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## AHC South Region EMS 2009 3<sup>rd</sup> Quarter CE Packet

In the United States the most frequent pregnancy related complications can be classified by those occurring during the 1<sup>st</sup> trimester (ectopic pregnancy, spontaneous abortion) and those occurring in the 2<sup>nd</sup> and 3<sup>rd</sup> trimester (preeclampsia/eclampsia, abruptio placenta and placenta previa).

### Complications during the 1<sup>st</sup> trimester

Ectopic pregnancy Ectopic pregnancy occurs when the developing blastocyst becomes implanted at a site other than the endometrium of the uterine cavity. The most common site is the fallopian tube. Hemorrhage from ectopic pregnancy is the leading cause of pregnancy related maternal death in the 1<sup>st</sup> trimester and accounts for 4 – 10 percent of all pregnancy related deaths. Risk factors for ectopic pregnancy are placed into high, moderate and low categories:

#### High:

- Previous ectopic pregnancy
- Previous tubal pregnancy
- Tubal ligation
- Tubal pathology

#### ⑩ Intra uterine contraception

#### Moderate:

- Previous genital infection
- Infertility
- Multiple sexual partners

#### ⑩ \*Smoking

#### Low

- In vitro fertilization
- Vaginal douching



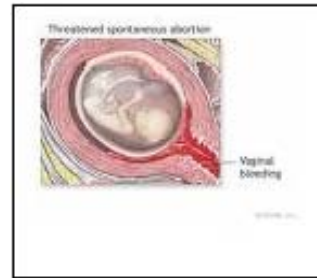
⑩ Age Signs and symptoms usually occur 6 – 8 weeks after the last menstrual period. Classic signs and symptoms include abdominal pain, amenorrhea and vaginal bleeding. These can occur in both ruptured and unruptured cases. Patients can also complain of shoulder pain from blood leakage out of the fallopian tube or the urge to defecate from blood collecting in the cul de sac. Signs of poor perfusion will occur with increased blood loss.

*Ectopic pregnancy should be suspected in any women of reproductive age with symptoms, especially those who have risk factors.*

Spontaneous Abortion Also known as miscarriage refers to a pregnancy that ends spontaneously before the fetus has reached a viable gestational age. Spontaneous abortion is the most common complication of early pregnancy. 8 – 20 percent of recognized pregnancies under 20 weeks of gestation will undergo spontaneous abortion (80% occur in the 1<sup>st</sup> 12 weeks).

Risk factors include:

- ⑩ Age (advancing maternal age is the most important risk factor for spontaneous abortions in otherwise healthy women)
  - Previous miscarriage
  - Smoking
  - Moderate to high alcohol consumption
  - Cocaine
  - NSAIDs if used around the time of conception
  - High levels of caffeine intake



Signs and symptoms will be dependent on which stage of a spontaneous abortion they are in.

- Threatened Abortion – vaginal bleeding is common and is often painless or accompanied by mild suprapubic pain
- Inevitable Abortion – bleeding increases, painful uterine cramps/contractions reach peak intensity.
- Complete or incomplete abortion – before 12 weeks entire contents of uterus usually are expelled; after 12 weeks membranes rupture, fetus passes but significant amounts of placental tissue may be retained.

Management of both includes IMC with the addition of:

- If patient is in 2<sup>nd</sup> or 3<sup>rd</sup> trimester, position on side
- Anticipate need for 2 large bore IV's
- If signs of poor perfusion – 200 ml NS boluses

### **Complications during the 2<sup>nd</sup> and 3<sup>rd</sup> trimester**

Preeclampsia/Eclampsia Preeclampsia is a syndrome characterized by the onset of hypertension (SBP >140 or DBP >90) and proteinuria after 20 weeks gestation. Pathophysiology likely involves both maternal and fetal/placental factors. As an example, abnormalities in the development of placental vasculature early in pregnancy may result in relative placental underperfusion/hypoxia, which then leads to release of factors into the maternal circulation that alter maternal endothelial function and cause hypertension and other manifestations of disease. Risk factors for the development of preeclampsia: 1<sup>st</sup> pregnancy, preeclampsia with previous pregnancy, age > 40 or < 18, family history of pregnancy induced hypertension, chronic hypertension, renal disease, vascular or connective tissue disease, diabetes mellitus, multifetal gestation, obesity, male partner whose previous partner had preeclampsia.

Additional signs and symptoms include: Headache, hyperreflexia, dizziness, confusion, blurred vision, diplopia, nausea, vomiting, RUQ or epigastric pain and tenderness, decreased urine output, bloody urine, edema

Eclampsia refers to the occurrence of one or more generalized seizures and or coma in the setting of preeclampsia and in the absence of other neurological conditions.

The immediate concerns in caring for women with preeclampsia/eclampsia are:

- Prevention of maternal hypoxia and trauma
- Management of severe hypertension
- Prevention of recurrent seizures
- Evaluation for prompt delivery

Management:

- IMC
- Time sensitive patient (transport without delay)
- Position patient on side if 2<sup>nd</sup> or 3<sup>rd</sup> trimester
- Anticipate seizures, prepare suction, magnesium, versed
- Minimal CNS stimulation – do not check pupils
- Lights and sirens may be contraindicated
- Magnesium 2 Gm< mixed with 16ml NS slow IVP over 5 minutes
- If seizure activity repeat magnesium
- If seizure persists after total of 4 Gm Mag, Versed

Abruptio Placenta Premature partial or complete separation of the placenta prior to delivery of the fetus.



Risk factors: Acute events (maternal trauma), hypertension disorder, premature rupture of membranes, preeclampsia, cocaine use, smoking

Signs and Symptoms: Painful vaginal bleeding, abdominal and/or back pain, uterine contractions

Placenta Previa Placenta previa refers to the presence of placental tissue overlying or proximate to the internal cervical os.

There are 3 categories of placenta previa based on their location:

1. Complete placenta previa — the placenta completely covers the internal os

2. Marginal placenta previa — the placenta is adjacent to the internal os, but does not cover it.

3. Low-lying placenta — This term is used in several ways: (1) to describe an apparent placenta previa in the second trimester, (2) to describe a placenta that lies in the lower uterine segment, but the exact relationship of the placenta to the os has not been determined, or (3) to describe a placental edge that lies within 2 to 3 cm of the internal os. Low lying placentas are also associated with an increased risk of bleeding, and possibly other adverse perinatal outcomes, although less than with true placenta previas.



Risk factors: Previous cesarean deliveries, multi gestation, increasing maternal age, prior spontaneous or induced abortions, smoking

Signs and symptoms: Painless vaginal bleeding after 20 weeks gestation. 10 – 20 % have uterine contractions.

Management of both abruptio and previa include IMC with the addition of:

- Time sensitive patient, do not delay transport
- If patient is in 2<sup>nd</sup> or 3<sup>rd</sup> trimester, position on side
- Anticipate need for 2 large bore IV's
- If signs of poor perfusion – 200 ml NS boluses

***It is important to remember that the pregnant patient and family experiencing any complications may be embarrassed, apprehensive and concerned about the well being of their unborn child; therefore tact, understanding and a caring, supportive attitude are essential.***

**Aurora Health Care South Region EMS**  
2009 3<sup>rd</sup> Quarter C Packet

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Department: \_\_\_\_\_

1. The leading cause of pregnancy related maternal death in the first trimester is \_\_\_\_\_.
  
2. List high risk factors for an ectopic pregnancy
  - A. \_\_\_\_\_
  - B. \_\_\_\_\_
  - C. \_\_\_\_\_
  - D. \_\_\_\_\_
  - E. \_\_\_\_\_
  
3. The three classic signs of an ectopic pregnancy are \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.
  
4. You are dispatched to a scene of a 28yo female who is 6 weeks pregnant for vaginal bleeding. Upon arrival to the scene you find your patient to be pale and dizzy. You note a large amount of vaginal bleeding and patient is complaining of abdominal cramping. Vital signs BP 88/50 HR 128 RR 20. Describe your management of this patient.
  
5. Preeclampsia syndrome is characterized by the onset of \_\_\_\_\_ and \_\_\_\_\_.
  
6. Describe the management of a patient with preeclampsia/eclampsia.

7. The presence of placental tissue overlying or proximate to the internal cervical is
- A. Abruptio Placenta                      B. Eclampsia
- C. Placenta Previa                      D. Ectopic pregnancy
8. Premature partial or complete separation of the placenta prior to delivery of the fetus is
- A. Abruptio Placenta                      B. Eclampsia
- C. Placenta Previa                      D. Ectopic pregnancy
9. List 3 signs and symptoms of abruption placenta.
- A. \_\_\_\_\_
- B. \_\_\_\_\_
- C. \_\_\_\_\_
10. Placental previa is associated with painless vaginal bleeding.
- A. True
- B. False