Obstetrics Questions

1. Which of the following physiologic changes are expected during pregnancy?

a. decreased plasma volume.
b. deceased minute ventilation
c. increase in fibrinogen
d. increase in glucose utilization.

C. There is an increase in plasma volume without a proportional increase in red call mass causing the classic dilutional anemia associated with pregnancy. There is an increased minute ventilation due to prostaglandin mediated increase in respiratory drive. There is decrease in glucose utilization and increased lipolysis leading to hyperglycemia. There is an increase in fibrinogen as well as factors VII, VIII, IX, and X adding to stasis in causing a hypercoaguable state.

2. Preeclampsia

a. typically occurs in the first trimester of pregnancy.
b. is associated with pulmonary edema, usually in the post-partum period.
c. is manifest by renal failure associated with diuresis.
d. is commonly associated with HELLP syndrome.

B. Preeclampsia occurs after the 20 week of pregnancy and is characterized by hypertension (>160/110), edema and proteinuria; when severe, dysfunction of hepatic, renal, cerebral and hematologic symptoms. Blurred vision, headache, CVA, hepatic distension, elevated transaminases, nausea and vomiting, drop in platelet counts, DIC, pulmonary edema and encephalopathy; renal failure is typically oliguric. HELLP syndrome occurs in 2-12% of the time. Pulmonary edema complicates 3% of preeclampsia and usually occurs postpartum.

3. In amniotic fluid embolism,

a. there is a high incidence of permanent neurologic damage.
b. the particluate matter causes vasodilatation.
c. there is a biphasic hemodynamic response ending in a hyperdynamic state.
d. the pathologic changes occur in the third trimester just prior to delivery.

A. Fluid contains particulate matter PGE2, PGF2, LTB and thrombokinase – like molecules resulting in pulmonary artery vasospasm. Happens during labor especially with forceful contractions or within minutes of delivery. There is a biphasic response - 1st pulmonary hypertension followed by myocardial depression. 85% survivors had permanent neurologic damage.

4. Trauma during pregnancy

a. occurs predominantly during the third trimester.
b. is an absolute contraindication to DPL.
c. results in several indications for emergent c-section including uncontrolled uterine hemorrhage.
d. precludes radiologic imaging other than ultrasound.

C. Occurs equally throughout all three trimesters. DPL can be performed, particularly using the open, supraumbilical approach. Evaluation is the same as in the non-p[regnant patient and xrays can be performed as necessary when other methods are not available. Indications for c-section include: uncontrollable uterine hemorrhage, irreparable uterine injury, maternal injuries obscured by uterus, unstable & viable fetus, complications of pregnancy, maternal death.

5. Thromboembolic disease in pregnancy

a. is caused by a combination of increased venous capacitance, venous stasis by uterine

compression and hypercoaguable state due to increased factors and relative or absolute decreased in proteins C & S.

b. is treated in the standard way with heparin, followed by coumadin.
c. should prompt evaluation with d-dimers when suspected.
d. is a contraindication to thrombolysis.

A. Treatment is with heparin as it does not cross the placenta; coumadin is contraindicated because it crosses placenta and is teratogenic. Work-up is same as non-pregnant, however D-dimers are not useful. Thrombolysis can be used for massive PE with hemodynamic compromise. Pathogenesis: Venous stasis - progesterone increased venous capacitance and caval obstruction by the uterus. Hypercoaguable - Increase in coagulation factors I, II, VII, VIII, X; decrease in coagulation inhibition by decrease protein S and increased resistance to protein C, impaired fibrinolysis and activation of platelets.