality and morbidity is concerned. So in that direction one more small effort for PG STUDENTS and for gynecologists who want to refresh.

You should answer each statement as true [T] or false [F].

QUESTION 1

PRE-EXISTING HYPERTENSION

1. Pre-existing hypertension always presents before 20 weeks' gestation.
2. Endocrine causes of pre-existing hypertension include hyperaldosteronism.
3. Women with previously uninvestigated pre-existing hypertension in pregnancy should have their serum potassium and creatinine measured.
4. Renal disease can present with hypertension and proteinuria that is indistinguishable from pre-eclampsia.
5. In pregnant women with pre-existing hypertension, the risk of superimposed pre-eclampsia is related to the degree of hypertension.

QUESTION 2

PREGNANT WOMEN WITH PRE-EXISTING HYPERTENSION

1. Women with pre-existing hypertension are at increased risk of placental abruption.
2. Diuretic therapy should be discontinued before conception in women with pre-existing hypertension.
3. Proteinuria develops earlier in women with pre-existing hypertension than other women with pre-eclampsia.
4. Antihypertensive therapy must be continued throughout pregnancy in women with pre-existing hypertension.
5. Women with pre-existing hypertension should not breastfeed if switched back to angiotensin-converting enzyme (ACE) inhibitors after delivery.

QUESTION 3

PRE-ECLAMPSIA

1. Pre-eclampsia can cause disseminated intravascular coagulopathy (DIC).
2. If pre-eclampsia necessitates delivery prior to 34 weeks' gestation, screening for antiphospholipid syndrome is indicated.
3. Pre-eclampsia commonly necessitates the use of antihypertensive agents in the puerperium.
4. Use of low-dose aspirin does not reduce pre-eclampsia.
5. Pre-eclampsia predisposes to pulmonary oedema.
Answers To Question 1

1. F
2. T
3. T
4. T
5. T

Explanation

1. Because the physiological fall in blood pressure in the first trimester can lead to a normal booking blood pressure, a high pre-pregnancy blood pressure could be masked and only present when there is a physiological rise in the third trimester.

2. Endocrine causes of hypertension include Conn's syndrome, other causes of hyperaldosteronism (e.g. bilateral adrenal hyperplasia), Cushing's syndrome and phaeochromocytoma.

3. This is to screen for hyperaldosteronism, which causes hypokalaemia, and pre-existing renal impairment. It is important to remember the physiological fall in serum creatinine that occurs early in gestation.

4. Proteinuria present before 20 weeks is indicative of underlying renal disease, but if there is no record of urinalysis in early pregnancy and a woman presents with hypertension and proteinuria, it could be difficult to differentiate pre-eclampsia from underlying renal disease. It should be remembered that the former is much more common and that pre-eclampsia might rarely present at very early gestations (18—24 weeks). If abnormal liver function or thrombocytopenia are present, this points towards pre-eclampsia more than renal disease.

5. Pregnant women with severe hypertension, defined as a diastolic blood pressure >110 mmHg at <20 weeks' gestation, have a 40% risk of superimposed pre-eclampsia.

Answers to Question 2

1. T
2. F
3. F
4. F
5. F

Explanation

1. Women with pre-existing hypertension are at increased risk of placental abruption, even if they do not develop superimposed pre-eclampsia.
2. There is no need to discontinue diuretics before conception; they are not thought to be teratogenic. The reason why diuretics are normally discontinued in pregnancy is because they could confound the picture in pre-eclampsia, causing volume depletion in an already vasoconstricted state. They can be safely used in pregnancy to treat pulmonary oedema, fluid overload and benign intracranial hypertension.
3. There is no reason why women with pre-existing hypertension would develop proteinuria at earlier gestations. If they have underlying renal disease, they might already have significant proteinuria before the development of pre-eclampsia, making pre-eclampsia more difficult to diagnose.
4. Because blood pressure usually falls in the first half of pregnancy, even in hypertensive women, this might enable the temporary withdrawal of antihypertensive therapy, especially in women who only require a low dose of one drug to control their hypertension outside pregnancy. It is usual to need to reinstitute antihypertensive therapy later in pregnancy, particularly after 28 weeks, when the physiological effect is for blood pressure to increase again.
5. Although ACE inhibitors are contraindicated in pregnancy, they can be safely used by breastfeeding mothers.

Answers to Question 3

1. T
2. T
3. T
4. F
5. T

Explanation
1. DIC is an unusual, but recognised, complication of pre-eclampsia. It can occur in up to 20% of cases of HELLP (haemolysis, elevated liver enzymes, low platelets) syndrome, but is more common if there is placental abruption or haemorrhage from other causes.

2. The diagnostic criteria for antiphospholipid syndrome include one or more premature births (<34 weeks’ gestation), with normal fetal morphology, due to pre-eclampsia or severe placental insufficiency.

3. Antihypertensive agents are required postpartum in more than 60% of women with pre-eclampsia, and more commonly in those who antenatally have heavy proteinuria or severe hypertension or require antihypertensive agents or preterm delivery.

4. Meta analysis of large randomised, controlled trials shows that low dose aspirin [75 mg daily] reduces the risk of developing pre-eclampsia by 19% [1].

5. Women with pre-eclampsia have leaky capillaries and hypoalbuminaemia. They are, therefore, particularly vulnerable to fluid overload and pulmonary oedema, which most commonly presents postpartum but can occur antenatally.