

Pathology

Vulva And Vagina (Lec 6)



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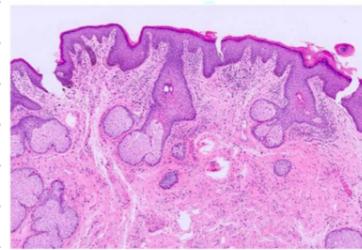
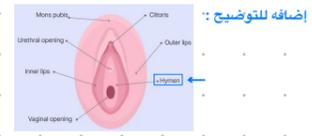
Vulva

-is the external part of female genital system

-includes the moist hair-bearing skin and mucosa in that region

-constitutes the portion of female genitalia that is external to the hymen

-can be affected by many pathology like:
 - Inflammation.
 - Non-neoplastic epithelial disorders.
 - Neoplastic lesions.



Labia majora showing keratinized stratified squamous epithelium with hair follicles and sebaceous glands

Inflammatory lesions (Vulvitis)

Exogenous stimulus:

contact irritant dermatitis,
 contact allergic dermatitis.

Infection: like sexually transmitted disease (STD):

- o Human papillomavirus (HPV): the causative agent of condyloma acuminatum and vulvar intraepithelial neoplasia. → Benign (cancer إلى يتحول إلى)
- o Herpes simplex virus (HSV-1 or -2): Characterized by vesicular eruption.
- o N. gonorrhoeae, a cause of suppurative infection of the vulvovaginal glands.
- o Treponema pallidum, the syphilis pathogen.
- o Candida.

a reactive inflammatory response
 (2ry to Exogenous stimulus or Infection)
 (Vulvitis)

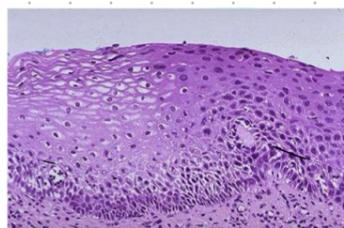
Characteristics of normal epithelium

1- **Normal** maturation or polarity (ترتيب معين للخلايا)

Stem cells in stratum basalis
 Have darker and larger nucleus and more crowded
 On moving upward cells become larger size . but smaller nucleus

2- **No** significant pleomorphism

3- mitosis only in basal cell layer



(normal)

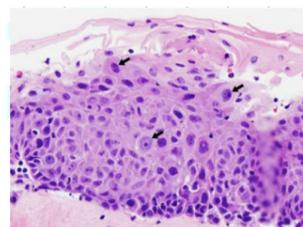
Characteristics of abnormal epithelium

1- **loss** of normal maturation or polarity

2- Significant pleomorphism / hyperchromasia / high (n/c) ratio

3- significant mitosis in the upward (superficial) layers

4- prominent nucleoli



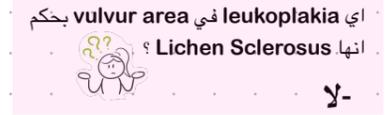
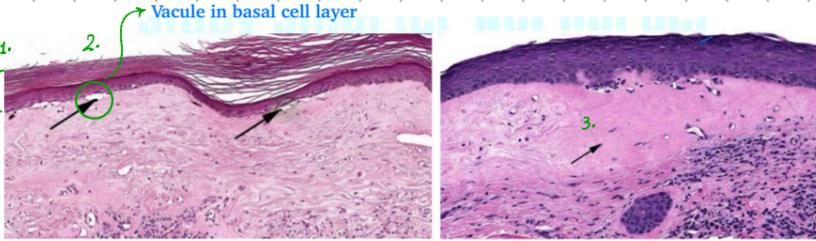
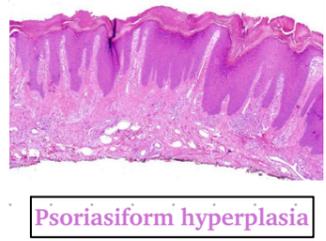
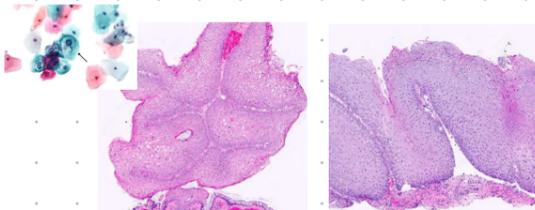
(abnormal)

High grade dysplasia(CIN).
 (invasive) لسه ما صارت
 → intact basement membrane

Non-Neoplastic Epithelial

Should be differentiated from neoplastic (different approach)

Can transform into malignancy

1. Lichen Sclerosus	2. Lichen Simplex Chronicus	3. Condyloma acuminatum
<p>– Clinically presented as white plaques (termed <u>leukoplakia</u>).</p> 	<p>– appears as white patches or plaques.</p>	<p>– Benign papillomatous squamous proliferation with a fibrovascular core</p> 
<p>– commonly affects postmenopausal women → (Low estrogen)</p> <p>– The pathogenesis is uncertain, may related to autoimmune disorders (genetic predisposition).</p>	<p>– It represent a consequence of chronic irritation, often caused by pruritus related to an underlying inflammatory dermatosis.</p>	<p>– Caused by human papillomavirus (HPV) infection (serotypes 6 and 11)</p> <p>(Low-risk)</p>
<p>– benign</p> <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <p>a small percentage of women (1%) with symptomatic lichen sclerosus</p> </div> <p>develop →</p> <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <p>squamous cell carcinoma of the vulva</p> </div>	<p>– With isolated lesions, no increased predisposition to cancer</p> <p>, but lichen simplex chronicus often is present at the margins of established vulvar cancer</p> <p>raising the possibility of an association with neoplastic disease.</p>	<p>– Usually asymptomatic but it may cause discomfort, pruritis, bleeding, eczematous rash or painless mass.</p> <p>– They can occur anywhere on the anogenital surface, sometimes as single but more often as multiple lesions.</p>
<p>➤ Microscopic features:</p> <ol style="list-style-type: none"> 1-Epidermal atrophy. 2-Hydropic degeneration of the basal cells. 3-Progressive sclerosis / homogenization of papillary dermal collagen fibers. 	<p>➤ Microscopic features:</p> <ol style="list-style-type: none"> 1- Epithelial thickening (acanthosis). 2-Hypergranulosis. 3-Hyperkeratosis. 4-Increased mitotic activity is seen in the basal and suprabasal layers; however,there is no epithelial atypia.  <p>Psoriasiform hyperplasia</p>	<p>➤ Microscopic features:</p> <ol style="list-style-type: none"> 1- Hyperplastic papillary squamous epithelium. 2-Marked acanthosis. 3-Koilocytosis (irregular nuclei, bi and multinucleation, perinuclear vacuolization). <p>Center fibrovascular core fiber (في النخس central BV وحواليه) (activation of fibroblast)</p> <p>Associated with HPV especially low risk (6 + 11)</p>  <p>لو اجاك مريض واخذت biopsy وطلعحت تحت microscope (papillomatous squamous epithelium with a fibrovascular core + koilocytosis)</p> <p>ما بجكي للمريض عندك HPV مباشرة لانه STD</p> <p>1- لازم بجوا consultants (4-3) ويكتنوا ع report (Suspicious HPV related viral change)</p> <p>We need PCR -2</p>

Carcinoma Of The Vulva

- Represents about **3%** of all female genital tract cancers
- mostly in **women older than age 60**
- 90%** of carcinomas are squamous cell carcinomas; the other tumors are mainly adenocarcinomas or basal cell carcinomas

1. HPV-related vulvar SCC	2. Non-HPV related SCC	3-Extramammary Paget Disease <small>كانسر مبروستة يهيمر في Breast خارج الثدي Breast ملامر متوت في vulva</small>
<ul style="list-style-type: none"> - Occurs in middle-aged women, & cigarette smokers. 	<ul style="list-style-type: none"> - Occurs in older women. 	<ul style="list-style-type: none"> • Intraepidermal proliferation of malignant epithelial cells that can occur in the skin of the vulva or nipple of the breast.
<ul style="list-style-type: none"> - Associated with high-risk HPV subtypes 16 and 18 	<ul style="list-style-type: none"> - Not associated with HPV 	<ul style="list-style-type: none"> • A majority of cases of vulvar (extramammary) Paget disease have no demonstrable underlying tumor.
<ul style="list-style-type: none"> - Associated with vulvar intraepithelial neoplasia (VIN). <small>(intact basement membrane)</small> 	<ul style="list-style-type: none"> - Not associated with vulvar intraepithelial neoplasia (VIN). 	<ul style="list-style-type: none"> • Paget disease manifests as a red, scaly, crusted plaque that may mimic the appearance of inflammatory dermatitis.
<ul style="list-style-type: none"> - Tend to be poorly differentiated squamous cell carcinomas. <small>(إذا اخترقت ال basement membrane)</small> 	<ul style="list-style-type: none"> - well-differentiated keratinizing squamous cell carcinomas. 	
<div data-bbox="270 1060 555 1272" data-label="Image"> </div> <div data-bbox="219 1325 937 1388" data-label="Section-Header"> <h3>> Vulvar intraepithelial neoplasia (VIN).</h3> </div> <ul style="list-style-type: none"> - Precursor lesion of HPV associated vulvar carcinoma. - Usually manifested as areas of leukoplakia in the form of whitish patches. - Over time, these areas are transformed into overt exophytic or ulcerative endophytic tumors. - Environmental factors such as cigarette smoking and immunodeficiency appear to increase the risk of such progression. <div data-bbox="219 1871 753 2028" data-label="Image"> <p><small>هي عبارة عن hyperchromatosis (Definitely abnormal cell but not invasive)</small></p> </div> <div data-bbox="774 1955 967 1986" data-label="Caption"> <p>(Non-invasive)</p> </div>	<ul style="list-style-type: none"> - preceded by years of reactive epithelial changes, principally lichen sclerosus. <div data-bbox="1101 1226 1445 1472" data-label="Image"> </div> <div data-bbox="1507 1310 1783 1346" data-label="Caption"> <p>(Invasive nests)</p> </div>	<div data-bbox="1952 1066 2273 1115" data-label="Section-Header"> <h3>> Microscopic:</h3> </div> <ul style="list-style-type: none"> - Large epithelioid cells with abundant pale, finely granular cytoplasm and occasional cytoplasmic vacuoles infiltrate the epidermis. - The presence of mucin, as detected by periodic acid-Schiff (PAS) staining, is useful in distinguishing Paget disease from vulvar melanoma, which lacks mucin. <div data-bbox="2000 1499 2778 1587" data-label="Diagram"> <p>DDx is melanoma ← كيف نميز ؟؟ → PAS stain (Confirm presence of mucin)</p> </div> <div data-bbox="2041 1604 2614 1745" data-label="Text"> <p>Note </p> <p>(+ve) PAS stain → Extramammary Paget Disease (-ve) PAS stain → vulvar melanoma</p> </div> <div data-bbox="2012 1793 2683 2028" data-label="Image"> </div>

Vagina

fibromuscular tube that extends from the vestibule of vulva to uterine cervix

is seldom a site of primary disease

More often, it is involved secondarily by cancer or infections arising in adjacent organs (e.g., cervix, vulva, bladder, rectum)

- > **Congenital anomalies of the vagina (Uncommon):**
- Total absence of the vagina.
 - Septate or double vagina (usually associated with a septate cervix and, sometimes, septate uterus).
(يبيّن أكثر في Pregnancy women على ultrasound)
 - Lateral Gartner duct cysts arising from persistent wolffian duct rests.



هي بروتين موجود في embryonic life لازم يختفي ، في هاي الحالة ضل موجود ما اختفى

Vaginitis

common

usually transient (no clinical consequence)

associated with leukorrhea

May be caused by bacteria, fungi, and parasites.

Candidiasis أكثر انتشاراً

- only in the setting of :
- 1-diabetes
 - 2-systemic antibiotic therapy
 - 3-immunodeficiency
 - 4-pregnancy

normal commensals (Lactobacilli)

become pathogenic

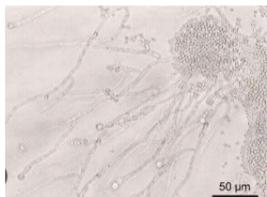
> Common vaginitis:

Candidiasis:

- fungal infection caused by *Candida albicans*:

Typical clinical features :

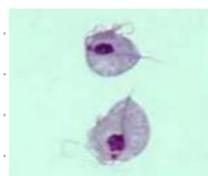
- 1-vulvar and vaginal erythema.
- 2-excoriations.
- 3-thick white adherent discharge.*
- 4-swelling.



Trichomonas vaginalis:

- Produces a watery, copious gray-green discharge in which parasites can be identified by microscopy.

-sexually transmitted diseases (STD)



(motile pear shaped parasite)

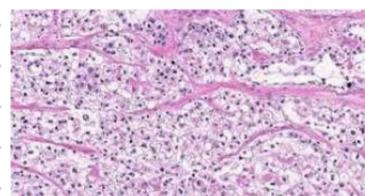
Malignant Neoplasms

1. Squamous Cell Carcinoma

- extremely uncommon
- in women older than 60 years of age
- Vaginal intraepithelial neoplasia VAIN is a precursor lesion that is nearly always associated with HPV infection

2. Clear Cell Adenocarcinoma

- Very rare tumor
- usually identified in a cluster of young women whose mothers took diethylstilbestrol DES during pregnancy to prevent threatened abortion.
- Now (is very rare).



3. Sarcoma Botryoides (مهم) *

- (embryonal rhabdomyosarcoma) is a rare form of primary vaginal cancer.
- usually is encountered in infants and children younger than 5 years of age.
- It also may occur in other sites, such as the urinary bladder and bile ducts.
- Grossly, it presents as a conglomerate of soft polypoid masses resembling a bunch of grapes—hence its designation as “botryoid”.

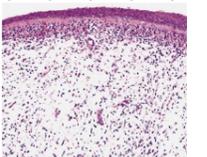
> Gross features:

- Clusters of edematous, grape-like masses that protrude into lumen of hollow organs.



> Microscopically:

- Myxoid stroma containing spindle cells. Some of these cells contain a bright eosinophilic granular cytoplasm suggestive of rhabdomyoblastic differentiation (Only with immune stain)
- An important diagnostic feature is the crowding of the tumor cells around blood vessels and beneath the squamous epithelium (the “cambium layer”).



* pathognomonic (hallmark for this variant of tumor)