

Pathology

Vulva And Vagina (Lec 6)



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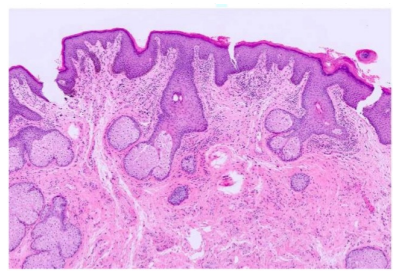
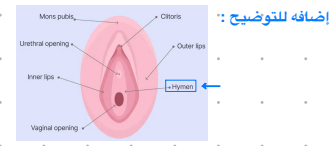
Vulva

-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 لكن ممكن 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)

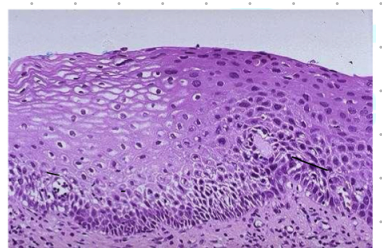
Characteristics of normal epithelium

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)

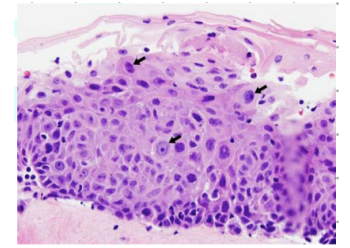
Characteristics of abnormal epithelium

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

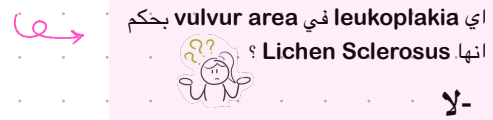
Non-Neoplastic Epithelial

Should be differentiated from neoplastic (different approach)

Can transform into malignancy

1. Lichen Sclerosus

– Clinically presented as white plaques (termed leukoplakia).



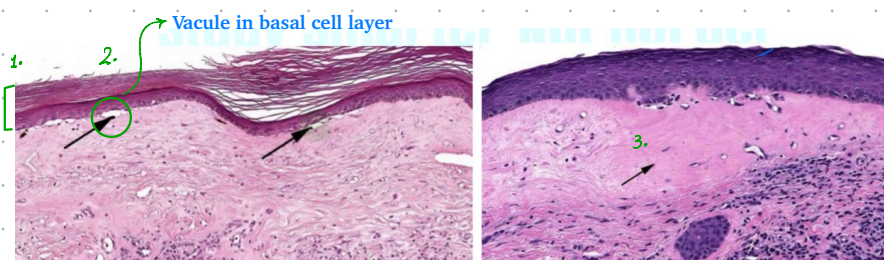
- commonly affects **postmenopausal women** → (Low estrogen)
- The pathogenesis is uncertain, may related to autoimmune disorders (genetic predisposition).

– **benign**



➤ Microscopic features:

- 1-Epidermal atrophy.
- 2-Hydropic degeneration of the basal cells.
- 3-Progressive sclerosis / homogenization of papillary dermal collagen fibers.



2. Lichen Simplex Chronicus

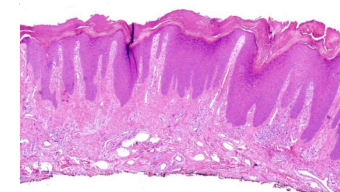
– appears as white patches or plaques.

– It represent a **consequence of chronic irritation**, often caused by **pruritus** related to an underlying inflammatory dermatosis.

- With isolated lesions, no increased predisposition to cancer
- , but lichen simplex chronicus often **is present at the margins of established vulvar cancer**
- raising the possibility of an association with neoplastic disease.

➤ Microscopic features:

- 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.



Psoriasiform hyperplasia

3. Condyloma acuminatum

– Benign papillomatous squamous proliferation with a fibrovascular core



– Caused by **human papillomavirus (HPV) infection** (serotypes 6 and 11)

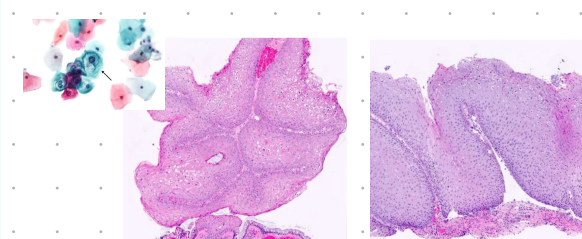
(Low-risk)

- Usually asymptomatic but it may cause discomfort, pruritis, bleeding, eczematous rash or painless mass.
- They can occur anywhere on the anogenital surface, sometimes as **single** but more often as **multiple lesions**.

➤ Microscopic features:

- 1- Hyperplastic papillary squamous epithelium.
- 2-Marked acanthosis.
- 3-Koilocytosis (irregular nuclei, bi and multinucleation, perinuclear vacuolization).

Associated with HPV especially low risk (6 + 11)

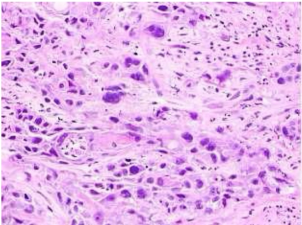
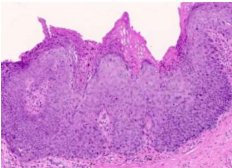
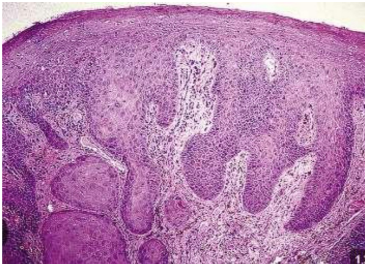
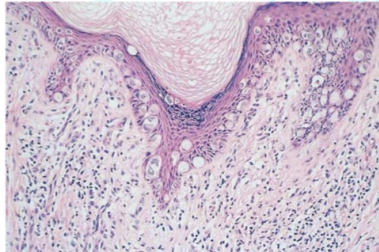
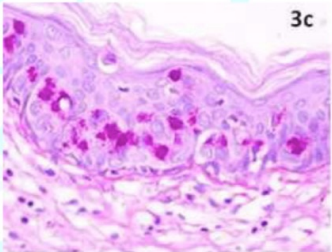


Center fibrovascular core
fiber وحواليه central BV
(activation of fibroblast)

لو اناك مريض واخذت biopsy وطلع تحت microscope (papillomatous squamous epithelium with a fibrovascular core + koilocytosis)
ما يحكي للمريض عندك HPV مباشرة لانه STD
1- لازم بجوا consultants (4-3) ويكتبوا ع report (Suspicious HPV related viral change)
We need PCR -2

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
<ul style="list-style-type: none"> Occurs in middle-aged women, & cigarette smokers. Associated with high-risk HPV subtypes 16 and 18 Associated with vulvar intraepithelial neoplasia (VIN). (intact basement membrane) Tend to be poorly differentiated squamous cell carcinomas. (إذا اخترقت ال basement membrane) 	<ul style="list-style-type: none"> Occurs in older women. Not associated with HPV Not associated with vulvar intraepithelial neoplasia (VIN). well-differentiated keratinizing squamous cell carcinomas. preceded by years of reactive epithelial changes, principally lichen sclerosus. 	<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. A majority of cases of vulvar (extramammary) Paget disease have no demonstrable underlying tumor. Paget disease manifests as a red, scaly, crusted plaque that may mimic the appearance of inflammatory dermatitis.
 <p>> Vulvar intraepithelial neoplasia (VIN).</p> <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>  <p>(Non-invasive)</p> <p>هي عبارة عن hyperchromatosis (Definitely abnormal cell but not invasive)</p> </div>	 <p>(Invasive nests)</p>	<p>> Microscopic:</p> <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> <p>DDx is melanoma → كيف نميز ؟؟ → PAS stain (Confirm presence of mucin)</p> <p>Note</p> <p>(+ve) PAS stain → Extramammary Paget Disease</p> <p>(-ve) PAS stain → vulvar melanoma</p> </div> <div>   <p>3c</p> </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.



embryonic life
reminant بروتين موجود في
لزم 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 شيوعاً

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

normal commensals
(Lactobacilli)

become pathogenic

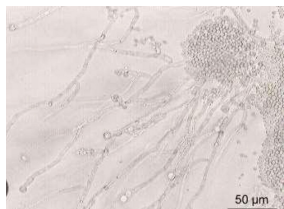
> Common vaginitis:

Candidiasis:

- fungal infection caused by *Candida albicans*:

Typical clinical features :

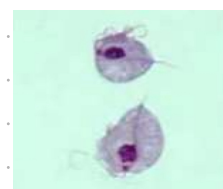
- 1-vulvar and vaginal erythema.
- 2-excoriations.
- 3-thick white adherent discharge.*
- 4-swelling.



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)

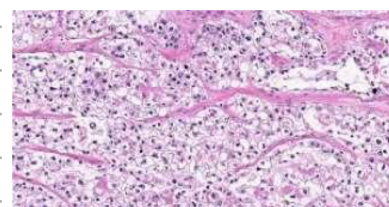
Malignant Neoplasms

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).

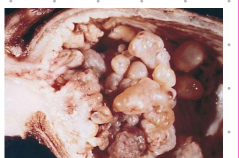


3. Sarcoma Botryoides (مهم)*

- (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)

