

# Chapter 21

## Gynecologic Emergencies

### Unit Summary

After students complete this chapter and the related course work, they will understand the anatomy and physiology, including the developmental changes during puberty and menopause, of the female reproductive system and identify and describe assessment and treatment for gynecologic emergencies. Special considerations and precautions that an EMT must observe when arriving at the scene of a suspected case of sexual assault or rape are also discussed.

### National EMS Education Standard Competencies

#### Medicine

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.

#### Gynecology

ÉRecognition and management of shock associated with:

Vaginal bleeding (pp 728, 729, 731, 732)

ÉAnatomy, physiology, assessment findings, and management of:

Vaginal bleeding (pp 7256726, 728, 729, 731, 732)

Sexual assault (to include appropriate emotional support) (pp 7326734)

Infections (pp 7256728)

### Knowledge Objectives

1. Describe the anatomy and physiology of the female reproductive system, including the developmental changes that occur during puberty and menopause. (pp 7256726)
2. Discuss the special, age-related patient management considerations an EMT should provide for both younger and older female patients who are experiencing gynecologic emergencies. (p 726)
3. List three common examples of gynecologic emergencies, including their causes, risk factors, assessment findings, and patient management considerations. (pp 7266728, 7326734)
4. Discuss the assessment and management of a patient who is experiencing a gynecologic emergency, including a discussion of specific assessment findings. (pp 7286731)
5. Explain the general management of a gynecologic emergency in relation to patient privacy and communication. (pp 7316732)
6. Give examples of the different types of personal protective equipment EMTs should use when treating patients with gynecologic emergencies. (p 732)
7. Discuss the special considerations and precautions an EMT must observe when arriving at the scene of a suspected case of sexual assault or rape. (pp 7326734)

8. Discuss the assessment and management of a patient who has been sexually assaulted, including the additional steps an EMT must take on behalf of the patient. (pp 7326734)

## Lecture

## I. Introduction

### A. Women are uniquely designed to conceive and give birth.

1. Women are susceptible to a number of problems that do not occur in men.

## II. Anatomy and Physiology

### A. The ovaries are the primary female reproductive organ.

1. Ovaries lie on each side of the lower abdomen and produce an ovum (egg).
  - a. A fetus develops from a fertilized ovum.
2. Each ovary produces an ovum in alternating months.
  - a. Each month one ovum is released into the fallopian tube.
  - b. This process is called ovulation.
    - i. Some women experience cramping during this release period.

### B. Fallopian tubes connect each ovary with the uterus.

1. Fallopian tubes are the primary location for fertilization.

### C. The uterus is the muscular organ where the fetus grows during pregnancy.

### D. The narrowest part of the uterus is the cervix.

1. The cervix opens into the vagina.

### E. The vagina is the outermost cavity of a woman's reproductive system.

1. It forms the lower part of the birth canal.
2. Sperm is deposited into the vagina from the male penis.
  - a. Sperm passes through the cervix into the uterus and eventually up the fallopian tubes.

### F. If fertilization does not occur within about 14 days of ovulation, the lining of the uterus begins to separate, and menstruation occurs for about a week.

1. The menstrual flow consists of blood from the separated lining of the uterus and lasts about 1 week.
2. The process of ovulation and menstruation is controlled by female hormones.

### G. Female genitalia

1. The vaginal opening is just posterior to the urethral opening.
  - a. The urethra is the canal that conveys urine from the bladder to outside the body.
2. The labia majora and labia minora are folds of tissue that surround the urethral and vaginal opening.
3. The clitoris is at the anterior end of the labia.
4. The anus is at the posterior end of the labia.

5. The perineum is the area of skin between the vagina and the anus.

#### **H. When a female reaches puberty, she begins to ovulate and experience menstruation.**

1. The onset of menstruation is called menarche.
  - a. It usually occurs between age 11 and 16 years.
  - b. Any female who reaches menarche is capable of becoming pregnant.

#### **I. Women continue the cycle of ovulation and menstruation until they reach menopause.**

1. Menopause usually occurs around age 50 years.

### **III. Pathophysiology**

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#### **A. The causes of gynecologic emergencies are varied, ranging from sexually transmitted diseases to trauma.**

#### **B. Pelvic inflammatory disease (PID)**

1. Infection of the upper organs of reproduction
  - a. Uterus, ovaries, fallopian tubes
  - b. Occurs almost exclusively in sexually active women
    - i. Disease-causing organisms enter the vagina and migrate into the uterine cavity.
  - c. If infection expands to fallopian tubes, it will cause scarring.
    - i. Can result in ectopic pregnancy or sterility
    - ii. Ectopic pregnancy is pregnancy that develops outside the uterus.
  - d. If infection expands to ovaries, it can lead to the development of a life-threatening abscess.
2. Most common presenting sign of PID is generalized lower abdominal pain.
  - a. Other signs include abnormal or foul-smelling vaginal discharge, increased pain with intercourse, fever, general malaise, and nausea and vomiting.

#### **C. Sexually transmitted diseases (STDs)**

1. STDs can lead to more serious conditions, such as PID:
  - a. Chlamydia
    - i. Common STD
      - (a) Affects an estimated 2.8 million Americans each year
    - ii. Caused by bacteria
    - iii. Usually mild or absent symptoms
    - iv. Infection of the cervix can spread to the rectum and can progress to PID.
  - b. Bacterial vaginosis
    - i. One of the most common conditions to afflict women
    - ii. Normal bacteria in the vagina are replaced by an overgrowth of other bacteria.
    - iii. Symptoms include itching, burning, pain, and a fishy, foul-smelling discharge.
    - iii. Untreated, it can progress to premature birth or low birth weight in case of pregnancy, make the patient more susceptible to other serious infections, and cause PID.
  - c. Gonorrhea
    - i. Caused by a bacterium
    - ii. Grows and multiplies rapidly in warm, moist areas of reproductive tract
      - (a) Cervix, uterus, fallopian tubes in women
      - (b) Urethra in men and women

- iii. Bacterium can also grow in the mouth, throat, eyes, and anus.
- iv. Symptoms are more severe in men than women.
- v. Severe infections present with cramping and abdominal pain, nausea, vomiting, and bleeding between periods.
  - (a) These symptoms indicate it has progressed to PID.
- vi. Untreated, it can enter the bloodstream and spread to other parts of the body, including the brain.

#### **D. Vaginal bleeding**

1. Bleeding may be considered menstrual bleeding even though it is not.
2. Possible causes include:
  - a. Abnormal menstruation
  - b. Vaginal trauma
  - c. Ectopic pregnancy
  - d. Spontaneous abortion
  - e. Cervical polyps
  - f. Cancer

## **IV. Patient Assessment**

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### **A. Obtaining an accurate and detailed assessment is critical when dealing with gynecologic issues.**

1. You may not be able to make specific diagnosis in the field, but a thorough patient assessment will help determine just how sick the patient is and whether lifesaving measures should be initiated.
  - a. An old medical axiom states, "Anyone who neglects to consider a gynecologic cause in a woman of childbearing age who complains of abdominal pain will miss the diagnosis at least 50% of the time."

### **B. Scene size-up**

1. Scene safety
  - a. First determine the following:
    - i. Is the scene safe?
    - ii. Will you need assistance?
    - iii. How many patients do you have?
    - iv. What is the nature of the illness?
    - v. Have you taken standard precautions?
  - b. Gynecologic emergencies can involve large amounts of blood and body fluids.
  - c. Where or in what position is the patient found?
  - d. If she is at home, what is the condition of the residence?
    - i. Is it clean, filthy, or wrecked?
    - ii. Do you see evidence of a fight?
    - iii. Are alcohol, tobacco products, or drug paraphernalia present?
    - iv. Are there pictures of loved ones?
    - v. Does the patient live alone or with other people?
  - e. Involve the police if any type of assault is suspected.
  - f. In cases of sexual assault, it is important to have a female EMT to provide patient care.
2. Mechanism of injury (MOI)

- a. The MOI in some patients with gynecologic problems may be easily understood from the dispatch information.
  - i. Sexual assault

## **B. Primary Assessment**

1. Form a general impression.
  - a. Is the patient stable or unstable?
  - b. Use the AVPU scale to determine the patient's level of consciousness.
2. Airway and breathing
  - a. Always evaluate the airway and breathing immediately to ensure they are adequate.
3. Circulation
  - a. Palpating a pulse and evaluating skin color, temperature, and moisture can help identify blood loss in a patient.
    - i. If there is significant blood loss, the patient may not be demonstrating obvious signs of shock, but may still be hypovolemic.
4. Transport decision
  - a. Most cases of gynecologic emergencies are not life threatening
    - i. If patient has signs of shock or a weak or rapid pulse, pale, cool, or diaphoretic skin, then rapid transport is warranted.

## **C. History taking**

1. Investigate chief complaint.
  - a. Some questions may be extremely personal to the patient.
    - i. Be sensitive to the patient's feelings.
  - b. An adolescent girl may want to keep her sexual history private.
2. SAMPLE history
  - a. Make a note of any allergies or medications she may be taking.
    - i. Birth control pills and devices.
  - b. Ask patient about medical conditions and last menstrual period.
    - i. This will help determine possible pregnancy.
    - ii. Also ask about the possibility of STDs.
  - c. If patient is bleeding, ask how many pads she has used in 1 hour.

## **D. Secondary assessment**

1. The secondary assessment is a more detailed, comprehensive examination of the patient that is used to uncover issues that may have been missed during the primary assessment.
2. May be performed on scene, en route to the emergency department, or, if time is limited, not at all.
3. Physical examinations
  - a. Should be limited and professional
    - i. Protect the woman's privacy.
    - ii. Few women are comfortable with having their body exposed.
      - (a) Limit the personnel present.
      - (b) Be an advocate for her modesty.
  - b. Use external pads to control vaginal bleeding.
    - i. Keep the possibility of hypoperfusion or shock in mind.

- ii. Always ask if there is pain associated with the bleeding.
    - iii. Never insert anything into the vagina to control bleeding, even a tampon.
  - c. Observe for vaginal discharge.
    - i. Make observations about the discharge.
- 2. Vital signs
  - a. Assess the patient:
    - i. Heart rate, rhythm, and quality
    - ii. Respiratory rate, rhythm, and quality
    - iii. Skin color, temperature, and condition
    - iv. Capillary refill time
    - v. Blood pressure
    - vi. Pay special attention to the presence of tachycardia and hypotension.
      - (a) Could indicate hemorrhage
- 3. Monitoring devices
  - a. Use of pulse oximetry should be routine.
  - b. Consider using noninvasive blood pressure monitoring to continuously track patient's blood pressure.
    - i. It is always recommended to assess the patient's first blood pressure with a sphygmomanometer and stethoscope.

## E. Reassessment

- 1. Repeat the primary assessment.
  - a. Reassess the patient's vital signs and the chief complaint.
  - b. Identify and treat any changes in the patient's condition.
  - c. Pay specific attention to the needs of your patient.
    - i. Accommodate her desire for conversation or silence.
- 2. Interventions
  - a. There are very few interventions with a gynecologic emergency.
  - b. For vaginal bleeding:
    - i. Treat for hypoperfusion or shock.
    - ii. Keep the patient warm.
    - iii. Place the patient in a supine position with the legs elevated.
    - iv. Provide supplemental oxygen.
    - v. Transport promptly to hospital.
- 3. Communication and documentation
  - a. Communicate all relevant information to the staff at the receiving hospital.
    - i. Including the possibility of pregnancy
  - b. Carefully document everything, especially in cases of sexual assault.
    - i. Patient's condition
    - ii. Chief complaint
    - iii. Scene
    - iv. All interventions

## V. Emergency Medical Care

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**A. Maintain the patient's privacy as much as possible.**

1. If in a public place, consider moving to ambulance.

**B. Determining the cause of bleeding is of less importance than treating the patient for shock and transporting her.****C. Most women will use sanitary pads to control bleeding before you arrive.**

1. If the woman has a tampon in place, it is not necessary for it to be removed.

**D. The external genitals have a rich nerve supply.**

1. This makes injuries to the area very painful.
2. Treat external lacerations, abrasions, or tears with moist, sterile compresses.
  - a. Use local pressure to control bleeding.
  - b. Use a diaper-type bandage to hold dressings in place.
  - c. Under no circumstances should you pack or place dressings in the vagina.

## VI. Assessment and Management of Specific Conditions

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**A. Pelvic inflammatory disease (PID)**

1. A patient with PID will complain of abdominal pain.
  - a. Pain usually starts during or after normal menstruation.
    - i. Inquiring about the date of last menstrual period is important.
  - b. The pain may be made worse by walking. Patients often present with a distinctive gait when they walk (øPID shuffleö).
2. Prehospital treatment is limited.
3. Nonemergency transport is usually recommended.
  - a. PID itself is seldom a threat to life.
    - i. It is serious enough to require transport and evaluation in the hospital.

**B. Sexual assault**

1. Sexual assault and rape are common in the United States.
  - a. One of three women will be raped in her lifetime.
  - b. One of every four women will be sexually molested, often before the age of 12 years.
2. EMTs called on to treat a victim of sexual assault face many complex issues.
  - a. Issues range from obvious medical ones to serious psychological and legal issues.
3. You may be the first person the victim has contact with after the encounter.
  - a. How you manage the situation may have lasting effects both for the patient and for yourself.
  - b. Important: professionalism, tact, kindness, sensitivity
4. You can generally expect police involvement.
  - a. Often EMS is called by the police.
5. Attempts to immediately gather a detailed report from the victim may cause her to øshut down.ö
6. If possible, give the patient the option of being treated by a female EMT.
7. Your focus:
  - a. Medical treatment of patient

- i. Is she physically injured?
- ii. Are any life-threatening injuries present?
- iii. Does the patient complain of any pain?
- b. Psychological care of patient
  - i. Do not pass judgment on the patient.
  - ii. Protect her from judgment of others on scene.
- c. Preserve evidence
  - i. Do not cut through any clothing.
  - ii. Do not throw away anything from the scene.
  - iii. Place bloodstained articles in separate paper bags.
- d. It may be necessary to persuade the patient not to clean herself.
  - i. Doing so can destroy evidence.
  - ii. Patient should also be discouraged from urinating, changing clothes, moving her bowels, or rinsing out her mouth.
- e. Offer to call the local rape crisis center for the patient.
  - i. Getting a professional advocate to the scene may help the patient deal with the trauma.
- f. Take the patient's history and limit any physical examination to a brief survey for life-threatening injuries.
- g. The patient report is a legal document and may be subpoenaed.
  - i. Keep the report concise, and record only what the patient stated in her own words.
    - (a) Do not insert your own opinion.
    - (b) Use quotation marks when reporting the patient's version of events.
    - (c) Focus on the facts.
  - ii. Bear in mind that rape is a legal diagnosis, not a medical diagnosis.

## VII. Summary

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- A. Women's bodies are uniquely designed to conceive and give birth. This difference makes women susceptible to a number of problems that do not occur in men.**
- B. If fertilization of the ovum does not occur within about 14 days of ovulation, the lining of the uterus begins to separate, and menstruation occurs for about a week.**
- C. When a girl reaches puberty, she begins to ovulate and experience menstruation.**
- D. Women continue to experience the cycle of ovulation and menstruation until they reach menopause.**
- E. The causes of gynecologic emergencies are varied and range from STDs to trauma.**
- F. Pelvic inflammatory disease is an infection of the female upper organs of reproduction: the uterus, ovaries, and fallopian tubes. It is the most common gynecologic reason why women access emergency medical services.**
- G. STDs can lead to more serious conditions, such as pelvic inflammatory disease.**
- H. Because menstrual bleeding is a monthly occurrence in most females, vaginal bleeding that is the result of other causes may be initially overlooked.**
- I. Some possible causes of vaginal bleeding include abnormal menstruation, vaginal trauma, ectopic pregnancy, spontaneous abortion, cervical polyps, ectopic pregnancy, miscarriage, and even cancer.**



- J. There are very few interventions that can or should be done in the prehospital setting with a gynecologic emergency.**
- K. Whenever you deal with patients who have gynecologic problems, maintain the patient's privacy as much as possible.**
- L. EMTs called on to treat a victim of sexual assault, molestation, or actual or alleged rape face many complex issues, ranging from obvious medical ones to serious psychological and legal issues.**
- M. You may be the first person a sexual assault victim has contact with after the encounter, and how you manage the situation from first contact through treatment and transport may have lasting effects for the patient and you.**
- N. Professionalism, tact, kindness, and sensitivity are of paramount importance in treating an assault victim.**

## Post-Lecture

### **Unit Assessment**

1. The \_\_\_\_\_ are located on each side of the lower abdomen and produce an ovum that, if fertilized, will develop into a fetus.
2. What is the function of the uterus?
3. The \_\_\_\_\_ is the area of skin between the vagina and the anus.
4. \_\_\_\_\_ is an infection of the female upper organs of reproduction that occurs almost exclusively in sexually active women.
5. What are three symptoms that appear in women with gonorrhea?
6. What are some of the possible causes of vaginal bleeding?
7. What are some examples of the questions that will help you determine the health of the patient and the safety of the scene in your initial scene size-up?
8. As an EMT arriving at the scene of a female patient with abdominal pain, why is it important to be sensitive to the patient's feelings?
9. What is the appropriate method of controlling internal vaginal bleeding?
10. Why is it important to keep a detailed and concise patient report?

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