Abdominal Pain in the Adolescent Female - Gynecologic Concerns

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Disclosure Information

The presenters have no disclosures to report.

Learning Objectives

The participant will be able to:

• explain the common causes of gynecologic reasons for abdominal pain in the adolescent female.
• identify several differential diagnoses of gynecologic reasons for abdominal pain in the adolescent female.
• restate common diagnostic findings of gynecologic causes of abdominal pain in the adolescent female.
## Overview

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## Incidence and Diagnostic Challenges

- Abdominal and pelvic pain are the most common reason female adolescents present to primary care/gynecology provider and to the emergency department.
- Chronic abdominal pain (present at least 2 months) is common in pediatric patients – up to 18%
- Abdominal pain can be classified as organic or functional
  - Most (up to 90%) of adolescent females have no clear identifiable cause for abdominal pain diagnosis functional or recurrent abdominal pain.

## Pelvic Pain

<table>
<thead>
<tr>
<th>Acute</th>
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</thead>
<tbody>
<tr>
<td>Pain in lower abdomen or pelvis</td>
</tr>
<tr>
<td>Present &lt; 3 months</td>
</tr>
<tr>
<td>Presenting symptoms can be nonspecific</td>
</tr>
<tr>
<td>Clinical presentation can vary widely</td>
</tr>
<tr>
<td>Urgent etiologies</td>
</tr>
<tr>
<td>Ectopic pregnancy, ruptured ovarian cyst, ovarian torsion, PID, appendicitis</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chronic</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 3 months</td>
</tr>
<tr>
<td>Gynecologic considerations</td>
</tr>
<tr>
<td>Non-gynecologic considerations</td>
</tr>
<tr>
<td>Up to 1/3 of women presenting with chronic pelvic pain will have no diagnosis after extensive testing</td>
</tr>
</tbody>
</table>
History: Gather data systematically

- History of Presenting Illness (HPI)
- Review of Systems (ROS)
- Menstrual History
- Medications
- Past Medical History (PMH)
  - Gynecologic, Obstetric
  - Abdominal/gynecologic surgeries
  - Chronic illness
- Family Medical History (FMH)
- Social History (SH)
  - Comprehensive psychosocial history
  - Confidential sexual history

HPI: Abdominal Pain

- Onset: gradual or sudden
  - May be subtle
- Location
  - Localized or diffuse
- Duration
  - Acute/chronic
- Characteristics
  - Often vary
  - Aggravating factors
    - Associated with menses or sexual activity?
  - Relieving factors
  - Timing
    - Menstrual cycle, coitus, post-coitus

OLDCART

Review of Systems (ROS)

Comprehensive
- Gastro-Intestinal
- Genito-Urinary
- Musculo-Skeletal

Focused
- Fever
- Pain related to menses/sexual activity
- Vaginal discharge
- Vaginal bleeding
- Dysuria
- Pubertal changes
- Menstrual history
Adolescent History Considerations

- Pubertal events
  - Timing
- Menstrual history
  - Menarche, LMP
  - Cycle, duration
    - First day of cycle to first day of cycle
  - Pain
  - Catamenial conditions
    - Headaches, pre-menstrual symptoms
  - Flow
    - Amount: # pads/tampons
    - Characteristics: flooding, clots

- Confidential Care
  - PMH
  - Obstetric history
  - Contraception history
  - Comprehensive psychosocial history
  - HEADDSSS assessment
  - Sexual history

HEADDSSS Assessment

- Home
- Education/Eating
- Activities
- Drug and alcohol/tobacco
- Depression
- Suicidality
- Sexuality
- Safety


Comprehensive Social History

- Sexual history
  - Sexual orientation, current relationship
  - Sexual activity: previous and current, # partners**, early coital debut**
  - Previous STI*, exposure, current partner symptoms
  - Use of condoms, recent unprotected coitus**
- Use of contraceptive devices
  - IUD* (hormonal/copper)
- Smoking*

* Risk factors (Ectopic pregnancy)
**Pelvic Inflammatory Disease (PID)
Physical Examination

**Inspection**
- Vital signs, growth charts
  - Unexplained fever
  - Involuntary weight loss
- Sexual Maturity Rating
- General appearance
  - Facial expression
- Body positioning
  - Restlessness
  - Immobility, knees drawn up
- External signs of trauma/abuse

**Palpation**
- Note involuntary guarding, rebound tenderness, lower quadrant and suprapubic location of pain
- If patient unable to locate point of maximal pain -- perform valsala
- Distinguish from abdominal wall pain
  - Carnett’s sign: pain increases with contraction of abdominal wall while tender area is palpated

Adolescent Considerations

Does Patient Need a Pelvic Exam?

**Type of Exam**
- Speculum exam
- Bimanual exam
  - with/without speculum

**Screening indicated**
- PAP screening
- STI cultures

Adolescent Considerations for Pelvic Exam

- Confidential Care
- Trauma Informed Care
- Validity and reliability of pelvic exam
  - Reports of poor inter-rater reliability
  - Low sensitivity of detecting adnexal mass
- CDC recommendation: low threshold for treating PID
Pelvic Exam

- External exam only
  - Inspection: Tanner stage/SMR, discharge, lesions, infestation
- External and bimanual exam
  - Vaginal NAAT testing
- Speculum and bimanual exam
  - Speculum size/type
  - Lubrication
  - Speculum insertion: position of OS
  - Bimanual exam: CMT/adnexal tenderness

Primary Care Diagnostic Considerations

- Ectopic Pregnancy
- Pelvic Inflammatory Disease (PID)
- Endometritis
- Dysmenorrhea

Urgent Considerations

<table>
<thead>
<tr>
<th>Life-threatening</th>
<th>Fertility-threatening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ectopic pregnancy</td>
<td>PID</td>
</tr>
<tr>
<td>Ruptured ovarian cyst</td>
<td>Ovarian torsion</td>
</tr>
</tbody>
</table>
### Onset/Timing of Pain

<table>
<thead>
<tr>
<th>Timing</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclic premenstrual pain</td>
<td>Onset soon after menses begins lasting first few days of period – can be severe</td>
</tr>
<tr>
<td>Sudden onset 6-8 weeks after LMP</td>
<td>Dysmenorrhea</td>
</tr>
<tr>
<td>New onset associated with menses or coitus</td>
<td>Ectopic Pregnancy</td>
</tr>
<tr>
<td>Dyspareunia with post-coital bleeding</td>
<td>PID, uterine fibroids</td>
</tr>
<tr>
<td>Post-partum associated with prolonged labor, C-section or ruptured membranes</td>
<td>PID, PID, PID</td>
</tr>
</tbody>
</table>

### Characteristics of Pain

<table>
<thead>
<tr>
<th>Description</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant, cramping; may be exacerbated with walking or sexual activity</td>
<td>PID</td>
</tr>
<tr>
<td>Uterine cramping, vaginal bleeding</td>
<td>Ectopic pregnancy, Endometritis</td>
</tr>
<tr>
<td>Sudden severe pain, nausea and vomiting</td>
<td>Ovarian torsion</td>
</tr>
</tbody>
</table>

### Aggravating Factors

- Dyspareunia – pain with sexual activity?
  
  **Consider Pelvic Inflammatory Disease**

- Pain with movement?
  
  **Include Consideration for Peritonitis**
Risk Factors

**Ectopic Pregnancy**
- Age (> 35 years old)
- History of Sexually Transmitted Infection, pelvic surgery (tubal ligation)
- Ethnicity (African Americans)
- Smoking

**Pelvic Inflammatory Disease**
- Adolescent ectropion
- Presence of cervicitis and/or Bacterial Vaginosis
- Previous history of PID
- IUD placement in past 3 weeks
- Ethnicity (African American)
- Sexual health risk behaviors
  - Unprotected sexual activity
  - Frequent change in partners/short duration relationships
  - Sexual activity during menstruation
  - Sexual activity during use of D&A

Physical Exam: Location of Tenderness

<table>
<thead>
<tr>
<th>Location</th>
<th>Consider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suprapubic</td>
<td>Urinary Tract Infection (UTI), Cystitis</td>
</tr>
<tr>
<td>Lower abdomen</td>
<td>Ovarian cyst, PID, Endometritis/salpinx</td>
</tr>
<tr>
<td>Pelvic tenderness</td>
<td>Pelvic Inflammatory Disease (PID), Endometritis</td>
</tr>
<tr>
<td>CMT, adnexal</td>
<td>Pelvic Inflammatory Disease (PID), Endometritis</td>
</tr>
</tbody>
</table>

Abdominal Examination

- RUQ
  - Breath sounds
  - Murphy’s sign
    “Sausage”
  - Rebound Pain at McBurney’s point
  - Dance’s sign
- LUQ
  - Breath sounds
  - Spleen edge
- RLQ
  - Hernias
  - Constipation
  - Rovsing’s sign
  - Torsion
Adolescent Variation: Ectropion

- Squamo-columnar Junction (SCJ)
- Circular area at the cervical os where mucous-producing lining of cervical canal is ectopic as compared to pink, smooth skin of cervix in adults

Clinical Clues

<table>
<thead>
<tr>
<th>Clinical Clues</th>
<th>Suggested Diagnosis</th>
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<tbody>
<tr>
<td>Bilateral pelvic pain</td>
<td>Pelvic Inflammatory Disease (PID)</td>
</tr>
<tr>
<td>Vaginal discharge</td>
<td>Pelvic Inflammatory Disease (PID)</td>
</tr>
<tr>
<td>Cervical motion, uterine or adnexal tenderness</td>
<td>Pelvic Inflammatory Disease (PID)</td>
</tr>
<tr>
<td>Hypotension</td>
<td>Ectopic pregnancy, ruptured hemorrhagic ovarian cyst</td>
</tr>
<tr>
<td>Adnexal mass</td>
<td>Ectopic pregnancy, ruptured hemorrhagic ovarian cyst</td>
</tr>
<tr>
<td>Vaginal mucopurulent discharge</td>
<td>Pelvic Inflammatory Disease (PID)</td>
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Differential Diagnosis Narrowing the List

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<thead>
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<th>Physical Exam</th>
<th>Suggested Diagnosis</th>
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<tbody>
<tr>
<td>Fever</td>
<td>Pelvic Inflammatory Disease (PID), appendicitis</td>
</tr>
<tr>
<td>Bilateral abdominal tenderness</td>
<td>Pelvic Inflammatory Disease (PID)</td>
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<tr>
<td>Cervical motion, uterine or adnexal tenderness</td>
<td>Pelvic Inflammatory Disease (PID)</td>
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<td>Pelvic Inflammatory Disease (PID)</td>
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Likelihood Ratios and Posttest Probability

- Pelvic Inflammatory Disease
  - Presence
    - Purulent endocervical discharge
  - Abdominal rebound tenderness
- Absence
  - CMT
  - Adnexal tenderness
- Ectopic Pregnancy
  - Noncystic extraovarian adnexal mass on USN
- Appendicitis
  - Right lower quadrant pain
  - Migration of pain from periumbilical to right lower abdominal quadrant
  - Fever, Psoas sign
Red Flags for Urgent Consideration

• Early ectopic pregnancy
  o Significant unilateral adnexal pain, LMP > 6 weeks ago
  o Free fluid peritoneal cavity

• Endometritis
  o Frank uterine bleeding; postpartum/post-abortion (>7 days)
  o Fever or significant abdominal pain; postpartum or post-abortion

• Malignancy
  o Fixed hard or nodular uterus or ovaries on bimanual exam

Primary Imaging Modalities

• Plain films
• Ultrasound (USN)
  o Transvaginal
• Computed Tomography (CT) Scan

Consider sensitivity/specificity, risk/benefit to patient, rapidity of diagnosis, cost

Ultrasound (USN)

• Advantages
  o Radiation/contrast free
  o Portable
  o Easy
  o Rapid preliminary results
### Best Test Imaging Method

<table>
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<tr>
<th>Ultrasound</th>
<th>Other Tests</th>
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<tbody>
<tr>
<td><strong>Pregnancy</strong></td>
<td>CT scan</td>
</tr>
<tr>
<td>- Intrauterine</td>
<td>- Further evaluation due to diagnostic uncertainty</td>
</tr>
<tr>
<td>- Ectopic</td>
<td></td>
</tr>
<tr>
<td><strong>Pelvic Disease</strong></td>
<td>Radiographic films: not useful</td>
</tr>
<tr>
<td>- Ovarian neoplasm</td>
<td>- Diagnosis not clear after less invasive testing</td>
</tr>
<tr>
<td>- Ovarian torsion</td>
<td>- Life-threatening or organ threatening</td>
</tr>
<tr>
<td>- Fibroids</td>
<td>- Endometriosis, PID</td>
</tr>
<tr>
<td>- Pelvic abscess</td>
<td></td>
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</tbody>
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### Pregnancy and Pelvic Pain

- USN immediately to evaluate for ectopic pregnancy if βHCG levels are detected
- Positive serum βHCG
  - Gestational sac visible βHCG level > 1500 mIU/mL
  - One half women with ectopic pregnancy βHCG level < 2000 mIU/mL
- Challenge evaluating early pregnancy vs ectopic pregnancy
  - Pseudo sac mimics intrauterine pregnancy in 5-10% ectopic pregnancies
    - Single echogenic ring
    - Gestational sac
    - Double echogenic ring

### Outpatient Evaluation

- If βHCG levels are decreasing, may indicate resolving pregnancy
  - Decline by 50-66% every 3 days
  - Observe and obtain serial βHCG levels
  - Follow until levels are undetectable
Pelvic Inflammatory Disease (PID)

• Clinical Diagnosis
  o Not diagnosis of exclusion
  o Must meet clinical criteria
  o Low threshold for clinical diagnosis
    o 65-90% sensitivity

Clinical Criteria
• Abdominal pain and ≥ 1 of the following on bimanual exam:
  o Cervical Motion Tenderness (CMT) or uterine/adnexal tenderness
• ≥ 1 of the following enhances criteria
  o T > 101, abnormal cervical muco-purulent discharge
  o Increased WBC’s on wet prep, increased ESR/CRP
• Most specific criteria
  o Transvaginal USN, laparoscopy, biopsy

STI Testing
Nucleic Acid Amplification Tests (NAAT)

• Detect DNA and RNA sequences in chlamydia and gonorrhea
• Recommended by CDC
• High sensitivity and specificity; comparable to cervical cultures via DNP probe
  o Vaginal swab
  o Urine sample

Other Diagnostic Testing Considerations

• Serum βHCG / Urine βHCG
  o All child-bearing age adolescents/women
• Wet prep/KOH
  o Bacterial Vaginosis is linked to PID
• CBC/HCT, WBC’s
  o Bleeding, infection
• Urinalysis
  o Leucocytes
  o Pyuria-culture
Uterovaginal Anomalies

OBSTRUCTION  ABSENCE

Development - What Goes Wrong?

OBSTRUCTION
• Imperforate hymen and variants
• Fusion Anomalies
  o TRANSVERSE: Failure of upper and lower vaginal fusion
  o VERTICAL: Imperfect fusion of paired Müllerian structures

ABSENCE
• Atresia
• Androgen Insensitivity

Embryology
Embryology

Development - What Goes Wrong?

OBSTRUCTION
• Imperforate hymen and variants
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  - TRANSVERSE: Failure of upper and lower vaginal fusion.
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ABSENCE
• Atresia
• Androgen Insensitivity

Imperforate Hymen
Imperforate Hymen Can Be Problematic

Normal Variations of Hymen

Imperforate Hymen

Presenting Symptoms

Adolescence

- At the time of puberty, symptoms may include amenorrhea, cyclic abdominal pain, and an abdominal mass secondary to hematocolpos or hydrometrocolpos
- Introital examination may show a bulging membrane with bluish discoloration behind it due to hematocolpos.
Case – Imperforate Hymen

What Goes Wrong?

OBSTRUCTION
- Imperforate hymen and variants
- Fusion Anomalies
  - TRANSVERSE: Failure of upper and lower vaginal fusion
  - VERTICAL: Imperfect fusion of paired Mülleran structures

ABSENCE
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- Androgen Insensitivity
Transverse Vaginal Septum

Septum bulging out from blood behind it.

Obstructed Transverse Septum

OBSTRUCTION
- Imperforate hymen and variants
- Fusion Anomalies
  - TRANSVERSE: Failure of upper and lower vaginal fusion.
  - VERTICAL: Imperfect fusion of paired Müllerian structures

ABSENCE
- Atresia
- Androgen Insensitivity

What Goes Wrong?
Müllerian Malfusion

If there is no obstruction, these are usually asymptomatic and found serendipitously.

If anatomy asymmetrical, get renal ultrasound.

Counseling regarding high risk pregnancy in order

Fusion Failure + Obstruction = Symptoms

Herlyn-Werner-Wunderlich or OHVIRA Syndrome
(Obstructed hemi-vagina ipsilateral renal agenesis)
### Development - What Goes Wrong?

<table>
<thead>
<tr>
<th>Obstruction</th>
<th>Absence</th>
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<tbody>
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<td>• Imperforate hymen and variants</td>
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<td>upper and lower vaginal</td>
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<td>o VERTICAL: Imperfect fusion</td>
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</tr>
<tr>
<td>of paired Müllerian structures</td>
<td></td>
</tr>
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</table>

### Absence of Vagina/Uterus

**ATRESIA**

- Mayer-Rokitansky-Kuster-Hauser
  - Normal female (XX) with Müllerian agenesis
  - No vagina or short dimple
  - Variable fallopian tube and rarely uterine cavity
  - No cervix
  - Present with primary amenorrhea
  - Normal ovaries
  - Renal anomalies (agenesis) common
  - Rare skeletal issues

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**Diagram**

- Diagram of female reproductive system, highlighting various structures such as the uterus, fallopian tubes, and ovaries.

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WHO Classification Ovarian Masses –
Commonly Seen in Children and Adolescents

<table>
<thead>
<tr>
<th>Type of Ovarian Mass</th>
<th>Diagnosis</th>
<th>Malignant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple Cyst</td>
<td>Corpus luteum, Corpus luteum cyst</td>
<td>..........</td>
</tr>
<tr>
<td>Germ cell tumors</td>
<td>Malignant germ cell tumors, mature cystic teratomas, hemorrhagic teratomas, yolk sac tumors, embryonal carcinoma, Yolk sac tumors, endodermal sinus tumor, polyembryoma</td>
<td>..........</td>
</tr>
<tr>
<td>Sex Cord Stromal tumors</td>
<td>Teratoma, Sex cord stromal tumors</td>
<td>..........</td>
</tr>
<tr>
<td>Surface Epithelial tumors</td>
<td>Serous cystadenoma, mucinous cystadenoma, endometrioid adenocarcinoma, endocervical adenocarcinoma, serous adenocarcinoma, mucinous adenocarcinoma, embryonic epithelial tumors, malignant teratomatous</td>
<td>..........</td>
</tr>
</tbody>
</table>

Physiologic Phenomenon
Simple Cyst Management

- Repeat US in 4-8 weeks
- Resolution
- Growth
- Persistence
- Partial Resolution
- Stop
- Surgery
- Oral Contraceptives
- No Change
- Observation
- Growth
- Surgery
- Observation
- Partial Resolution

Ovarian Cysts

F/U Ultrasound in 6 weeks

**Indications for Surgical Intervention in Children with Ovarian Mass**

- Persistent symptoms
- Clinical suspicion of torsion
- Signs and symptoms of complications such as hydronephrosis
- Imaging characteristic suggestive of neoplasm (complex/solid mass, metastasis, ascites)
- Positive tumor markers
- Unclear origin of mass
- Failure of cyst resolution or cyst growth in serial imaging
- Large masses with complex imaging
- Rapid virilization or estrogenization
- Precocious puberty
Serum Tumor Markers Elevated in Ovarian Neoplasms

<table>
<thead>
<tr>
<th>Tumor Markers</th>
<th>Associated Neoplasm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha fetoprotein (AFP)</td>
<td>Immature Teratoma&lt;br&gt;Nontesticular germ cell tumors&lt;br&gt;Embryonal carcinoma</td>
</tr>
<tr>
<td>Human chorionic gonadotropin (hCG)</td>
<td>Dysgerminoma&lt;br&gt;Endodermal sinus tumors&lt;br&gt;Brenner tumors</td>
</tr>
<tr>
<td>Lactate dehydrogenase (LDH)</td>
<td>Dysgerminoma&lt;br&gt;Endodermal sinus tumors</td>
</tr>
<tr>
<td>CA 125</td>
<td>Ovarian tumors</td>
</tr>
<tr>
<td>CA 19-9</td>
<td>Ovarian tumors</td>
</tr>
<tr>
<td>Chorionic gonadotropin (CG)</td>
<td>Ovarian tumors</td>
</tr>
<tr>
<td>Testosterone</td>
<td>Sertoli-Leydig tumors</td>
</tr>
<tr>
<td>Estradiol</td>
<td>Juvenile granulosa cell tumors</td>
</tr>
</tbody>
</table>

Classification of Ovarian Masses

**Origin**<br>Surface Epithelial<br>Germ Cell<br>Sex Cord - Stromal<br>Metastasis to Ovaries

<table>
<thead>
<tr>
<th>Overall Frequency</th>
<th>Surface Epithelial</th>
<th>Germ Cell</th>
<th>Sex Cord - Stromal</th>
<th>Metastasis to Ovaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Frequency</td>
<td>65-70%</td>
<td>15-20%</td>
<td>5-10%</td>
<td>0%</td>
</tr>
<tr>
<td>Proportion of Malignant Ovarian Tumors</td>
<td>80%</td>
<td>3-5%</td>
<td>2-3%</td>
<td>5%</td>
</tr>
<tr>
<td>Age Group Affected</td>
<td>20+ Years</td>
<td>0-25+ years</td>
<td>All ages</td>
<td>Variable</td>
</tr>
</tbody>
</table>
| Types | Serous Tumor<br>Mucinous tumor<br>Endometrioid tumor<br>Clear cell tumor<br>Brenner tumor<br>Cystadenofibroma<br>Teratoma<br>Dysgerminoma<br>Endodermal sinus tumor<br>Choriocarcinoma<br>Granulosa cell tumor<br>Sex cord-stromal tumor<br>Sertoli-Leydig cell tumor<br>Granulosa-theca cell tumor

Classification of Ovarian Masses

**Origin**<br>Surface Epithelial<br>Germ Cell<br>Sex Cord - Stromal<br>Metastasis to Ovaries

<table>
<thead>
<tr>
<th>Overall Frequency</th>
<th>Surface Epithelial</th>
<th>Germ Cell</th>
<th>Sex Cord - Stromal</th>
<th>Metastasis to Ovaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Frequency</td>
<td>65-70%</td>
<td>15-20%</td>
<td>5-10%</td>
<td>0%</td>
</tr>
<tr>
<td>Proportion of Malignant Ovarian Tumors</td>
<td>80%</td>
<td>3-5%</td>
<td>2-3%</td>
<td>5%</td>
</tr>
<tr>
<td>Age Group Affected</td>
<td>20+ Years</td>
<td>0-25+ years</td>
<td>All ages</td>
<td>Variable</td>
</tr>
</tbody>
</table>
| Types | Serous Tumor<br>Mucinous tumor<br>Endometrioid tumor<br>Clear cell tumor<br>Brenner tumor<br>Cystadenofibroma<br>Teratoma<br>Dysgerminoma<br>Endodermal sinus tumor<br>Choriocarcinoma<br>Granulosa cell tumor<br>Sex cord-stromal tumor<br>Sertoli-Leydig cell tumor<br>Granulosa-theca cell tumor
FIGO and COG

Staging Guidelines and Practices

Germ Layers
Mature Cystic Teratoma

- Normal Right Ovary
- Tumor from other side
- Peeled off ovary to preserve gonad
Normal Ovary  
Rolled up Ovary, Sewn Closed
Ovarian Torsion

- Proportion of premenarchal to postmenarchal
- Lower right abdominal pain most common location
- Abdominal tenderness main finding
- Palpable mass
- Right sided torsion more common than left
- Pathology
  - Pelvic Ultrasound
  - Management
    - Detorsion
      - Oophorectomy?
      - Oophoropexy?
      - Detorsed adnexa and contralateral side?
Key Points to Remember

- Entertain pelvic etiology for abdominal pain in every female
- Virtually every female ages 9-55 years old must be considered pregnant until proven otherwise
- 50% of abdominal pain is due to functional bowel syndrome—related to stress (diagnosis of exclusion only)
- Patients with rebound tenderness, distention and/or involuntary guarding require surgical consultation
- Ectopic pregnancy is a medical emergency
- 15% of all maternal deaths in 1st trimester
- Pelvic Inflammatory disease must be followed up in 72 hours or requires hospitalization

Questions

References


References


