Gynecology & Obstetrics

Khaled khalilia

IMLE

2016
### Menstrual disorders

<table>
<thead>
<tr>
<th>Amenorrhea</th>
<th>Primary Amenorrhea</th>
<th>Secondary Amenorrhea</th>
</tr>
</thead>
</table>
| - Absence of menes for X ≥ 3 Months  
- Injury to arcuate nucleus | - No Menes at Age 14 without secondary sexual development.  
- No Menes at Age 16 with/without secondary sexual development. | - No Menes for X> 6 months or 3 cycles I a women with a previous normal cycle. |
| - Normal menes:  
  - Frequency → 21-35 day  
  - Duration → 3-7 day  
  - Volume → 30-80 ml | - With secondary sex development:  
  - Müllerian agenesis  
  - Androgen insensitivity syndrome (Morris)  
  - Imperforate Hymen  
  - Hyperprolactinemia ↑  
  - Hypothyroidism ↓  
  - Polycystic Ovary Syndrome (PCOS)  
  - Cushing Syndrome  
  - Anorexia Nervosa  
  - Congenital Adrenal Hyperplasia  
  - Pituitary Tumor | - Pregnancy (pregnancy should be ruled out first)  
- Functional hypothalamic (stress, exercise)  
- Sheehan Syndrome (Ant. Pituitary Necrosis)  
- Asherman Syndrome (intrauterine scarring following D&C)  
- Arcuate nucleus injury  
- Ovarian Failure  
- Hyperprolactinemia ↑  
- polycystic ovarian syndrome |
| - Oligomenorrhea: bleeding > 35 day  
- Polymenorrhea: bleeding < 21 day  
- Metrorrhagia: bleeding at irregular interval  
- Hypomenorrhea: low intensity bleeding ↓  
- Hypermenorrhea: high intensity bleeding ↑ | - without secondary sex development:  
  - Kallman Syndrome  
  - Turner Syndrome XO (Gonadal Dysgenesis)  
  - Diabetes Mellitus (DM) | - |

<table>
<thead>
<tr>
<th>Virilization</th>
<th>Hirsutism</th>
<th>Dysmenorrhea</th>
</tr>
</thead>
</table>
| **Def:** excessive growth of antigeneic, responsive hair in women. (Face) | **ET:**  
- Congenital adrenal hyperplasia  
- Phenylketonuria  
- Androgen insensitivity syndrome  
- Dahlberg syndrome  
- Progesterone ↑  
- Cushing Syndrome  
- Ovarian Tumor  
- Von-Hippel-Lindau  | **Primary**  
Menstrual pain in absence of organic disease.  
**Secondary**  
Menstrual pain due to organic disease. |
| **ET:**  
- Congenital adrenal hyperplasia  
- Phenylketonuria  
- Androgen insensitivity syndrome  
- Dahlberg syndrome  
- Progesterone ↑  
- Cushing Syndrome  
- Ovarian Tumor  
- Von-Hippel-Lindau | **Def:** Menstrual pain in absence of organic disease.  
**ET:**  
- Allergic/psychogenic  
- Ovulatory cycle  
- Normal pelvic exam | **Primary**  
Menstrual pain in absence of organic disease.  
**Secondary**  
Menstrual pain due to organic disease. |
| **Tx:**  
- GnRH-Agonist  
- Cyproterone Acetate  
- Combined Oral Contraceptive | **Tx:**  
- Antiprostaglandins (Naproxen)  
- NSAIDs (first line)  
- Combined oral contraceptive  
- Progestin (IM, oral, IUD)  
- Endometrial ablation (increase the risk of infertility, miscarriage, preterm labor, antepartum hemorrhage, and abnormal placental attachment. It is therefore contraindicated in women who wish to maintain the possibility of fertility.) | **Tx:**  
- GnRH-Agonist  
- Cyproterone Acetate  
- Combined Oral Contraceptive | **Tx:**  
- Antiprostaglandins (Naproxen)  
- NSAIDs (first line)  
- Combined oral contraceptive  
- Progestin (IM, oral, IUD)  
- Endometrial ablation (increase the risk of infertility, miscarriage, preterm labor, antepartum hemorrhage, and abnormal placental attachment. It is therefore contraindicated in women who wish to maintain the possibility of fertility.) |

### Development + Puberty

- The age of onset of puberty varies and is correlated with osseous maturation  
- The breast bud (thelarche) is the 1st sign of puberty (10-11 yr), followed by pubic hair (pubarche) 6-12 mo later.  
- Precocious puberty → pubertal changes before age 8 or menarche before age 10.  
  precocious puberty **Tx** → long-acting GnRH agonist → leuprolide (Lupron)  
- The production of sex steroids induces secondary sex characteristics, endometrial proliferation (leading to menstruation), vaginal cornification, and growth of long bones.
## Gynecologic Disorders

<table>
<thead>
<tr>
<th>Gestational Trophoblastic Disease</th>
<th>Leiomyoma (Fibroids)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Complete / Partial vesicular mole</td>
<td>• Fibromyoma, Fibroid, Leiomyoma, Myoma</td>
</tr>
<tr>
<td>2. Invasive mole (chorio-adenoma destruens)</td>
<td>• Uterine myoma ➔ most common benign Tumor of Female Genital Tract.</td>
</tr>
<tr>
<td>3. Placental-site trophoblastic tumor</td>
<td>• Not detectable before Puberty. (↑ during reproductive years x&gt; 35)</td>
</tr>
<tr>
<td>4. Chorio-carcinoma</td>
<td>• Have rich vascular supply</td>
</tr>
</tbody>
</table>

### Gestational Trophoblastic Disease
- Anemia ➔ most common complication
- Types:
  - Summucous:
    - Intramural: within uterine wall ➔ prolonged bleeding + Dysmenorrhea
  - Sunserous: bladder symptoms, constipation, back pain

### Leiomyoma (Fibroids)
- Fibromyoma, Fibroid, Leiomyoma, Myoma
- Uterine myoma ➔ most common benign Tumor of Female Genital Tract.
- Not detectable before Puberty. (↑ during reproductive years x> 35)
- Have rich vascular supply
- Anemia ➔ most common complication
- Types:
  - Summucous:
    - Intramural: within uterine wall ➔ prolonged bleeding + Dysmenorrhea
    - Sunserous: bladder symptoms, constipation, back pain

### Symptoms (S+S):
- Asymptomatic
- Uterine Bleeding
- Dysmenorrhea
- Pelvis pain
- Pelvis Pressure
- Urinary frequency + urgency
- Urinary retention
- Constipation
- Infertility
- Compression of ureter, Bladder, Rectum.

### Diagnosis (Dx):
- Pelvis examination
- US (confirm + location)
- CBC (Anemia)
- Biopsy (exclude cancer)
- IV Urography

### Complications:
- Anemia (most common)
- Inflammation (Endometritis, salpingitis)
- Torsion
- Obstruction (Bowel, urinary)
- Malignancy

### Treatment (Tx):
- Only if symptomatic, rapidly enlarging, menorrhagia, intracavitary.
- Treat anemia if present.

#### Conservative (watch and wait)
- If symptoms absent or minimal
- If fibroids <6-8 cm or stable in size
- If currently pregnant due to increased risk of bleeding (follow-up U/S if symptoms progress).

#### Medical:
- NSAIDS
- OCC /Depo-provera
- GnRH-analouges: (Leuprolide, Danazol)
  - Short term (6 months)
  - Before myomectomy, Hysterectomy ➔ reduce fibroid size
  - Reduce bleeding
  - Progesterone
  - Mifepristone

#### Surgery:
- Myomectomy (preserve fertility)
- Hysterectomy
## Tumors

<table>
<thead>
<tr>
<th>Ovarian Tumor</th>
<th>Endometrial Cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Benign</strong>: cystic, smooth, unilateral, mobile</td>
<td><strong>Adenocarcinoma</strong>: x &gt; 80% (most common)</td>
</tr>
<tr>
<td><strong>Malignant</strong>: Solid, nodular, Bilateral, Fixed</td>
<td><strong>↑Estrogen, X progesterone</strong>: Endometrium → Hyperplasia → Endometrial Cancer</td>
</tr>
<tr>
<td><strong>Protective Factors</strong>: OCP, Pregnancy, Breastfeeding</td>
<td><strong>most endometrial cancers are diagnosed as Stage I</strong></td>
</tr>
<tr>
<td><strong>Serous</strong>: most common ovarian cancer 50% (Postmenopausal)</td>
<td></td>
</tr>
<tr>
<td><strong>Most common in Young patient (20s)</strong></td>
<td></td>
</tr>
</tbody>
</table>

- Germ Cell origin (Teratoma, dysgerminoma)

### Risk Factors:
- ↑Age > 40
- Nulliparity
- Family History (BRCA-1)

### Dx:
- CA-125
- US
- Labaroscopy (Biopsy)

### S+S:
- Asymptomatic
- Abd. discomfort (Nausea, Dyspepsia)
- Pelvic mass → Compression
- Constipation
- Urinary frequency
- Menstrual irregularities
- Ascites

### Dx:
- Endometrial Sample:
  - Endometrial Biopsy (office)
  - D&C +/- Hysteroscopy
- US
- X-ray, CT, MRI, Urography

### S+S:
- ↑Age (60-70)
- Uterine Bleeding (postmenopausal).
- Uterus: enlarged, soft
- Hematuria

### Risk Factors:
- Age postmenopausal ↑↑
- obesity ↑
- Estrogen replacement Therapy
- nulliparity
- late menopause (after 52)
- polycystic ovarian syndrome
- estrogen-producing tumors
- Tamoxifen

### Stage:

#### FIGO Classification

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Limited to Uterine Fundus</td>
</tr>
<tr>
<td>II</td>
<td>Myometrial invasion</td>
</tr>
<tr>
<td>III</td>
<td>Myometrial Invasion X &gt; 50%</td>
</tr>
<tr>
<td>IV</td>
<td>Extra to Cervix → Stromal invasion</td>
</tr>
</tbody>
</table>

#### FIGO Stages:

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1: Local/Regional spread</td>
<td></td>
</tr>
<tr>
<td>3A</td>
<td>Invade serosa / Adnexa</td>
</tr>
<tr>
<td>3B</td>
<td>Vaginal metastasis</td>
</tr>
<tr>
<td>3C</td>
<td>Pelvis metastasis / para-aortic LN metastasis</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stage 4: Distant metastasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>4A</td>
</tr>
<tr>
<td>4B</td>
</tr>
</tbody>
</table>

### Tx:

- **Stage I:**
  - Total Hysterectomy
  - + Bilateral Salpingo-oophorectomy
  - + peritoneal cytore. Examination

<table>
<thead>
<tr>
<th>Stages 2 + 3, grade 1 with deep myometrial invasion:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Hysterectomy + Bilateral Salpingo-oophorectomy + pelvic and para-aortic lymphadenectomy.</td>
</tr>
<tr>
<td>Extended-field radiation for extra pelvic cancer (depending on the site and extent)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stage 4: systemic chemotherapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recurrence: high-dose progesterins (Depo-Provera)</td>
</tr>
</tbody>
</table>

### Extra:
- ovarian endodermal sinus tumor → Schiller-duval body
- mucinous ovarian tumors → Usually very large.
- Intestine → first affected by spread and encroachment of ovarian cancer.
- the leading cause of gynecological cancer deaths
- Androgen-secreting tumors → produce Hirsutism (Sertoli-leydig cell tumors, Luteoma)

### Endometrial Hyperplasia
- It is considered weakly premalignant because it progresses to endometrial carcinoma in approximately 1% of women.
## Tumors

<table>
<thead>
<tr>
<th>Uterine Sarcoma</th>
<th>Vulvular Cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Types:</strong></td>
<td><strong>Squamous cell carcinoma:</strong></td>
</tr>
<tr>
<td></td>
<td>most common type 90%</td>
</tr>
<tr>
<td>Arise from Stromal components (Endometrial stroma, mesenchymal).</td>
<td>Pruritus</td>
</tr>
<tr>
<td>Bad prognosis</td>
<td>Bloody vaginal discharge</td>
</tr>
<tr>
<td>most common after age 40</td>
<td>Postmenopausal bleeding</td>
</tr>
<tr>
<td>rapidly enlarging uterus → Pain</td>
<td>Ulcerated lesion</td>
</tr>
<tr>
<td>Vaginal Bleeding: most common symptom</td>
<td>cauliflower-like lesion</td>
</tr>
<tr>
<td>vaginal discharge.</td>
<td><strong>S+S:</strong></td>
</tr>
</tbody>
</table>

### Lichen Sclerosus

- White, thin skin extending from labia to perianal area.
- Most common in postmenopausal women (can occur at any age)
- Associated with a higher risk of cancer → Vulvar carcinoma

**S+S:**
- Pruritus
- Dyspareunia
- Burning

**Tx:** Topical steroid (clobetasol)

### Squamous cell Hyperplasia

- Surface thickened and hyperkeratotic
- Postmenopausal women ↑
- Pruritus (most common symptom)

**Dx:** Biopsy

**Tx:** Corticosteroid

## Squamous cell carcinoma staging

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Carcinoma in situ</td>
</tr>
<tr>
<td>I</td>
<td>Limited to vaginal wall x&lt;2cm</td>
</tr>
<tr>
<td>II</td>
<td>Limited to vulva/perineum X&gt;2cm</td>
</tr>
<tr>
<td>III</td>
<td>Spread to lower urethra/anus/Unilateral LN</td>
</tr>
<tr>
<td>IV</td>
<td>Invade into Bladder/rectum/bilateral LN</td>
</tr>
<tr>
<td>IVa</td>
<td>Distant metastasis</td>
</tr>
</tbody>
</table>

### Risk factors:
- HPV 16 positivity
- Smoking
- Immunosuppression

### Staging:
Done during surgery

### Tx:
- Unilateral lesion without LN involvement → modified radical vulvectomy
- Bilateral → radical vulvectomy
- Involved LN must undergo Lymphadenectomy

### Lymphatic drainage:
- Superficial inguinal lymph nodes → Deep femoral nodes → External iliac lymph nodes

### Paget Disease:

- Intraepithelial neoplasia

**S+S:**
- Soreness
- Pruritus
- Red lesion + superficial white coating

**Dx:** Biopsy (always)

**Tx:**
- Bilateral lesion: radical vulvectomy
- Unilateral lesion: modified Vulvectomy