


Sanders: Mosby's Paramedic Textbook, Revised 3rd Edition

PowerPoint Lecture Notes

Chapter 41: Gynecology

**Chapter 41
Gynecology**



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Objectives

- Describe menstruation and ovulation
- Describe pathophysiology of:
 - Pelvic inflammatory disease
 - Ruptured ovarian cyst
 - Cystitis
 - Dysmenorrhea
 - Mittelschmerz
 - Endometriosis
 - Ectopic pregnancy
 - Vaginal bleeding

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Objectives

- Describe traumatic causes of abdominal pain
 - Vaginal bleeding
 - Sexual assault
- Outline assessment and management of:
 - Females with abdominal pain
 - Patient who has been sexually assaulted
- Describe evidence preservation in the care of rape patients

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Scenario

Your patient is a 45-year-old female with a chief complaint of severe vaginal bleeding. She thinks menopause has started because her periods are irregular, and she has crampy abdominal pain. She says she has soaked 10 sanitary napkins in an hour, and blood has soaked through her clothes.

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Discussion

- Should you rule out pregnancy in this patient?
- What could be causing the bleeding?
- What further exam is needed?
- Discuss your priorities of care for this woman

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Female Reproductive System

- Ovaries
- Fallopian tubes
- Uterus
- Vagina
- External genital organs
- Mammary glands



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Ovaries

- Ovaries attached to broad ligament (mesovarium)
- Other ovarian ligaments
 - Suspensory ligament
 - Ovarian ligament

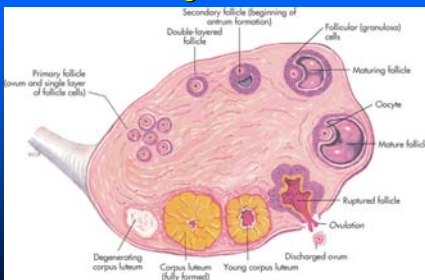
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Ovaries

- Ovarian arteries, veins, and nerves enter ovary through mesovarium
 - Dense outer portion
 - Cortex
 - Looser inner portion
 - Medulla
 - Ovarian follicles contain oocytes
 - Distributed throughout cortex

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Ovary and Successive Stages of Oogenesis



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Uterine Tubes

- Ducts for ovaries
- Open directly into peritoneal cavity to receive oocyte



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Uterus

- Size and shape of pear
- Fundus
- Cervix



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External Genitalia (Vulva)

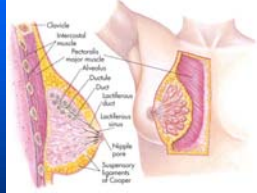
- Vestibule and surrounding structures
- Labia minora
- Clitoris
- Labia majora
- Clinical perineum
 - Between vagina and anus



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Mammary Glands

- Organs of milk production
- Lactiferous duct divides to form smaller ducts
 - Secretory sacs secrete milk



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Menstruation

- Normal discharge
 - Blood, mucus, cellular debris from uterine mucosa
 - About every 28 days
- Menarche
 - Onset during puberty
- Menopause
 - Cessation of ovarian function
 - Cessation of menstrual activity
 - Average age is late 40s

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Ovulation

- Egg (ovum) is released from ovary following breaking of follicle
- Occurs about 14 days after menstrual cycle begins

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Menstrual and Ovarian Cycles

- Proliferative phase
 - Endometrium thickness increases
 - Stimulated by estrogen increase
 - Anterior pituitary hormones released
 - Stimulates cells producing estrogen
 - Initiates ovarian cycle
 - Maintained by increased estrogen production

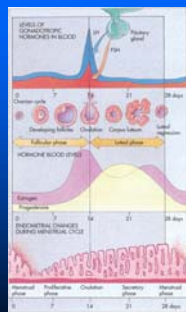
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Menstrual and Ovarian Cycles

- Secretory phase
 - Follows ovulation
 - Influenced by estrogen and progesterone
 - Prepares endometrium for gestation
 - Gestation—fertilization until birth
- Menstrual phase
 - Ovum not fertilized
 - Average length: 4-6 days
 - Flow: 25-60 mL
 - Absent during pregnancy

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Human Menstrual Cycle



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Pelvic Inflammatory Disease (PID)

- Affects 1 million annually
- Infection of cervix, uterus, fallopian tube, ovaries, and supporting structures
- Often due to STD
 - Gonorrhea, chlamydia
 - Staphylococci, streptococci



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PID

- Signs and symptoms
 - Often 7-10 days after menstruation
 - Abdominal pain
 - Low-grade fever
 - Vaginal discharge
 - Dyspareunia
 - "PID shuffle"

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PID

- Complications
 - Infertility
 - Ectopic pregnancies
 - Abscesses
- Management
 - Prehospital—supportive
 - Antibiotics
 - Surgery if severe

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Ruptured Ovarian Cyst

- Can cause significant internal hemorrhage
 - Cyst is thin, fluid-filled sac on ovarian surface
- Can rupture
 - Causes localized pain or peritonitis
- Onset of pain
 - After trauma, exercise, intercourse



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Cystitis

- Inflammation of inner lining of bladder
 - Usually bacterial infection
- Signs and symptoms
 - Frequency
 - Urgency
 - Burning
 - Fever, chills
 - Lower abdominal pain
- Treatment

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Dysmenorrhea

- Painful menstruation
- May also have:
 - HA, faintness, dizziness
 - Nausea, vomiting, diarrhea
 - Backache, leg pain

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Mittelschmerz

- Signs and symptoms
 - Right or left lower quadrant abdominal pain
 - Midcycle of menstrual period
 - After ovulation
 - Duration about 24-36 hrs
- Treatment
 - Physician evaluation to rule out other illness

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Endometritis

- Inflammation of uterine lining
 - Usually infection
 - Often after childbirth or abortion
 - Retained placental tissue
- May affect uterus and fallopian tubes
 - If left untreated, sterility, sepsis, death may result
- Signs and symptoms
- Treatment

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Endometritis

- Signs and symptoms
 - Fever
 - Purulent vaginal discharge
 - Lower abdominal pain
- Treatment (physician)
 - Removal of tissue
 - Antibiotics

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Endometriosis

- Ectopic growth and functioning of endometrial tissue
- Fragments of endometrium migrate into peritoneum
 - Attach and form cystic structures
- Signs and symptoms
- Treatment

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Ectopic Pregnancy

- Consider in females of reproductive age with abdominal pain
- Possible life threat
- Develops outside uterus
 - Fallopian tube common
 - Also ovary, abdominal cavity, or cervix

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Ectopic Pregnancy

- Severe abdominal pain
- Spotty vaginal bleeding
- Shoulder pain highly suggestive
- Signs of shock
- May or may not have missed period
- Transport and treat for shock

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Vaginal Bleeding

- Blood loss from uterus, cervix, vagina
 - Most common source is menstruation

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Vaginal Bleeding

- Nonmenstrual bleeding
 - Spontaneous abortion
 - Disorders of placenta
 - Hormonal imbalances
 - Menopause
 - Lesions
 - PID
 - Onset of labor

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Vaginal Bleeding

- Traumatic causes
 - Straddle injuries
 - Blows to perineum
 - Blunt force to lower abdomen
- Other causes
 - Foreign bodies
 - Intercourse
 - Abortion attempts
 - Sexual assault
- Complications
- Treatment

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General Principles of Assessment and Management

- Diagnosis of abdominal pain is difficult
 - Many gynecological conditions have common characteristics
- Goals of prehospital care
 - Identify conditions that need aggressive therapy
 - Rapid transport for surgical intervention

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History of Present Illness

- Obtain history of present illness to understand patient's chief complaint

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History of Present Illness

- Associated symptoms
 - Fever
 - Diaphoresis
 - Syncope
 - Diarrhea
 - Constipation
 - Abdominal cramping
- Expand interview to include OB history

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Obstetrical History

- Pregnancy
- Cesarean deliveries
- Last menstrual period
- Possibility of pregnancy
- Previous gynecological problems
- Blood loss
- Vaginal discharge
- Contraceptive use
- Trauma to reproductive system

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Physical Examination

- Conduct with professional attitude
 - Protect privacy
- Assess color of skin and mucous membranes

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Physical Examination

- Vital sign assessment
 - Orthostatic measurements
- Inspect vagina for bleeding, discharge:
 - Color
 - Amount
 - Clots and/or tissue

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Physical Examination

- Auscultate abdomen (if time permits)
- Palpate to assess for:
 - Masses
 - Tenderness
 - Guarding
 - Distention
 - Rebound tenderness

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Patient Management

- Support vital functions
- Administer oxygen
- IV access if signs of shock or excessive vaginal bleeding
- May prefer transport in a left lateral recumbent, knee-chest position or in hips raised knees-bent position
- Monitor for onset of serious bleeding

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Sexual Assault

- Crime of violence
- Serious physical and psychological implications
- Tact, kindness, and sensitivity
- Treat life-threatening injuries
- Private area for exam and history
- If possible, crew member of same gender should examine and interview

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History Taking

- Avoid detailed questions about incident
 - Questions needed for emergency care
- Allow patient to speak openly about event
- Record information accurately and thoroughly

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Assessment

- Identify physical trauma outside pelvic area that needs immediate attention
- Examine genitalia if severe injury is present or suspected
- Explain procedures

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Assessment

- Document findings and observations:
 - Patient's emotional state
 - Condition of clothing
 - Obvious injuries
 - Patient care rendered
- Nonjudgmental, professional attitude

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Management

- Manage life-threatening injuries
- Provide emotional support
- Provide safe environment
- Respond appropriately to physical and emotional needs
- Preserve evidence

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Special Considerations

- Minimal clothing handling
- Do not clean wounds unless absolutely necessary
- Do not allow patient to drink or brush teeth
- Do not use plastic bags for bloody articles
- Bag each clothing item separately
- Ask patient not to change clothes or bathe
- Disturb crime scene as little as possible

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Conclusion

A number of disorders can occur in the female reproductive system, some of which lead to gynecological emergencies. It is critical for the paramedic to take an accurate history and perform a thorough examination to identify life-threatening conditions and ensure appropriate action.

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Questions?

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