Chapter 31
Gynecology

Learning Objectives

• Describe the physiological processes of menstruation and ovulation.
• Describe the pathophysiology of the following nontraumatic causes of abdominal pain in females: pelvic inflammatory disease, Bartholin’s abscess, vaginitis, ruptured ovarian cyst, ovarian torsion, cystitis, dysmenorrhea, mittelschmerz, endometriosis, ectopic pregnancy, vaginal bleeding, uterine prolapse, and vaginal foreign body.
Learning Objectives

• Outline the prehospital assessment and management of the female with abdominal pain or bleeding.
• Outline specific assessment and management for the patient who has been sexually assaulted.
• Describe specific prehospital measures to preserve evidence in sexual assault cases.

Female Anatomy

• Female reproductive organs
  – Ovaries
  – Fallopian (uterine) tubes
  – Uterus
  – Vagina
  – External genital organs
  – Mammary glands
Female Anatomy

- Ovaries
  - Small, oval-shaped glands located on either side of uterus
  - Each consists of dense outer portion (cortex) and less dense inner portion (medulla)
  - Produce eggs (ova) and hormones
    - Estrogen
    - Progesterone

- Fallopian tubes
  - Uterine ducts for ovaries
  - Ovum fertilized while in fallopian tube normally implants in lining for uterus (endometrium)
    - Signals beginning of pregnancy

- Uterus
  - Womb
  - Muscular organ that is size and shape of medium-sized pear
  - Main function is to accept and nourish fertilized ovum
    - Fertilized ovum not implanted in uterus is shed from body through menstruation
Female Anatomy

• Vagina
  — Birth canal
  — Female organ of copulation
  — Canal that joins cervix (lower portion of uterus) to outside of body
  — Functions to receive penis during intercourse

Female Anatomy

• External genital organs (vulva)
  — Outer parts of female genitalia
  — Protect internal organs from infectious disease
  — Consist of
    • Labia majora
    • Labia minora
    • Bartholin’s glands
    • Clitoris

Female Anatomy

• Mammary glands
  — Organs of milk production
  — Located within breasts (mammae)
  — Under influence of hormones, secrete milk during nursing
Menstruation

- Women of reproductive age prepare for potential pregnancy about once each month
  - If pregnancy does not occur, menstruation follows
- Normal, periodic discharge of blood, mucus, and cellular debris from uterine mucosa
  - Normal cycle lasts about 28 days
  - Occurs at more or less regular intervals from puberty to menopause
    - Except during pregnancy and lactation

Menstruation

- Average menstrual flow is 25 to 60 mL
  - Lasts 4 to 6 days, fairly constant from cycle to cycle
- Onset of menses (menarche) generally begins between ages 12 and 13
  - Ends permanently (menopause) at average age of 47 years
  - Depending on person, normal menopause age may vary from ages 35 to 60 years

Menstruation

- Occurs in three phases
  - Follicular phase
  - Ovulatory phase
  - Luteal phase
Follicular Phase

• Begins on first day of menstrual cycle
  – FSH and LH are released from brain and make contact with ovaries
    • Stimulates each ovary to produce about 15 to 20 oocytes (immature ova)
    • Each oocyte surrounded by layer of cells (granulosa cells)
    • Structure known as a primary follicle
    • Cause increase in production of estrogen

Follicular Phase

• When estrogen levels rise, stops production of FSH
  – Limits number of primary follicles that mature into secondary follicles
    • Mature secondary follicle continues to enlarge and produce estrogen
    • Eventually forms lump on surface of ovary
    • Fully mature follicle known as vesicular, or graafian, follicle
Ovulatory Phase

• Cellular secretions of graafian follicle cause it to swell more rapidly than can be accommodated by follicular growth
  – Rise in estrogen during this phase triggers release of LH
  • Causes follicle to expand and rupture and forces small amount of blood and follicular fluid out of vesicle
  • Shortly after initial burst of fluid, an oocyte escapes from follicle
  • Release of secondary oocyte is termed ovulation

Ovulatory Phase

• Ovulation starts about 14 days after follicular phase
  – Midpoint in menstrual cycle
  – Egg is captured in fallopian tube where may or may not be fertilized

Luteal Phase

• After ovulation, empty follicle transformed into corpus luteum
  – Yellow glandular structure
  – Cells secrete large amounts of progesterone and some estrogen
Luteal Phase

• If pregnancy occurs, fertilized oocyte (zygote) travels through fallopian tube to implant in uterus
  – Chorionic gonadotropin released to prevent corpus luteum from degenerating
    • As result, blood levels of estrogen and progesterone do not decrease
    • Menstrual period does not occur

Luteal Phase

• If pregnancy does not occur, corpus luteum degenerates
  – No longer produces progesterone
  – Estrogen level decreases
  – Top layers of lining are shed with menstrual flow

Hormonal Control of Ovulation and Menses

• Hormones released from hypothalamus and anterior pituitary control ovulation and menses
  – Under influence of ovarian hormones, lining of uterus (endometrium) goes through two phases of development
    • Proliferative
    • Secretory
Proliferative phase
- Starts with and is sustained by increasing amounts of estrogen
  - Produced by maturing follicle
  - Stimulates endometrium to grow and increase in thickness
  - Prepares uterus for implantation of fertilized ovum

Secretory phase
- Begins after ovulation
- Under combined influence of estrogen and progesterone
- Endometrium is prepared for implantation of fertilized ovum
- Within 7 days after ovulation (about day 21 of menstrual cycle), endometrium is ready to receive developing embryo if fertilization has occurred
Hormonal Control of Ovulation and Menses

- In absence of fertilization, ovum can survive only 6-24 hours
  - After, hormone levels drop and endometrium is shed as menstrual flow
  - Usually takes place on day 28 of cycle (about 14 days after ovulation)
  - Oocyte is capable of being fertilized for up to 24 hours after ovulation

What could happen to the menstrual cycle if the hormonal balance was off?

Gynecological Emergencies

- Severe abdominal pain
  - May be caused by chronic infection involving
    - Uterus
    - Ovaries
    - Fallopian tubes
    - Adjacent structures
Gynecological Emergencies

• Severe abdominal pain
  – Scope associated with female reproductive system may range widely
    • Minor episodes of difficult menstruation
    • Potentially life-threatening hemorrhage from ruptured ovarian cyst or ectopic pregnancy
  – Pregnancy should always be considered in any woman of child-bearing age until determined otherwise by physician

Pelvic Inflammatory Disease

• Infection of cervix, uterus, fallopian tubes, and ovaries and their supporting structures
  – Affects about 1 million women annually, responsible for 250,000+ hospitalizations/year
  – Usually caused by sexually transmitted bacteria
    • Neisseria gonorrhoeae (gonorrhea)
    • Chlamydia trachomatis (chlamydia)
  – Staphylococci, streptococci, other pathogens also may cause infection
    • These organisms usually transmitted by instruments used during medical procedures
Pelvic Inflammatory Disease

- Supporting structures around uterus and fallopian tubes (parametritis) may become infected
  - Polymicrobial
  - Can produce diffuse lower abdominal pain associated with
    - Low-grade fever (variable)
    - Vaginal discharge
    - Dyspareunia (pain with sexual intercourse)

Pelvic Inflammatory Disease

- Ascending infection from vaginal area may infect cervix initially (cervicitis)
  - May be followed by infection of uterus proper (endometritis) and fallopian tubes (salpingitis)
- Inflammation often follows onset of menstrual bleeding by 7 to 10 days
  - Reproductive organs are vulnerable to bacterial infection because lining of uterus has been shed during menstruation

Pelvic Inflammatory Disease

- Often accompanied by pain on ambulation
  - Patient bent forward
  - Taking short, slow steps
  - Often guarding abdomen ("PID shuffle")
Pelvic Inflammatory Disease

- Consequences
  - Secondary infertility
  - Ectopic pregnancies
  - Tubo-ovarian abscesses
  - In severe cases, reproductive organs may need to be surgically removed

Pelvic Inflammatory Disease

- Definitive treatment
  - Antibiotic therapy
    - Helps to control infection and prevent damage to fallopian tubes
  - Prehospital care primarily supportive
    - In most cases, physician evaluation and care required

Bartholin's Abscess

- Accumulation of pus that forms lump (swelling) in one of Bartholin's glands
  - Results from duct of gland being blocked, allowing infection to occur
  - Can take years to develop or may occur quickly over several days
Bartholin's Abscess

• Signs and symptoms
  – Swelling and inflammation of gland
  – Visible lump on one side of vaginal opening
  – Fever

• Any activity that puts pressure on vulva (including walking, sitting, sexual intercourse) can cause severe pain and discomfort

Bartholin's Abscess

• Treatment
  – Biopsy to rule out malignancy
  – Surgical incision to drain infected gland
  – Oral antibiotic therapy
  – Surgery sometimes required for recurrent infections (about 10 percent recur)

Vaginitis

• Inflammation and infection of vulva and vagina
  – Can occur in young girls and women of all ages
  – Most common in postmenopausal and postpartum women

• Affects millions of women each year
Vaginitis

• Most cases result from
  – Candida (yeast) infections
  – Bacteria (bacterial vaginosis)
  – Sexually transmitted disease
  – Trichomoniasis

Vaginitis

• Can be caused by
  – Parasites
  – Viruses
  – Poor personal hygiene

Vaginitis

• Often complain of irritation and itching of genital area and
  – Inflammation (redness and swelling) of labia majora, labia minora, or perineal area
  – Vaginal discharge
  – Foul vaginal odor
  – Discomfort or burning with urination
Vaginitis

- Depending on cause of infection, treatment for vaginitis may include
  - Antiyeast or antifungal creams
  - Vaginal suppositories
  - Antibiotics
- Most patients advised not to engage in sexual activity until infection has been resolved
  - Can be spread to sexual partners who may also require treatment

Ruptured Ovarian Cyst

- Can be gynecological emergency that may result in significant internal hemorrhage
- Ovarian cyst is thin-walled, fluid-filled sac
  - Located on surface of ovary

Ruptured Ovarian Cyst

- Abdominal pain caused by ovarian cyst may result from
  - Rapid expansion
  - Torsion that produces ischemia
  - Acute rupture
Ruptured Ovarian Cyst

- Cyst most prone to rupture is corpus luteum cyst
  - Forms as result of hemorrhage in mature corpus luteum
  - Corpus luteum develops after ovulation (day 14 of 28-day cycle)
- Most ruptures occur about 1 week before menstrual bleeding is to begin
- Some patients with ruptured ovarian cyst have vaginal bleeding or report late or missed period at time of rupture

Consider a patient who you suspect has a ruptured ovarian cyst. How will you assess for the possibility of bleeding?
Ruptured Ovarian Cyst

- Can result in
  - Localized, one-sided lower abdominal pain
  - Generalized signs of peritonitis if massive hemorrhage has occurred
- Onset of pain often associated with:
  - Minimal abdominal trauma
  - Sexual intercourse
  - Exercise

Ovarian Torsion

- Twisting of ovary
  - Causes
    - Congenital abnormalities
    - Ovarian cysts or tumors
    - Disease that affects fallopian tube or ovary
    - Adhesions from previous pelvic surgeries, trauma, and others
  - Affects only one ovary and commonly oviduct (adnexal torsion)

Ovarian Torsion

- Fifth most common gynecologic surgical emergency
  - About 70 percent of cases occur in women under 30 years of age
  - About 20 percent of reported cases involve pregnant women
Ovarian Torsion

• Signs and symptoms
  – Sudden onset of lower abdominal pain (usually on right side)
    • May radiate to back, pelvis, or thigh
    • Often begins with exercise
    • Described as sharp or stabbing in nature
  – Nausea and vomiting
  – Fever, usually late sign

Ovarian Torsion

• Physician care
  – Pain management
  – Fluid replacement
  – Surgery to manage vascular compromise, peritonitis, or necrosis

Cystitis

• Inflammation of inner lining of bladder
  – Usually caused by bacterial infection
  – Both sexes can develop infection
    • Cystitis in women more common because urethra is shorter
Cystitis

• Signs and symptoms
  – Main symptom is frequent urge to pass urine, with only small amount of urine passed
  – Painful (burning) urination
  – Fever
  – Chills
  – Lower abdominal pain
  – Urine may be foul smelling or contain blood

Cystitis

• Causes
  – Structural abnormality of ureters (common in children)
  – Compression of urethra as result of inflammation
  – Indwelling urinary catheters
• Prompt treatment of cystitis with complete course of antibiotics usually settles infection within 24 hours

Dysmenorrhea and Mittelschmerz

• Dysmenorrhea
  – Pain during menstruation
  – May include
    • Headache
    • Fainting
    • Dizziness
    • Nausea
    • Diarrhea
    • Backache
    • Leg pain
Dysmenorrhea and Mittelschmerz

- **Dysmenorrhea**
  - In severe cases
    - Chills
    - Headache
    - Diarrhea
    - Nausea
    - Vomiting
    - Syncope can occur
  - Occurs more often in women not sexually active and women who have not borne children

- **Mittelschmerz**
  - German for “middle pain”
  - May occur from rupture of graafian follicle and bleeding from ovary during menstrual cycle
  - Characterized by right or left lower quadrant abdominal pain
    - Occurs in normal midcycle of menstrual period (after ovulation)
    - Lasts about 24 to 36 hours
Dysmenorrhea and Mittelschmerz

- Mittelschmerz
  - Hormones produced by ovary also may produce slight endometrial bleeding and low-grade fever
- Dysmenorrhea and mittelschmerz do not pose threat to life
  - Physician evaluation is required to rule out more serious causes of menstrual pain
  - Evaluation required to differentiate pain from that of appendicitis and other surgical emergencies

Endometritis

- Inflammation of uterine lining
  - Usually results from infection
  - Occurs after childbirth or abortion and usually caused by retained placental tissue
  - Feature of PID and other sexually transmitted infections
  - May affect uterus and fallopian tubes

Endometritis

- Inflammation of uterine lining
  - If left untreated, may result in
    - Sterility
    - Sepsis
    - Death
Endometritis

• Inflammation of uterine lining
  — Signs and symptoms
    • Fever
    • Purulent vaginal discharge
    • Lower abdominal pain
  — Treatment
    • Removal of foreign tissue
    • Antibiotic therapy

Endometriosis

• Endometrial tissue growing outside of uterus
  — May occur as result of fragments of endometrium being regurgitated backward (during menstruation) through fallopian tubes into peritoneal cavity
    • There fragments attach and grow as small cystic structures
    • Endometrial tissue of endometriosis functions cyclically and undergoes periodic menstrual breakdown
    • Can result in bleeding within cysts, stretching of cyst wall, pain

Endometriosis

• More common in women who defer pregnancy
  — Average age of patient is 37 years
  — Symptoms
    • Pain (particularly dysmenorrhea)
    • Painful defecation
    • Suprapubic soreness
    • Vaginal spotting of blood before start of period
    • Infertility
  — Treatment
    • Drug therapy with analgesics or hormones
    • Surgery
Why do you think patients with endometriosis tend to be infertile?

Ectopic Pregnancy
• Pregnancy that develops outside uterus
  – Third leading cause of maternal death
    • 6 percent of maternal mortality
  – Pregnancy develops in fallopian tube or ovary
    • Rarely, pregnancy develops in abdominal cavity or cervix

Ectopic Pregnancy
• Pregnancy that develops outside uterus
  – Can be life-threatening emergency
  – Most discovered in first 2 months, often before woman realizes she is pregnant
  – Signs and symptoms
    • Severe abdominal pain that may radiate to neck or shoulder (made worse on inspiration)
    • Vaginal "spotting"
Ectopic Pregnancy

• If rupture, possible
  – Internal hemorrhage
  – Sepsis
  – Shock

Ectopic Pregnancy

• Once confirmed, treated with surgery
  – Performed to remove developing fetus, placenta, any damaged tissue at site of pregnancy
• Common: occurs in 2 percent of all pregnancies
  – Should be considered in any female of reproductive age with abdominal pain
Vaginal Bleeding

- Loss of blood from uterus, cervix, or vagina
  - Most common source of nontraumatic vaginal bleeding is menstruation
  - Possible causes of serious nonmenstrual bleeding
    - Spontaneous abortion
    - Disorders of placenta
    - Hormonal imbalances (especially menopause)
    - Lesions
    - PID
    - Onset of labor

Vaginal Bleeding

- Never assume vaginal hemorrhage is due to normal menstruation
  - May be life threatening, can lead to
    - Hypovolemic shock
    - Death
  - Vaginal passage of clots usually indicates bleeding at rate greater than menstrual flow

Dysfunctional Uterine Bleeding

- Abnormal bleeding that occurs because of changes in hormone levels
  - Most common cause is failure of ovary to release oocyte (anovulation)
  - Ovulation does not take place
    - Results in continuous unopposed production of estradiol, stimulating overgrowth of endometrium
    - Without progesterone, endometrium proliferates, eventually outgrows its blood supply, leading to necrosis
    - End result is overproduction of uterine blood flow
  - Symptoms
    - Uterine bleeding with noticed changes in menstrual cycle
Dysfunctional Uterine Bleeding
• Noticed changes
  – Vaginal bleeding or spotting that occurs between periods
  – Menstrual periods less than 28 days or more than 35 days apart
  – Timing of menstrual periods that change with each cycle

Dysfunctional Uterine Bleeding
• Noticed changes
  – Heavier than normal bleeding
    • Passing large clots
    • Changing protection during night
    • Soaking through sanitary pad or tampon every hour for 2-3 hours in a row
  – Bleeding that lasts for more days than normal or more than days
  – Tenderness and dryness of vagina

Dysfunctional Uterine Bleeding
• Most common at extreme ages of woman’s reproductive years
  – At beginning or near end
  – May occur at any time during reproductive life
• Physician care
  – Pregnancy test
  – IV hormone therapy
  – Methods to tamponade bleeding
  – Sometimes surgery
Uterine Prolapse

• Falling or sliding of uterus from its normal position in pelvic cavity into vaginal canal
  – Main portion of uterus (body) positioned between funds and cervix
  – Uterus is held in place by
    • Connective tissue
    • Muscles
    • Broad ligament
    • Round ligaments
    • Uterosacral ligaments

Uterine Prolapse

• Factors
  – Trauma during vaginal childbirth
  – Large babies and difficult vaginal delivery
  – Loss of muscle tone associated with aging
  – Menopause and reduced amounts of circulating estrogen
  – Pelvic cavity tumors
Uterine Prolapse

- Conditions that place strain on muscles and connective tissue in pelvis, which play role in condition
  - Obesity
  - Chronic constipation
  - COPD

Uterine Prolapse

- If mild and patient is asymptomatic, treatment may not be necessary
  - Patients advised to make lifestyle changes to slow progression of prolapse
    - Weight loss
    - Smoking cessation
    - Cough prevention
    - Avoid heavy lifting and straining

Uterine Prolapse

- Signs and symptoms of more severe prolapse
  - Patient complaints of feeling like she is “sitting on a small ball”
  - Heaviness in vaginal area
  - Lower back pain
  - Difficult or painful intercourse
  - Vaginal bleeding
Uterine Prolapse

- Treatment
  - Vaginal pessary (placement of device similar to diaphragm)
  - Surgery to hold uterus in place

Vaginal Foreign Body

- Not uncommon to find foreign body inserted in vagina
  - Especially true of children, who may insert foreign body during self exploration and not tell their parents or caregivers
  - Can cause foul-smelling, purulent discharge with or without vaginal bleeding
  - May also be result of
    - Psychiatric disorder
    - Unusual sexual practices
    - Episode of abuse

Vaginal Foreign Body

- Occasionally a tampon, broken portions of condoms, or pessary is forgotten or lost and causes discomfort and vaginal discharge
- Less common symptoms
  - Pain
  - Urinary discomfort
- No attempt should be made in prehospital setting to remove foreign body in vagina
  - Transport for physician evaluation
Gynecological Emergencies: Assessment and Management

- Finding cause of lower abdominal pain is difficult in both men and women
  - Especially challenging in women because many gynecological conditions produce common characteristics
    - Ruptured ectopic pregnancy, ruptured ovarian cyst, and PID can have identical presentations

Gynecological Emergencies: Assessment and Management

- Finding cause of lower abdominal pain is difficult
  - Goal of prehospital care
    - Identify quickly conditions that require aggressive therapy
    - Rapid transport
  - Prehospital care
    - History of present illness (including thorough gynecological history)
    - Provide airway, ventilatory, and circulatory support
    - Transport

History of Present Illness and Obstetrical History

- History of present illness to better understand patient’s chief complaint
  - Associated symptoms
    - Fever
    - Diaphoresis
    - Syncope
    - Diarrhea
    - Constipation
    - Abdominal cramping
  - Interview should include thorough obstetrical history
Will the patient always give you accurate information about whether she is pregnant? Why?

History of Present Illness and Obstetrical History

• Obstetrical history components
  – Pregnancy
    • Total number of pregnancies
    • Number of pregnancies carried to term
  – Previous cesarean deliveries
    • Surgical procedure in which abdomen and uterus are incised
    • Baby delivered through abdomen
    • Usually done when maternal or fetal conditions might make vaginal delivery risky
    • May indicate a high-risk pregnancy

• Obstetrical history components
  – Last menstrual period
    • When did it start (date)?
    • When did it end (duration)?
    • Have menstrual periods occurred regularly for patient?
    • Was last menstrual period normal for patient?
    • Was menstrual flow heavier or lighter than other periods?
    • Was there any bleeding between periods?
History of Present Illness and Obstetrical History

• Obstetrical history components
  – Possibility of pregnancy
    • Some patients may hesitate to disclose possible pregnancy
    • If pregnancy is suspected (but not confirmed by patient), ask specific questions
    • Missed or late periods
    • Breast tenderness
    • Urinary frequency
    • Morning sickness (nausea and/or vomiting)
    • Unprotected sexual activity to determine likelihood of pregnancy

• History of previous gynecological problems
  – Can be helpful to others who may be involved in patient’s care
  – Infections
  – Bleeding
  – Painful intercourse (dyspareunia)
  – Miscarriage
  – Abortion
  – Dilation and curettage
  – Ectopic pregnancy

• Present blood loss
  – Color (bright versus dark red blood)
  – Amount of blood loss (estimated by number of pads/tampons soaked per hour)
  – Duration of bleeding episode

• Vaginal discharge
  – Color
  – Amount
  – Odor of discharge
  – Findings may indicate presence of infection, venereal disease, or other illness
History of Present Illness and Obstetrical History

• Obstetrical history components
  – Use and type of contraceptive
    • Birth control pills: associated with hypertension and pulmonary embolus
    • Intrauterine devices: can cause intrauterine bleeding and infection
    • Withdrawal or rhythm method: may increase likelihood of pregnancy
    • Spermicides and condoms
    • Contraceptive systems (e.g., Norplant and Depo-Provera)
    • Surgical tubal ligation: permanent form of female sterilization where fallopian tubes are severed and sealed

• Obstetrical history components
  – History of trauma to reproductive system
    • Question all patients about any injury to reproductive tract
    • May be responsible for vaginal bleeding or discharge
    • Ask sexually active patient whether pain or bleeding has occurred during or after intercourse

• Obstetrical history components
  – Degree of emotional distress
    • Personal health issues
    • Depression
    • Unwanted pregnancy
    • Financial worries
Physical Examination

- Conducted in comforting and professional manner with consideration for patient’s modesty and privacy
- Be considerate of reasons for patient discomfort
- When evaluating potential for serious blood loss, patient’s skin and mucous membranes for color, cyanosis, or pallor
Patient Management

- Management
  - Support of patient’s vital functions
  - Administration of high-concentration O₂ during transport
  - IV access usually not needed unless patient is demonstrating signs of impending shock or has excessive vaginal bleeding
  - Position of transport
    - Left-lateral recumbent, knee-chest position
    - Hips-raised, knees-bent

- Control vaginal bleeding with application of sanitary pads or trauma dressings
  - Never pack with dressings or tampons
  - Count number of soaked pads, record on patient care report

- During transport, monitor for onset of serious bleeding
  - If occurs or patient’s condition begins to deteriorate, establish one or two large-bore IV lines with normal saline or lactated Ringer’s solution
  - ECG and pulse oximetry monitoring are indicated
  - Consider analgesics
Sexual Assault

• Crime of violence with serious physical and psychological implications
  – Anyone of either gender at any age
  – Women and girls are most often victims
  – 1 in 6 women will be experience completed or attempted rape during their lifetimes
  – Many go unreported
  – Often, paramedic is first to encounter, use
    • Tact
    • Kindness
    • Sensitivity

How do you feel about rape, and how would you manage a patient who has been raped?

Sexual Assault

• Initially, care like any other injured patient
  – First priority is to manage any injury that poses threat to life
  – Approach modified in reference to history taking and physical examination
  – Move patient to private area
  – If possible, interview and examination by paramedic of same sex
History Taking

- Victims should not be questioned in detail about incident in prehospital setting
  - History limited to elements needed to provide emergency care
    - Questions regarding penetration, sexual history, or practices are irrelevant to prehospital care
    - Only add to patient’s emotional stress

- Allow patient to speak openly
  - Record accurately and thoroughly
  - Common reactions range from anxiety to withdrawal and silence
    - Denial
    - Anger
    - Fear

Assessment

- Physical examination should identify
  - Physical trauma
    - Trauma outside pelvic area that needs immediate attention
    - Facial fractures
    - Human bites of hands and breasts
    - Long bone fractures
    - Broken ribs
    - Trauma to abdomen
  - Examine genitalia only if severe injury present or suspected
  - Explain all procedures before initiating them
Assessment

- Document all examination findings
  - Patient’s emotional state
  - Condition of patient’s clothing
  - Obvious injuries
  - Patient care rendered
- Professional attitude
  - Feelings and prejudices about victim or assault should not affect delivery of care

Management

- After managing life-threatening injury, emotional support is most important patient care procedure one can offer a victim of sexual assault
  - Provide safe environment
  - Respond appropriately to victim’s physical and emotional needs
- Be aware of need to preserve evidence from crime scene

Management

- Special considerations
  - Handle clothing as little as possible
  - Do not clean wounds unless absolutely necessary
  - Do not allow patient to drink or brush teeth
  - Do not use plastic bags for blood-stained articles
  - Bag each clothing item separately
  - Ask victim not to change clothes or bathe
  - Disturb crime scene as little as possible
Summary

- Menstruation is normal, periodic discharge of blood, mucus, and cellular debris from the uterine mucosa
  - Ovulation is release of a secondary oocyte from ovary
- Pelvic inflammatory disease (PID) results from infection of the cervix, uterus, fallopian tubes, and ovaries and their supporting structures
- Bartholin’s abscess is a buildup of pus in one of Bartholin’s glands

Summary

- Vaginitis is inflammation and infection of the vulva and vagina
- Ruptured ovarian cyst occurs when a thin-walled, fluid-filled sac located on the ovary ruptures
  - Can cause internal hemorrhage
- Ovarian torsion is twisting of ovary caused by another condition or disease

Summary

- Cystitis is inflammation of inner lining of the bladder
  - Usually is caused by a bacterial infection
- Dysmenorrhea is characterized by painful menses, and may be associated with headache, faintness, dizziness, nausea, diarrhea, backache, and leg pain
- Mittelschmerz is German for “middle pain”
  - May occur from rupture of graafian follicle and bleeding from the ovary during the menstrual cycle
Summary

• Endometritis is inflammation of the uterine lining
  – Endometriosis is characterized by endometrial tissue growing outside the uterus
• Ectopic pregnancy is one that develops outside the uterus
  – Rupture of an ectopic pregnancy can cause life-threatening hemorrhage

Summary

• Vaginal bleeding is the loss of blood from the uterus, cervix, or vagina
• Uterine prolapse occurs when the uterus descends into the vagina
• Vaginal foreign bodies can cause vaginal discharge, pain, and urinary discomfort

Summary

• History of the patient with a gynecologic emergency should include pregnancy history; history of cesarean births; last menstrual period; possibility of pregnancy; history of previous gynecologic problems; blood loss; vaginal discharge; contraceptives used; history of trauma to the reproductive system; and degree of emotional distress
Summary

• Goal of prehospital care of lower abdominal pain in the female is to obtain a history (including a gynecological history); provide airway, ventilatory, and circulatory support as needed; and provide transport for physician evaluation

Summary

• Sexual assault is a crime of violence
  – Can have serious physical and psychological effects
• Paramedics should be aware of the need to preserve evidence from a sexual assault crime scene

Questions?