Educational Topic 17: Medical and Surgical Complications of Pregnancy

Rationale: Medical and surgical complications may alter the course of pregnancy. Likewise, pregnancy may have an impact on the management of these conditions.

Intended Learning Outcomes:

A student should be able to:
Identify the following medical and surgical conditions in pregnancy and discuss the potential impact of the conditions on the gravid patient and the fetus/newborn, as well as the impact of pregnancy (if any) on each condition, and appropriate initial evaluation:

- Anemia
- Endocrine disorders, including diabetes mellitus and thyroid disease
- Cardiovascular disease
- Hypertension
- Pulmonary disease
- Renal disease
- Gastrointestinal disease
- Neurologic disease
- Autoimmune disorders
- Alcohol, tobacco, and substance abuse
- Surgical abdomen
- Infectious diseases, including:
  - Syphilis
  - TORCH (Toxoplasmosis, Rubella, Cytomegalovirus, Herpes)
  - Group B Streptococcus
  - Hepatitis
  - Human Immunodeficiency Virus (HIV)
  - Human Papilomavirus (HPV) and other sexually transmitted infections
  - Parvovirus
  - Varicella
TEACHING CASE

CASE: A 22-year-old woman presents to the emergency department with a 3 hour history of steadily increasing lower abdominal pain. She has not seen a physician in over 3 years. She has no history of medical or surgical problems and takes no medications. She noted the pain shortly after eating lunch, and has had some nausea, but no vomiting. She denies fever, dysuria, flank pain, and vaginal bleeding. She does not remember her last menstrual period, because they are very irregular. She is sexually active, and does not use contraception regularly. She was treated for a "pelvic infection" with an injection one year ago, but she cannot recall the name of the infection. She denies use of illicit drugs, but admits to alcohol abuse (one 6-pack daily and more on the weekend) and gives a 6-year history of tobacco use. She describes the pain as a gradual onset, becoming sharp and intermittent with waves of pain alternating with short episodes of relief. An antacid did not give relief.

Physical examination reveals an anxious female lying on the exam table with hips flexed, moaning softly. She intermittently cries and complains of increasing pain. The nurse tells you her temperature is 99°F, and her pregnancy test is positive. Your examination of her abdomen reveals a gravid uterus to the level of the umbilicus with guarding and mild rebound tenderness in both upper quadrants. The uterus is soft and non-tender to palpation. Pelvic examination reveals no amniotic fluid in the vagina, and cervix is closed with no blood visible at the external os.

COMPETENCY-BASED DISCUSSION & KEY TEACHING POINTS:
Competencies addressed:
• Patient care
• Medical knowledge
• Professionalism

1. What tests/labs should be ordered at this time?

2. What is your initial assessment and plan?

3. What potential impact will the medical or surgical condition have on the patient and the fetus/newborn, and what potential impact will the pregnancy have on the medical or surgical condition?
CASE 2: A 30 year-old white woman G0 who is infected with human immunodeficiency virus (HIV, diagnosed 4 years ago) presents to your office inquiring about future pregnancy. She is recently married to a man who is not infected with HIV and they want to have a child. She is concerned about whether her baby could be infected with HIV and whether pregnancy could make her develop AIDS. She is asymptomatic and is taking no HIV medications. Her pap smears have all been normal.

Pertinent ROS reveals she has felt well, no recent fevers, chills, cough, shortness of breath, abdominal pain, vaginal discharge, night sweats, diarrhea, weight loss, or other symptoms.

Physical examination is unremarkable.

Laboratory tests: CD4+ lymphocyte count (per mm$^3$) 489; HIV RNA (copies/ml) 6520.

COMPETENCY-BASED DISCUSSIONS & KEY TEACHING POINTS:

Competencies addressed:

- Patient care
- Communication
- Medical knowledge
- Professionalism

1. What are the major issues to discuss with a woman who is HIV+ and wants to have a baby?

2. What are some of the risk factors for MTCT of HIV?

3. What are the recommendations for treatment of HIV in pregnant women? How may these differ from recommendations for non-pregnant adults?

4. Are there any antiretroviral drugs that should be avoided or administered in altered doses in pregnant women with HIV?
REFERENCES


ACOG Practice Bulletins 6, 60, 86, 92, 95, 105, 123, 148, 151

ACOG Committee Opinions 231, 301, 411, 418, 422, 435, 438, 449, 471, 474, 479, 496, 503, 524, 535, 538, 549, 614, 637
