Diseases of Vulvovaginal and Uterus

Vulva
- Non-Neoplastic Epithelial Disorder (Vulvar Dystrophy)
  - Lichen Sclerosus
  - Lichen Simplex Chronicus
- Vulvitis
  - Condylomas and Vulvar Intraepithelial Neoplasm
    - VIN Grade 1
    - VIN Grade 2
    - VIN Grade 3
- Neoplasms of the Vulva
  - Condylomata and Vulvar Intraepithelial Neoplasm
    - VIN Grade 1
    - VIN Grade 2
    - VIN Grade 3
  - Melanoma of the Vulva
  - Condylomata Lata
  - Condylomata Accuminata

Cervix
- Cervical Carcinoma
- Cervical Polyps
- Neoplasms of the Cervix
  - VIN Grade 1
  - VIN Grade 2
  - VIN Grade 3
  - Melanoma of the Cervix

Uterus
- Myometrium
  - Leiomyoma
  - Leiomyosarcoma
- Endometrium
  - Endometrial Carcinoma
### Vulva

#### Non-Neoplastic Epithelial Disorder (Vulva Dystrophy)
- Both condition may appear in different areas at the same patient
- Macroscopically appear as white lesion: **Leukoplakia**

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<tr>
<th>Diseases</th>
<th>Epidemiology/ Clinical Features</th>
<th>Morphology Gross</th>
<th>Microscopic</th>
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</table>
| Lichen Sclerosus              | • All groups of age can be affected  
  o Most commonly postmenopause  
  • Might be due to autoimmunity  
  • 1-4% patient progress into cancerous changes                                                                                                                         | • Plaques that are  
  o White  
  o Smooth  
  • Papules that coalesce  
  • Entire Vulva may be affected  
  o Labia can be  
  ▪ Atrophic  
  ▪ Stiffened  
  o Vaginal orifice may constrict                                                                                                                                          | • Thinning of the epidermis  
• Disappearance of rete pegs  
• Superficial Hyperkeratosis  
• Dermal fibrosis  
• Scanty Mononuclear Inflammatory cells |
| Lichen Simplex Chronicus      | • Doesn't associate with cancer but often present at the margins of already establish cancer of the Vulva  
  • Previously called Hyperplastic Dystrophy                                                                                                                                                     | • Hyperkeratosis  
• Appear as Leukoplakia                                                                                                           | • Epithelium thickening  
• Epithelium shows increase in Mitotic activity in  
  o Basal layer  
  o Prickle layer  
• The hyperplastic epithelium doesn't show Atypia                                                                                     |
<table>
<thead>
<tr>
<th>VIN Grade I</th>
<th>Epidemiology/ Clinical Features</th>
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</table>
| **VIN Grade I** | • Strong association with HPV  
  o HPV11  
  o HPV16  
  • Vulva Condylomas are not Precancerous lesion by exists along with foci of VIN  
  • Both due to HPV, but HPV for VIN are different serotype | Condylomata Lata  
  • Flat  
  • Moist  
  • Minimally elevated lesion  
  • Associated with Secondary Syphilis | Areas of Leukoplakia  
  o Thickening of the Epithelium | Koilocytes  
  o Perinuclear cytoplasmic vacuolation  
  o Nuclear angular pleomorphism  
  Koilocytes are hallmark cells for HPV infection  
  Lesions  
  o HPV positive  
  ▪ Poorly differentiated Squamous Cell Carcinoma  
  o HPV negative  
  ▪ Well-differentiated Keratinizing Squamous cells |
| **Condylomata Accuminata** | • Can be either  
  o Papillary  
  o Distinctively elevated  
  o Flat  
  • Happens anywhere on the Anogenital surface  
  • Can be single or multiple | |

| VIN Grade 2 and Grade 3 | Epidemiology/ Clinical Features | May present with  
  • Vaginal or Cervical Carcinoma  
  • Condylomata Accuminata  
  • Carcinoma In Situ  
  • Suggesting that it may be associated with HPV | Types  
  o Squamous Cell Carcinoma – 90%  
  o Adenocarcinoma  
  o Melanomas  
  o Basal Cell Carcinoma |
<p>| <strong>VIN Grade 2 and Grade 3</strong> | | | |</p>
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<tr>
<td>Extramammary Paget Disease of the Vulva</td>
<td>• Paget disease may extend&lt;br&gt;  o Skin appendages&lt;br&gt;  o Invade locally&lt;br&gt;  o Metastasize into distant tissue within 2-5 years</td>
<td>• Solitary or multiple well-demarcated foci of red inflammatory like area&lt;br&gt;  • Usually at the Labia Majora</td>
<td>• Intraepithelial Carcinoma&lt;br&gt;  • Scattered single cells&lt;br&gt;  • Small clusters of recognizable Carcinomatous cells</td>
</tr>
<tr>
<td>Melanoma of the Vulva</td>
<td>• Highly aggressive neoplasms&lt;br&gt;  • Account less than 3-5% of total Vulvar cancers</td>
<td>• May look like Paget disease in the early stage</td>
<td>• Melanoma cells may disperse</td>
</tr>
</tbody>
</table>
## Cervix

### Cervical Carcinoma
- Usually appeared as
  - Squamous Cell Carcinoma – the most common
  - Adenocarcinoma
- The most common cancer in women in the world
- Due to HPV
- It is the result from the Cervical Intraepithelial Neoplasia

#### Signs and Symptoms
- **Earlier stage**
  - Irregular vaginal bleeding
  - Mostly Postcoitally, but can happen spontaneously between menses
  - Leukorrhea
  - Painful coitus
  - Dysuria
- **Larger cancers**
  - Bleed spontaneously
  - Foul smelling vaginal discharge
  - Pelvic pain

#### Metastasized cancer
- Obstructive Uropathy
- Back pain
- Leg swelling
- Venous and lymphatic obstruction
- Exophytic necrotic tumor

### Diseases

<table>
<thead>
<tr>
<th>CIN Grade I (Mild Dysplasia)</th>
<th>Epidemiology / Clinical Features</th>
<th>Morphology</th>
</tr>
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<tbody>
<tr>
<td><strong>Predisposing factors</strong></td>
<td>Flat Condyloma</td>
<td>Koilocytic changes mostly at the superficial layers of the Epithelium</td>
</tr>
<tr>
<td>o Early age at first sexual intercourse</td>
<td></td>
<td></td>
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<tr>
<td>o Multiple sexual partners</td>
<td></td>
<td></td>
</tr>
<tr>
<td>o A male partner having multiple previous sexual partners</td>
<td></td>
<td></td>
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<tr>
<td>o Infections</td>
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<tr>
<td>• Persistent infection by HPV</td>
<td></td>
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<tr>
<td>• HPV16</td>
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<tr>
<td>• HPV18</td>
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<tr>
<td>• HIV</td>
<td></td>
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<tr>
<td>• Chlamydia</td>
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<tr>
<td>o Smoking</td>
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<tr>
<td>o Oral contraceptives</td>
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<tr>
<td>o Multiple pregnancies</td>
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<tr>
<td>o Low socioeconomic status</td>
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<tr>
<td>o Family history</td>
<td></td>
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<tr>
<td><strong>Diagnostic Methods</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o Pap smear</td>
<td></td>
<td></td>
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<tr>
<td>o Colposcopy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>o Cone biopsy (conization)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Preventive measures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o Yearly routine pap smear</td>
<td></td>
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<tr>
<td>• Started at</td>
<td></td>
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<tr>
<td>• First sexual intercourse</td>
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<td></td>
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<tr>
<td>• 18 years old</td>
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<tr>
<td>o Can be done together to check for HPV</td>
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<tr>
<td>o If both positive or 3 consecutive positive Pap smear, check every 3 years</td>
<td></td>
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<td>o Test continues until</td>
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<tr>
<td>• 60-75 years old</td>
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<tr>
<td>• Undergone Hysterectomy</td>
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</tr>
</tbody>
</table>

| CIN Grade II (Moderate Dysplasia) | | |
| CIN III (Severe Dysplasia) | | |

<p>| Invasive Cervical Carcinoma | | |
| Tumors can be either | | |
| • Invincible | | |
| • Exophytic | | |
| Encircling tumor in the Cervix forms the Barrel Cervix | | |
| • Can be palpated directly | | |
| Extension into Parametrial soft tissues may fix the Uterus to the pelvic structures | | |
| May spread to surrounding tissues through | | |
| • Lymphatic (Paraaortic Lymph Nodes) | | |
| • Haematogenous | | |
| Invasion into the stroma | | |
| Increase nuclear cytoplasmic ratio | | |
| Pleomorphism | | |
| Loss in tissue polarity | | |
| Area of | | |
| • Haemorrhage | | |
| • Necrosis | | |</p>
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| **Leiomyoma/ Fibroid of Uterus** | • Most common benign tumor in women  
  • 30-50% happen during reproductive life  
  • **Causes**  
  o Genetic influences  
    ▪ Common in black rather than white  
  o Estrogen in OCPs  
    ▪ Stimulate their growth  
  • **Clinical features**  
  o Mostly asymptomatic  
  o Menorrhea  
  o Large masses can be palpated on the pelvic region  
  o Can also produce dragging mass | • Sharply circumscribed  
  • Firm gray-white masses  
  • Whorled cut surface  
  • May occur singly or multiple sites scattered within the Uterus  
  • Variable in size  
    o Can be small  
    o Massively large  
  • **Location**  
    o Intramural  
      ▪ Embedded within Myometrium  
    o Submucosal  
      ▪ Beneath Endometrium  
    o Subserosal  
      ▪ Beneath the Serosa  
      ▪ This develops to surrounding organ termed as Parasitic Leiomyoma | • Whirling bundle of smooth muscle cells  
  • Cell duplicating the normal cells of Myometrium  
  • Foci of fibrosis  
  • Cystic degeneration  
  • Haemorrhage |

| **Leiomyosarcoma** | • Arise from Mesenchymal cells of Myometrium  
  • Recurrence after removal is common  
  • Metastasize widely | • Almost always solitary tumor  
  • Bulky mass infiltrating uterine wall  
  • Presented as Polypoid lesions projecting into the Uterine cavity | • Wide range of differentiation  
  • Some well-differentiated tumor cells lie between Benign and Malignant cells  
    o These cells called Leiomyoblastomas  
  • Frequent mitosis  
    o With/o cellular atypia  
  • Less numerous mitosis cellular atypia |
### Uterus

#### Tumor of the Endometrium

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| **Endometrial Carcinoma** | • Usually Adenocarcinoma  
  • Happens commonly in  
  o 55 to 65 years old  
  • Strictly uncommon below 40s  
  • High prevalence in developed country where the high fat dietary intake  
  • **Predisposing factors**  
  o Obesity  
    ▪ Increase synthesis of Estrogen  
  o Diabetes  
  o Hypertension  
  o Infertility  
    ▪ Nulliparity  
    ▪ Single lady  
    ▪ Nonovulatory cycle  
  o Unopposed estrogen  
  o Previous Pelvic radiation therapy  
  o Family history of breast and ovarian tumors  
  • **Signs and Symptoms**  
  o First symptoms  
    ▪ Leukorrhea  
    ▪ Irregular bleeding  
  o Later  
    ▪ Masses become palpable  
    ▪ Abnormal Uterine bleeding in  
      • Postmenopausal women  
      • Premenopausal women  
    ▪ Vaginal discharge  
  | • Closely resemble normal Endometrium  
  • Can be either  
  o Exophytic  
  o Infiltrative  
  • **Staging**  
  o **Stage 1**  
    ▪ Confined to Corpus  
  o **Stage 2**  
    ▪ Involvement of Cervix  
  o **Stage 3**  
    ▪ Beyond Uterus  
    ▪ Within true Pelvic  
  o **Stage 4**  
    ▪ Distant metastasize  
    ▪ Involvement of other Viscera  
  | • Range of differentiation  
  o Mucinous  
  o Ciliated/tubal  
  o Squamous  
  o Adenosquamous  
  • Originate from the Mucosa  
  o Infiltrate Myometrium  
  o Into lymph nodes and blood vessels  
    ▪ Spread into distant tissues  |

#### Prognosis

- **Stage 1**  
  o 90% 5 years survival rate  
- **Stage 2**  
  o 30-50% 5 years survival rate  
- **Stage 3 and 4**  
  o Less than 20% 5 years survival rate