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Benign and malignant conditions of the vulva and vagina

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Anatomy

The vulva is the part of the female genital tract located between the genitocrural folds laterally, the mons pubis anteriorly, and the anus posteriorly.

It contains the labia majora, labia minora, clitoris, vestibule, urinary meatus, vaginal orifice, hymen, Bartholin glands, and Skene ducts.

Mons pubis
Anterior commissure
Prepuce
Clitoris
Labium majus
Labium minus
Urethral meatus
Paraurethral (Skene's) gland opening
Vaginal opening (introitus)
Hymen or hymenal tags
Vestibule
Greater vestibular (Bartholin's) gland opening
Posterior fourchette (frenulum of labia)
Perineum
Anus

introduction

Benign vulvovaginal lesions are common with vulvovaginal problems constituting one of the ten leading causes of primary care physicians visits .

These disorders include nonneoplastic epithelial disorders , benign tumors, hamartomas and cysts and infectious disorders

Epithelial conditions

Lichen simplex chronicus

Lichen planus

Lichen sclerosus

Vulvovaginal atrophy

Lichen Simplex , squamous cell hyperplasia

It’s local thickening of the epithelium (hyperplasia) due to prolonged itching

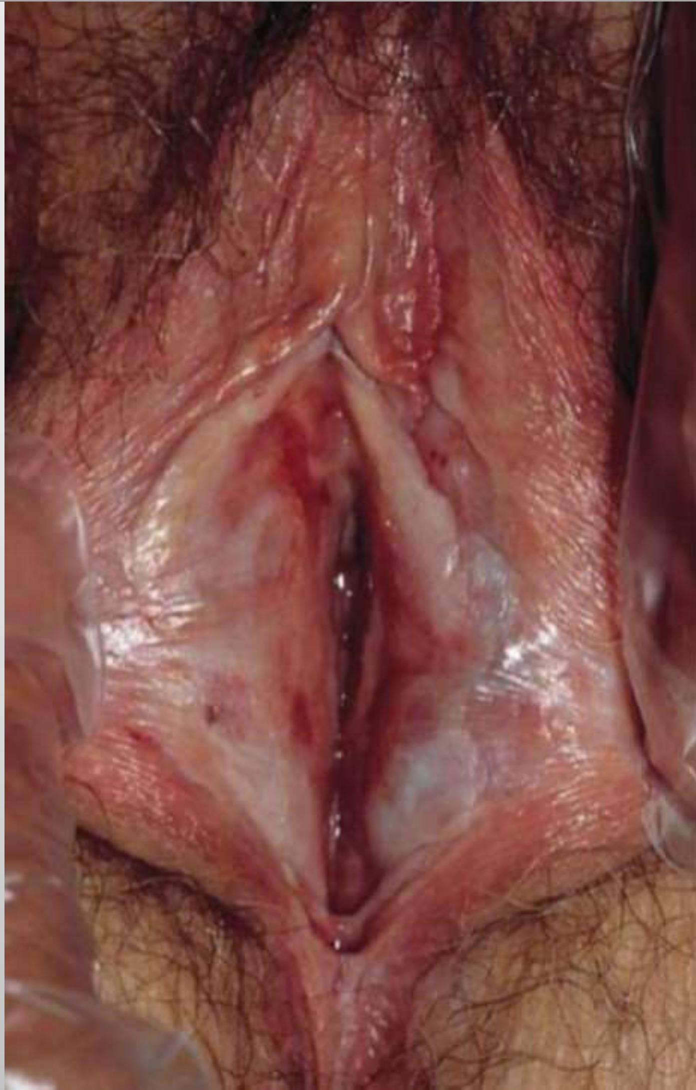
Symptoms : pain and itching in the absence of underlying dermatosis .

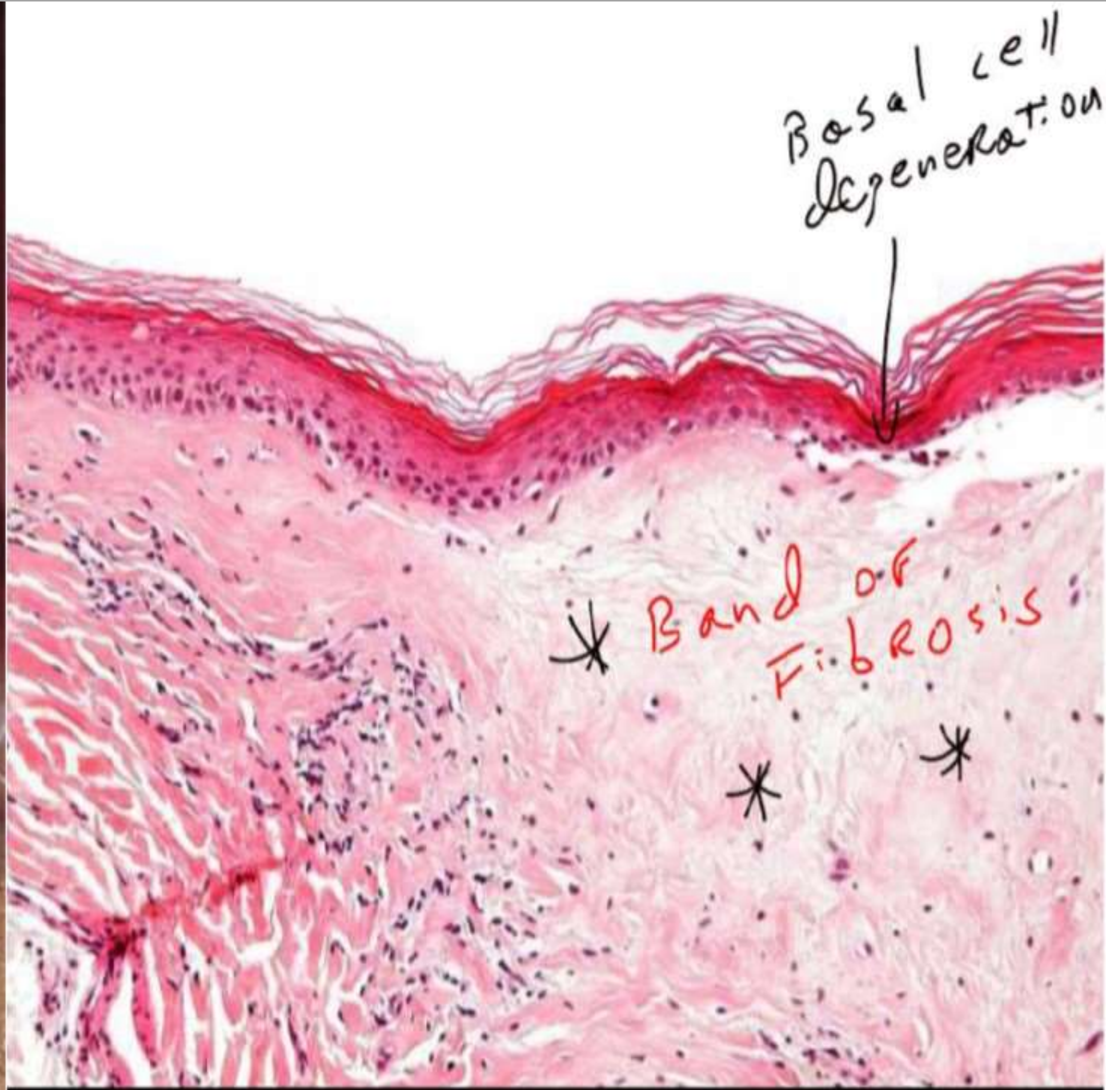
Signs : white plaques or darker red areas on keratinized skin with a leathery raised surface .

Treatment : intermediate potency topical corticosteroids

Lichen sclerosus

- It is most commonly found in the anogenital area of midlife women .
- **Symptoms** : intense pruritis , dysparunia and burning pain as well as painful bleeding fissueres .
  Involvement of the anal sphincter may cause constipation
  - it starts as isolated pearly white papules and plaques that coalesce and form scars
- **Signs** white thin and inelastic skin with tissue paper appearance
  shrinkage or loss of the labia minora , buried clitoris , contraction of the vestibule and scarring around the anus
- **Diagnosis :** skin biopsy that shows loss of rete ridges , atrophic epithelium and inflammatory cells lining the basement membranes
- **Treatment** high potency corticosteroids





Basal cell degeneration
Band of Fibrosis

Lichen planus

It’s an inflammatory autoimmune process that involves the vagina , vulva and/or mouth .

Symptoms : burning , irritation and dysparunia .

Signs : erythema and erosions on the vulva surrounded by white striae .

Treatment : topical and systemic steroids

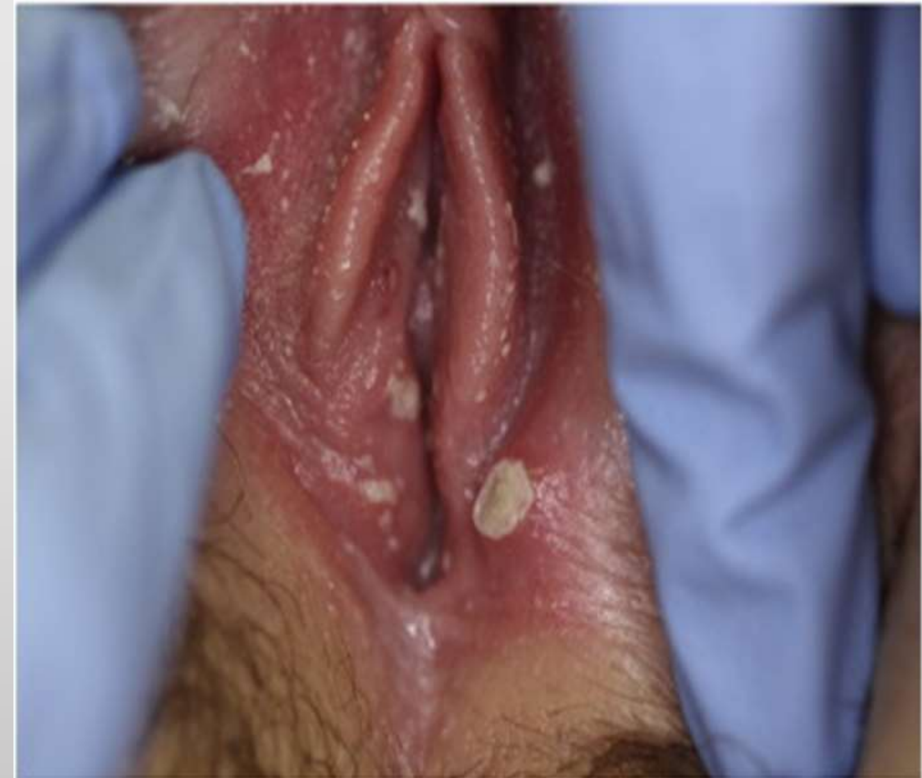
- Heat shock protein-70 is more often expressed in LS than in healthy controls. HSP-70 not only supports tumor growth and metastasis, but on the other hand mat help to develop immune-driven treatment strategies.

Solid or cystic masses

1. Epidermal inclusion cysts
2. Bartholin and Skene's duct cysts
3. Genital warts
4. Hidradenitis suppurativa or acne inversa (inflammation of apocrine glands)
5. Urethral caruncle
6. Vascular lesions (varicosities , angiomas and hematomas)

Epidermal cysts

- Non tender , mobile , slow growing lesions
- Form in obstructed hair follicles
- May be left untreated or may be deflated by expressing its contents (sebum and epithelium)



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Bartholin and skene's cyst

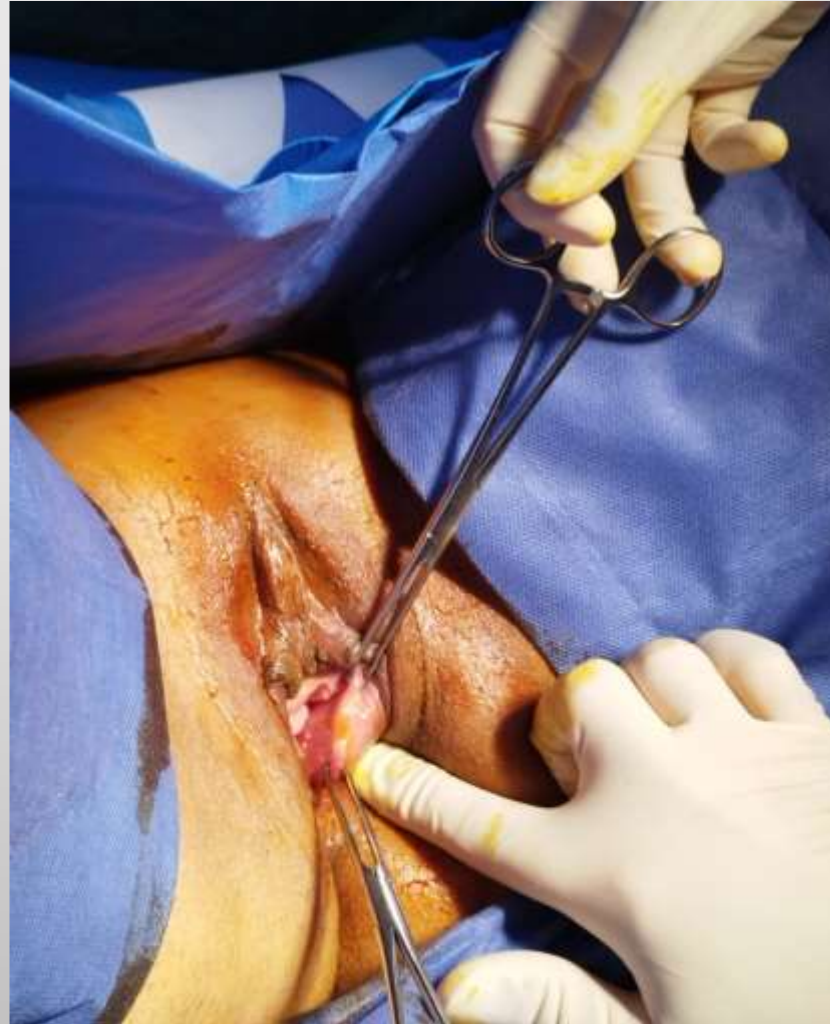
Bartholin cysts usually present below the hymenal ring at 4 or 8 o'clock.

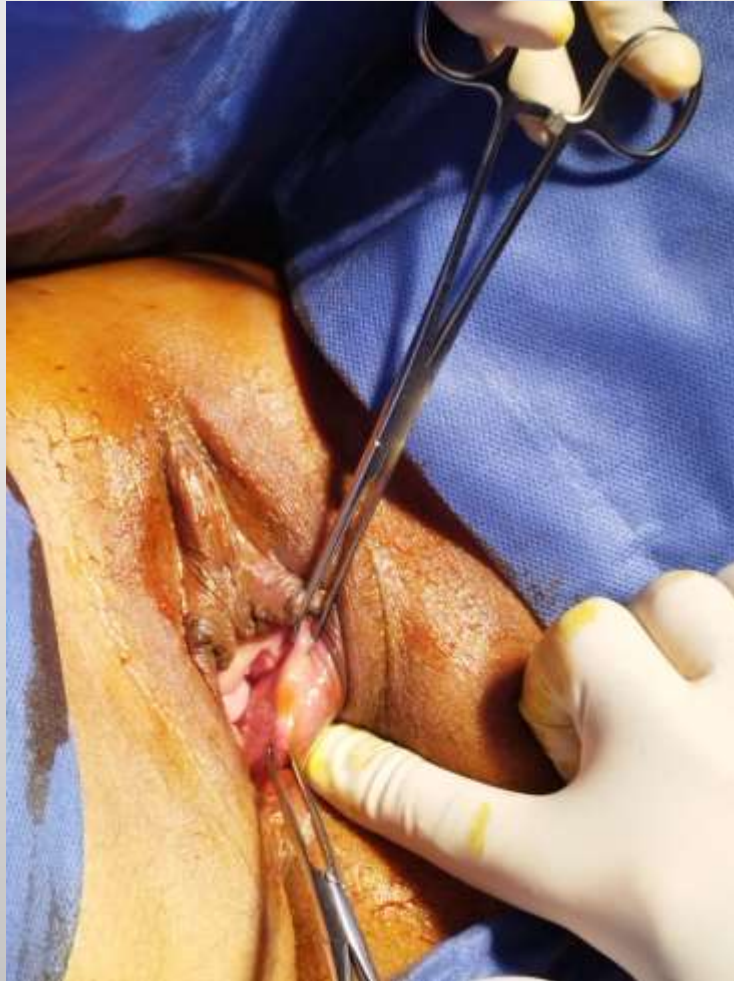
Skene's cyst present in the paraurethral area near the distal urethra , it may cause dysparunia or urinary tract obstruction .

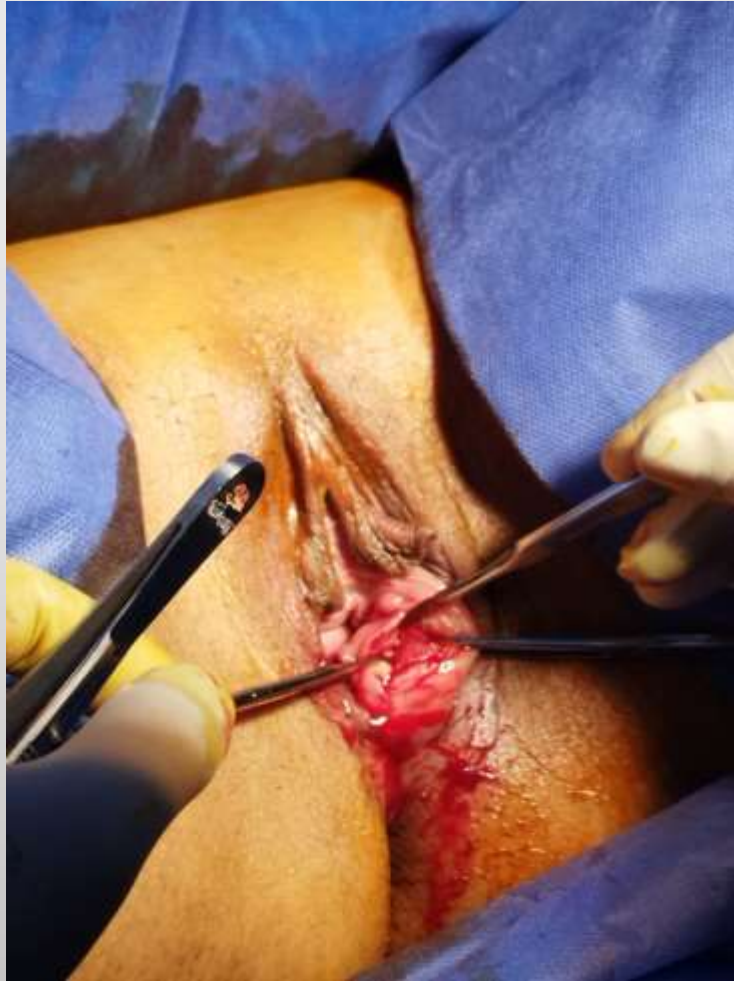
Treatment is only indicated if the cyst causes discomfort or if there's a change in the site or character of the cyst

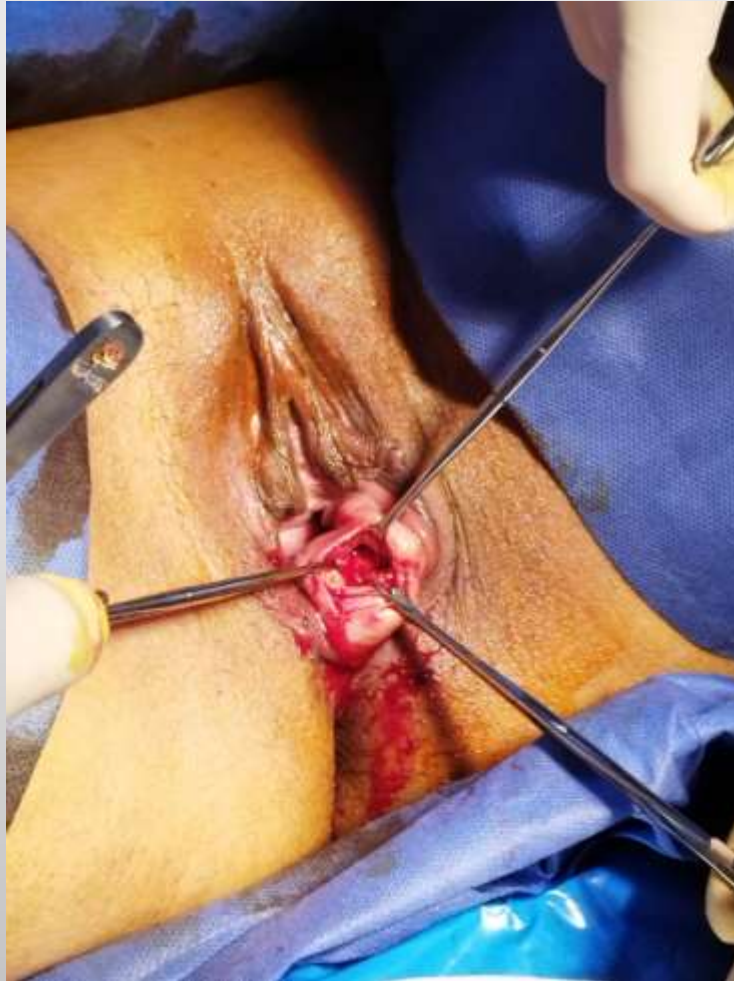
Treatment is with either marsupialization or I&D .

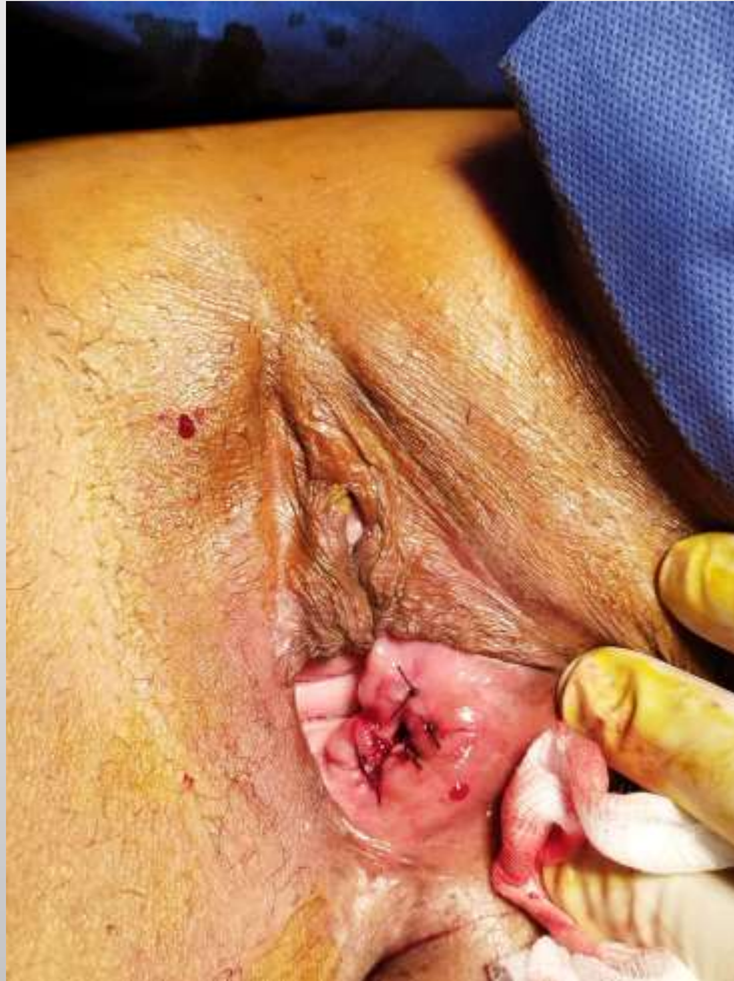
Urethral opening
Swelling caused by Bartholin's gland cyst
Vagina
Duct of Bartholin's gland
Bartholin's gland (normal)
Anus











Genital warts

Caused by human papillomavirus , usually HPV 6 and 11.

Usually present at the posterior fourchette and lateral vulval walls .

Treatment is through excision of warts and antiviral therapy

Genital warts

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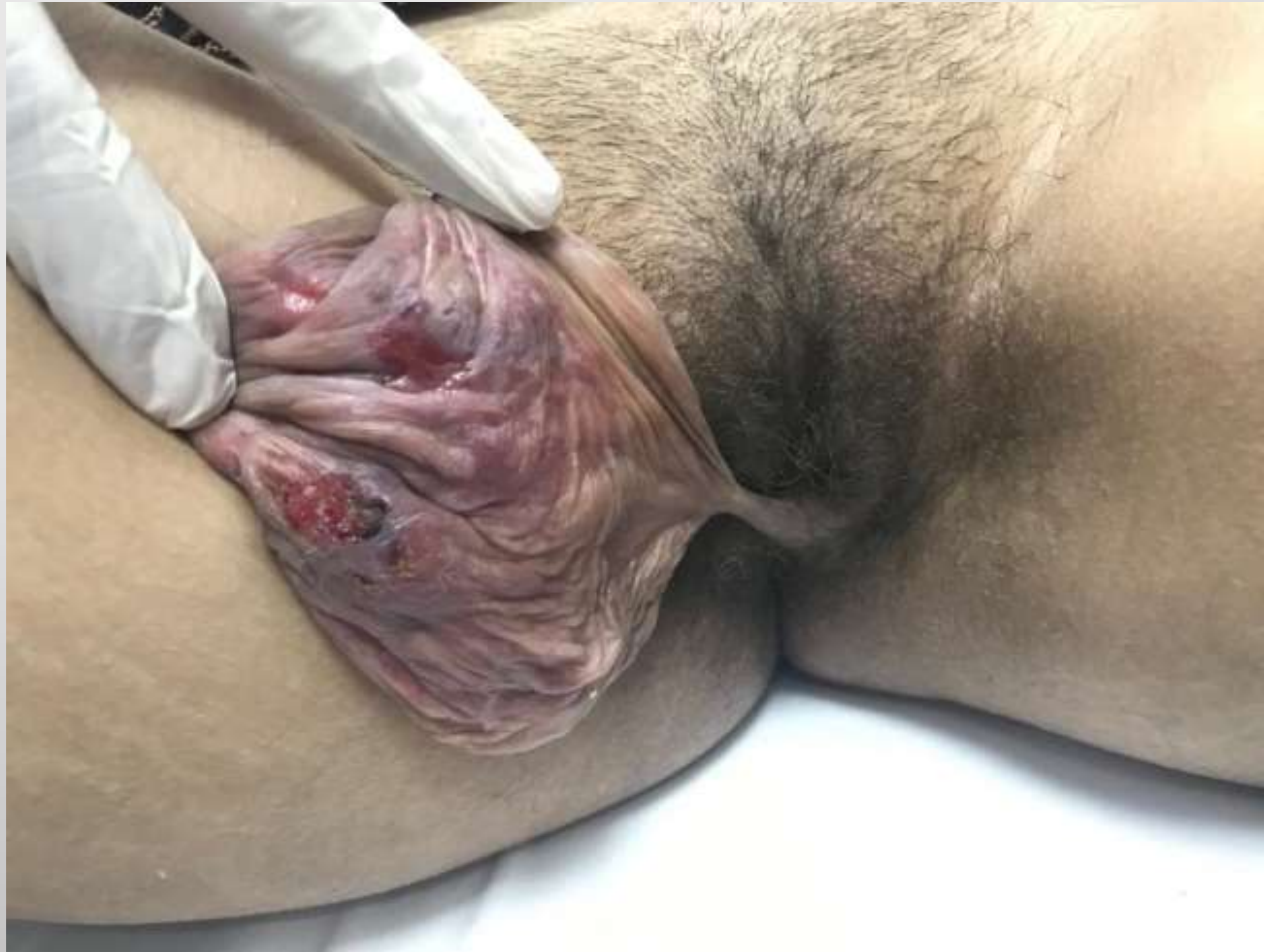


Dermatologic disorders

Psoriasis.

Behcet ’s syndrome.

Crohn ’s disease .

Acanthosis nigricans

Eczema

Vulval intraepithelial neoplasia

Squamous VIN
includes bowen's disease (i.e squamous cell carcinoma in situ , VIN grade 3)

Non squamous VIN
includes Paget disease (i.e adenocarcinoma in situ , VIN grade 3) and noninvasive tumors of melanocytes .

Bowen’s disease

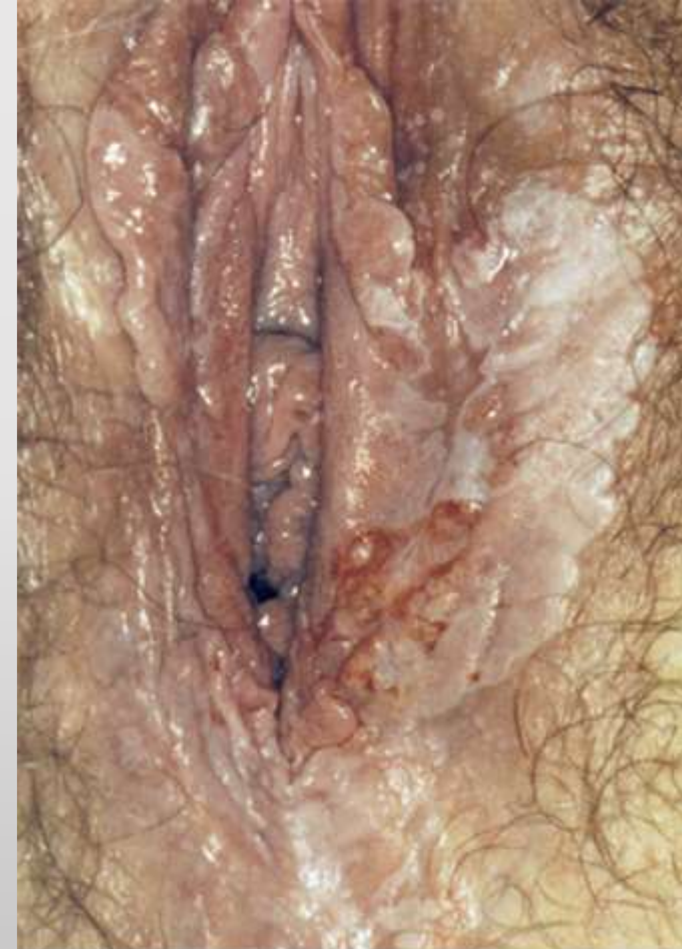
Mean age 45 years.

Symptoms:

50% asymptomatic.

itching is the most common Symptom.

Signs:
most lesions are elevated ,white ,red ,pink , brown or grey in color.
20% of lesions are warty in appearance.



Source: B. Y. Karlan, R. E. Bristow, A. J. Li: Gynecologic Oncology: Clinical Practice and Surgical Atlas
www.obgyn.mhmedical.com
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Bowen’s disease

Diagnosis :

1. local superficial excision with margins of 5 mm .
2. skinning vulvectomy in extensive lesions.

Paget' s disease

Occurs in white postmenopausal elderly women.

May also occurs in the nipple area of the breast.

20% is associated with adenocarcinoma.

Symptoms: itching and tenderness are common.

Signs:
well demarcated and eczematus with white plaque like lesions.
may progresses beyond the vulva to the mons pubis ,buttocks & thighs.

Paget' s disease

Diagnosis

characterized by large ,pale , pathognomonic Paget's cells, located both in the epidermic and in the adnexal structures

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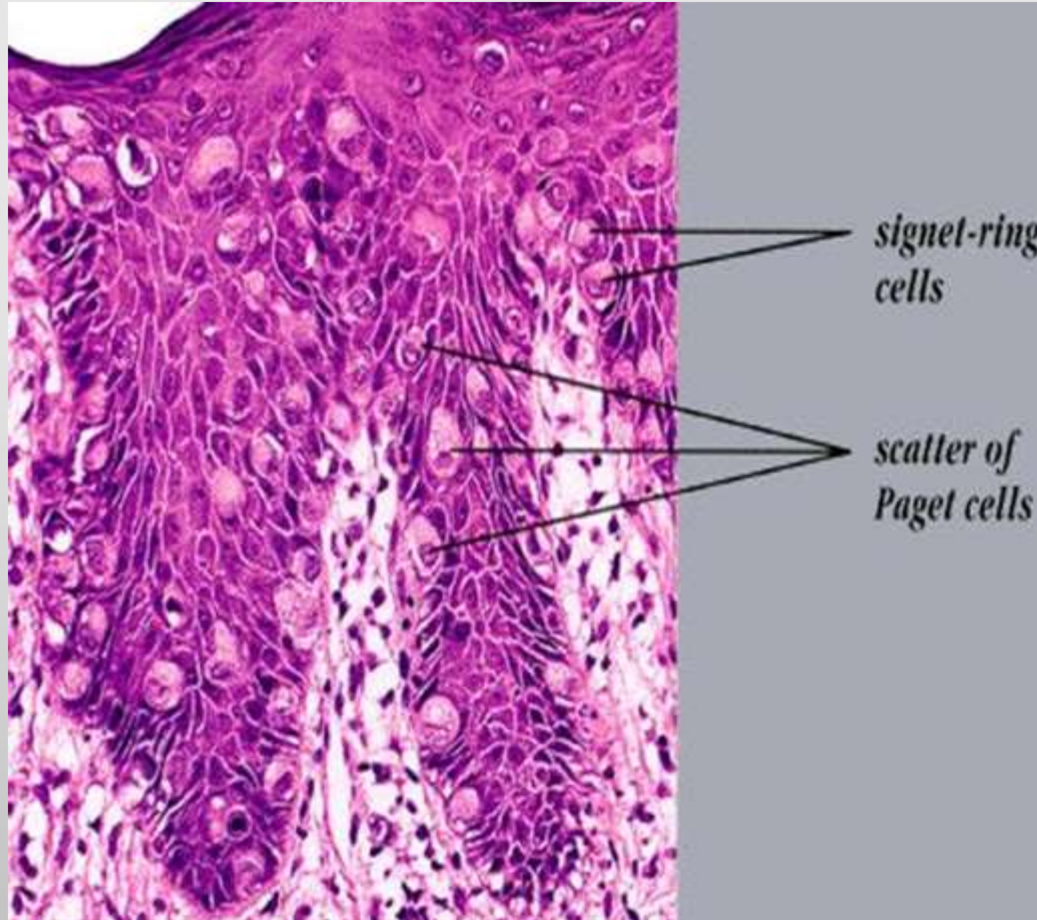
Paget' s disease



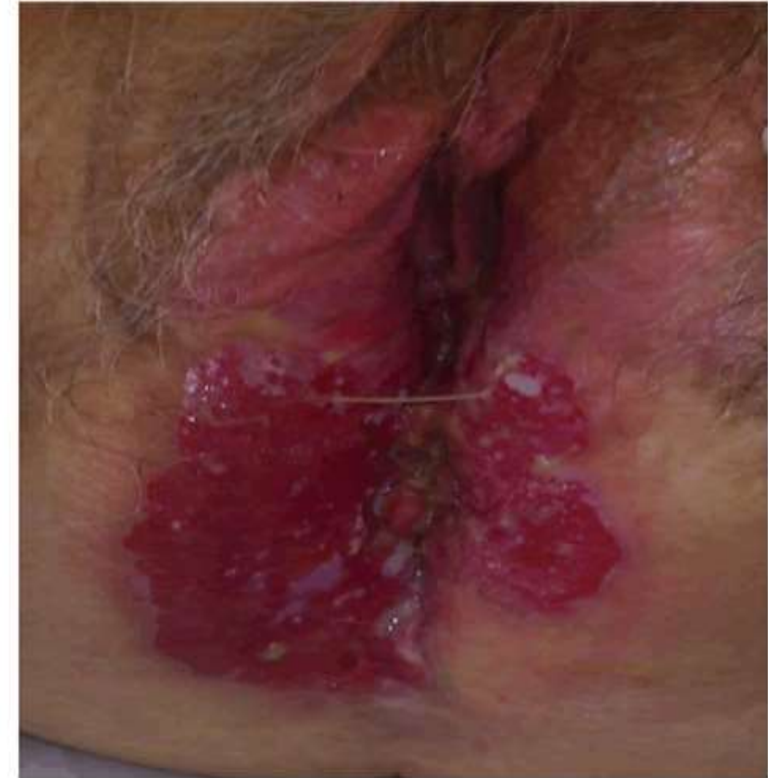


Figure 1a: Pre treatment evaluation

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Vulval neoplasm

It’s uncommon , only represents 5% of gynecolgical malegnancies

It’s either squamus cell carcinoma (most common) , adenocarcinoma , melanoma or sarcoma .

Invasive vulvar cancer most commonly spreads to adjacent structures such as vagina , urethra or anus .

In around 30% of cases lymphatic metastasis is present (inguinal lymph nodes)

Etiological types

The more common type :
in older women , frequently related to long standing lichen sclerosus .

The less common type :
young women , related to HPV infection with concurrent VIN commonly present

Squamous cell carcinoma

Constitutes 90% of vulval cancers.

Symptoms:

vulval lump or ulcer.

long standing pruritus.

Signs:

raised ,ulcerated ,pigmented or warty lesion.

Site :

most lesions occur on labia majora and labia minora.

Less common sites , the clitoris or the perineum.

5% of lesions are multifocal

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Squamous cell carcinoma

FIGO Staging of Cancer Vulva

Stage I	Tumor limited to the vulva or perineum or both ,and 2 cm or < in diameter ,and no nodal metastases.
Ia	as above + stromal invasion < 1mm.
Ib	as above + stromal invasion > 1 mm.
Stage II	Tumor limited to the vulva or perineum or both ,and > 2 cm in diameter ,and no nodal metastases.
Stage III	Tumor of any size with : • adjacent spread to the urethra &/or vagina &/or anus • unilateral regional LN. metastasis or combination.

Stage IV	
IVa	Tumor invades any of the following pelvic : upper urethra ,bladder mucosa ,rectal mucosa ,pelvic bone or bilateral regional node metastasis ,or a combination.
IVb	Any distant metastasis including pelvic lymph nodes.

Management

Stage I a

radical local excision surgical margins1cm, patient do not need groin dissection.

Stage I b & Stage II

radical local excision + ipsilateral inguinal & femoral lymphadenectomy if the lesion is unilateral and bilateral groin dissection in the midline lesions .

Management

Stage III

Radical vulvectomy (complete excision of the superficial and deep tissue of the vulva + bilateral groin dissection.)

Preoperative radiation or chemo-radiation should be used to shrink the 1ry tumor ,followed by more conservative surgical excision.

Management

Radiation

used with > one nodal mico metastasis (<5mm), or evidence of extra nodal spread .

Prognosis:

it correlate significantly with LN status:

–ve nodes have a 5-ys survival rate of 90%.

+ve nodes have a 5-ys survival rate of 50%.

- Patients with no involved node have a good prognosis regardless of stage

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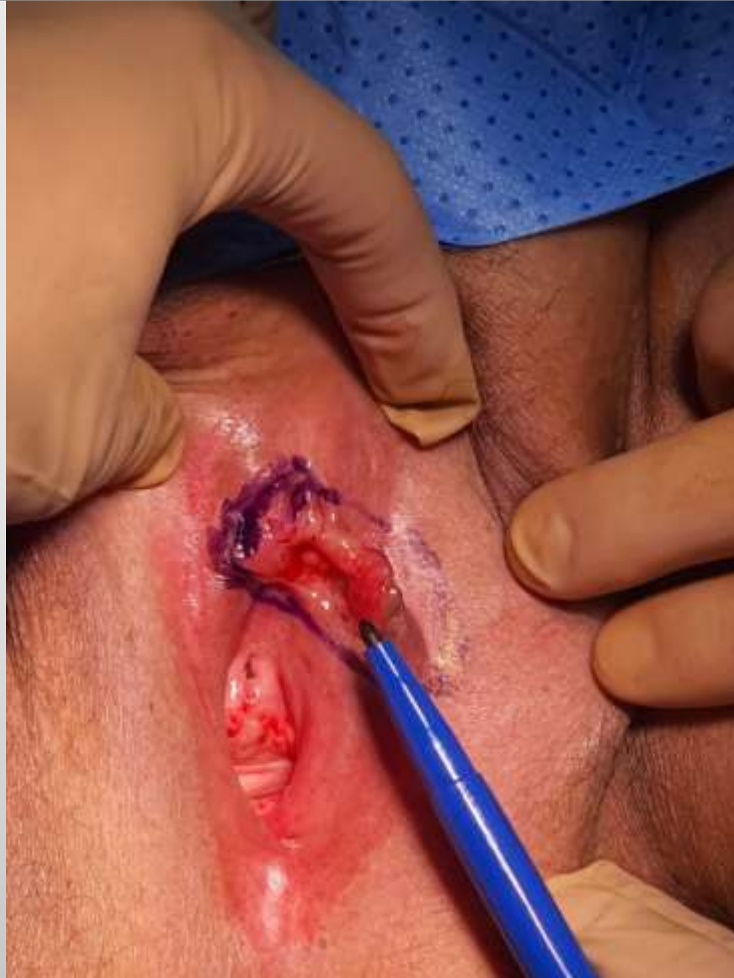

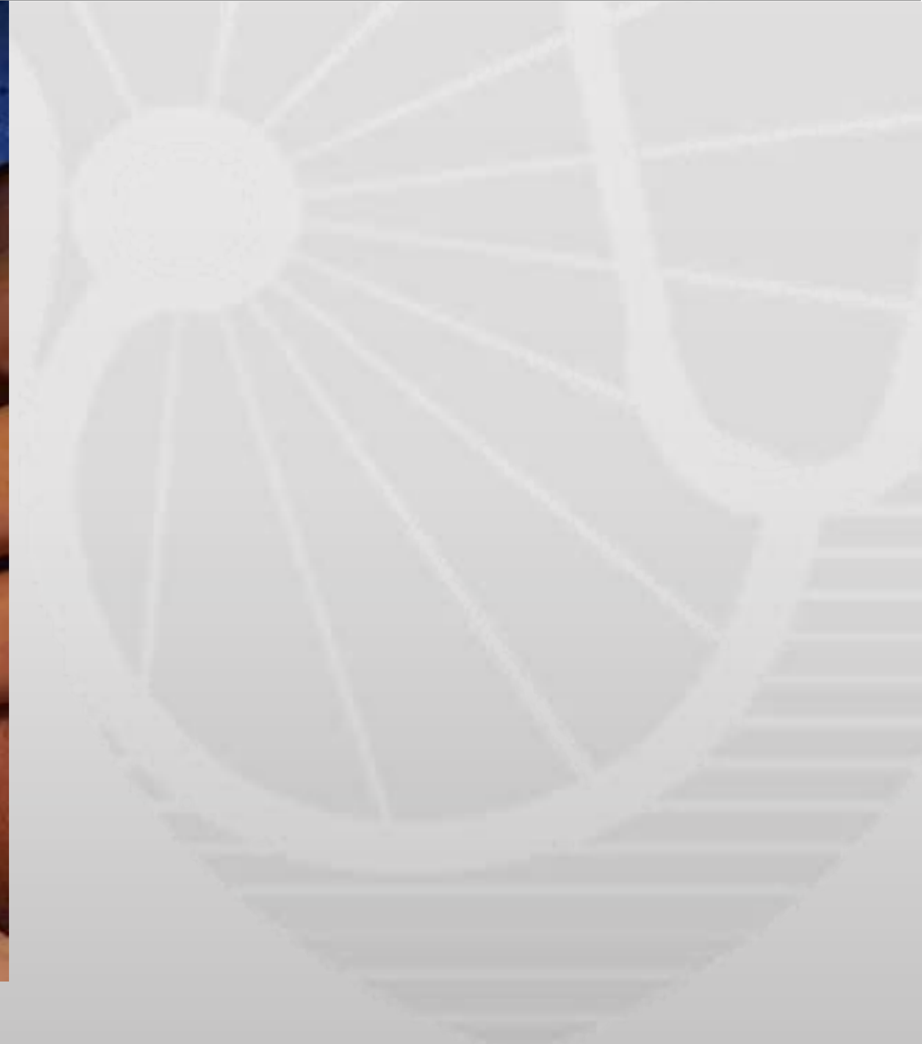

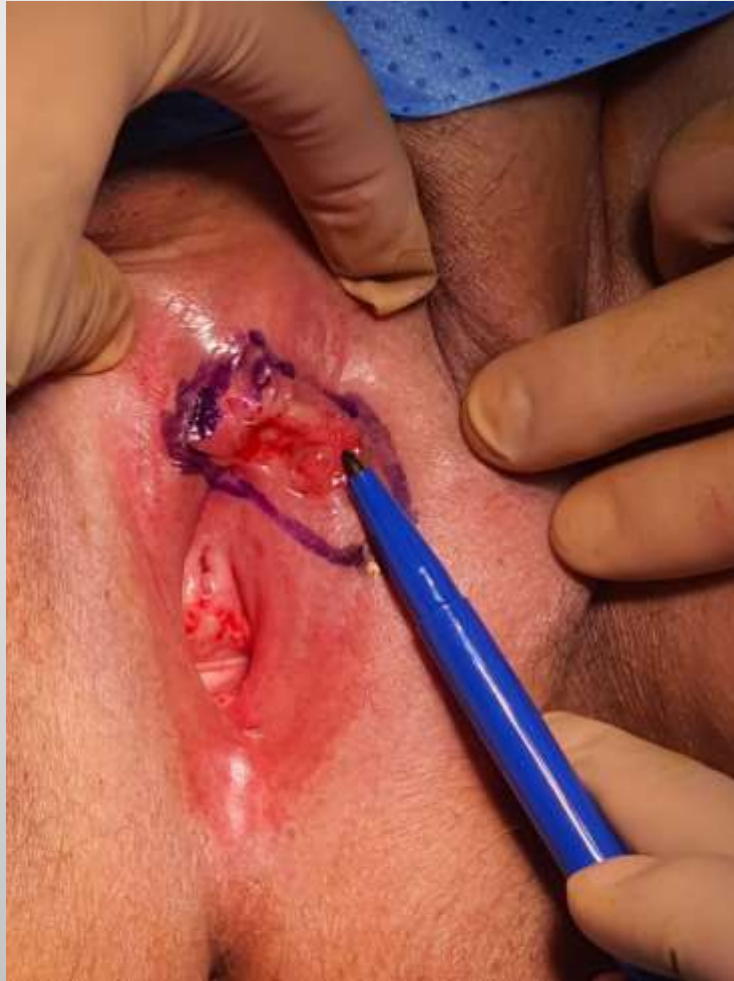

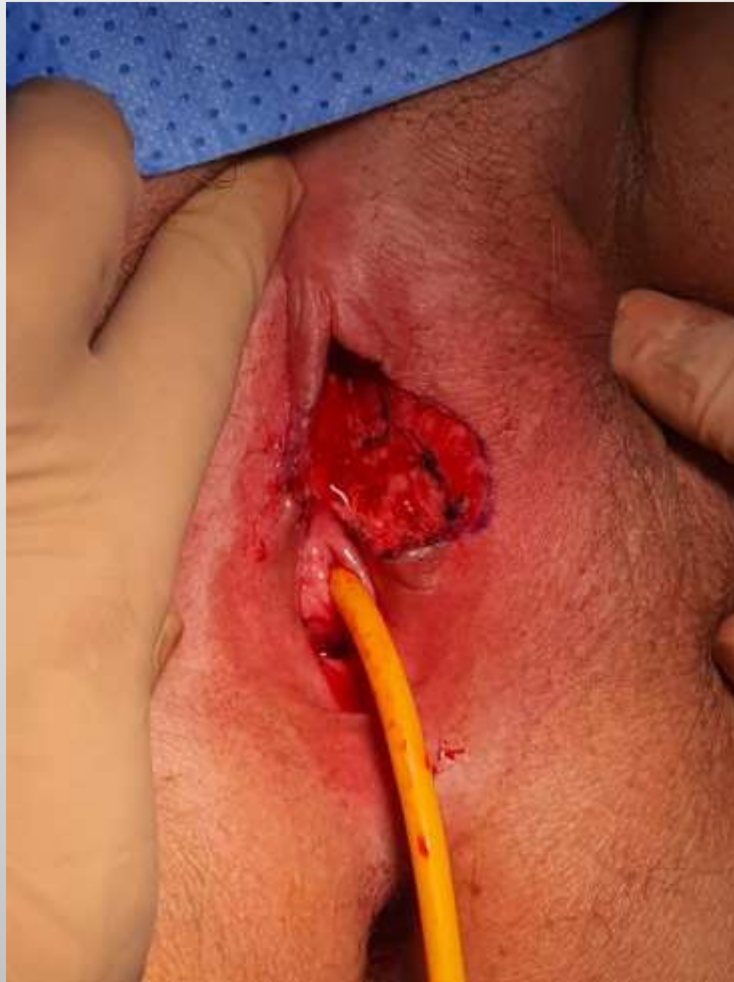

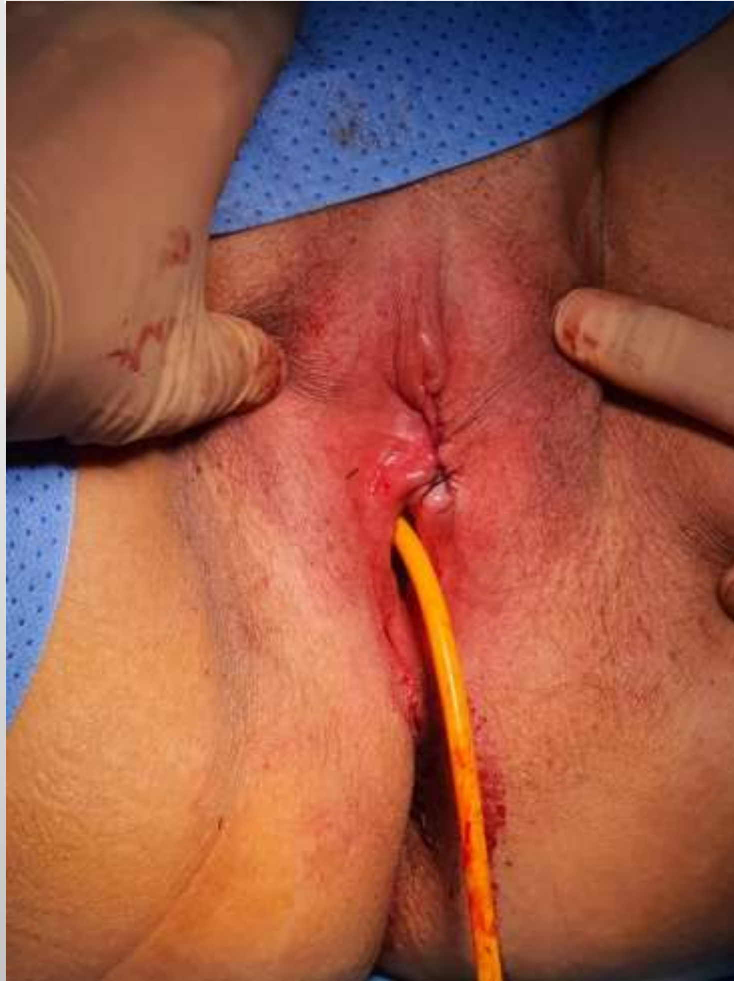

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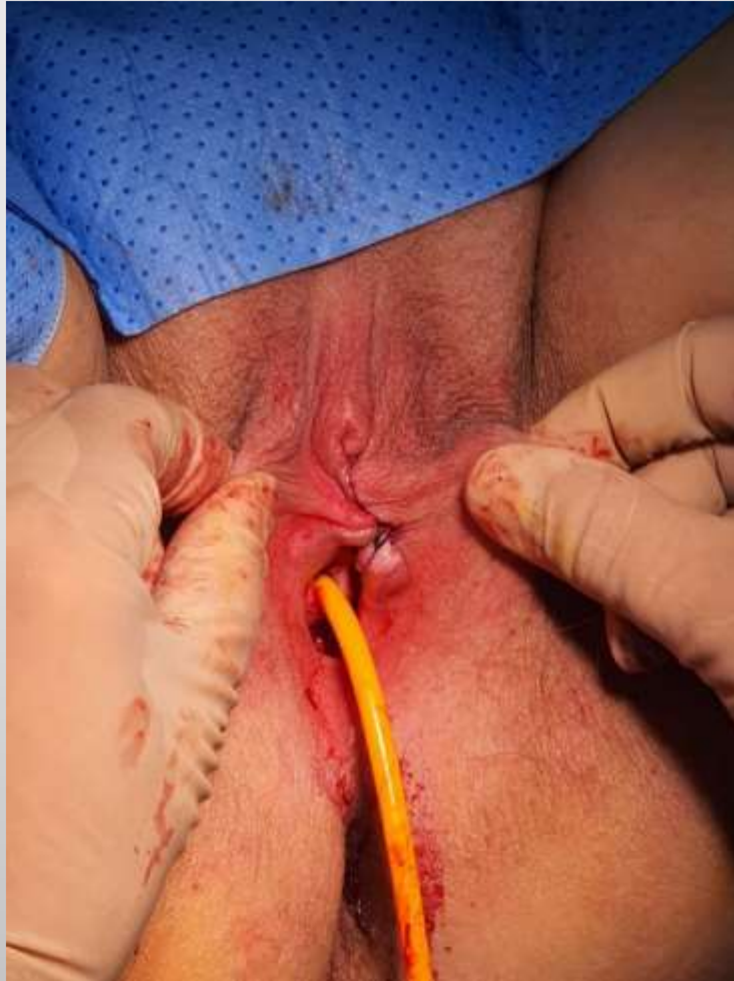

Malignant melanoma

2nd most common vulvar cancer.

May arise de novo or from a preexisting nevus.

Commonly involve labia minora or clitoris.

Occurs in postmenopausal white women.

Usually smaller lesions and tend to metastasized early.

Diagnosis : excisonal biopsy

Prognosis: correlates to the depth of penetration into the dermis. The 5-ys survival rate is 30%.

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Malignant Melanoma

Malignant Melanoma

Management

Superficial lesion : radical local excision alone with margins of 1 cm, is adequate.

Deeper lesions 1 mm or more : radical local excision + ipsilateral inguinal femoral lymphadenectomy.

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Diseases of the vagina

Genital infections

Bacterial (bacterial vaginosis),

Fungal (Candida albicans)

Protozoal (Trichomonas vaginalis)

can produce vaginal inflammation and discharge. Microbiological swabs will confirm the diagnosis

Diseases of the vagina

Erosive lichen planus of the vagina

autoimmune inflammatory skin condition that causes vaginal pain, inflammation and if untreated vaginal stenosis.

Treatment is usually with vaginal trainers (to stretch the narrowing) and intravaginal steroids.

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Diseases of the vagina

Conditions affecting the vulva, such as lichen sclerosis and eczema do not affect the vagina

VAIN

Usually an extension of CIN from the cervix

Asymptomatic

Treatment

Cauterization

Excision

Radiotherapy

Expectant (patient, grade, size)

There is a risk of cancer ? How much the risk

Vaginal cancer

Rare

Unknown cause

Risk factors; (as premalignat and malignant lesions of cervix)

Absence of symptoms in early stages: Frequently presents at an advanced stage

When advanced; bleeding and discharge

Pain (beyond the vagina and infiltrating pelvic nerves)

Vaginal Cancer

The diagnosis : vaginal biopsy

Investigation : the same as for cervical cancer.

Surgery is rarely an option as the disease is advanced

Radiotherapy and chemotherapy are usually first-line treatments.

Disease progression is usually local

advanced stages: patients may develop symptoms that are difficult to palliate, such as rectovaginal and vesicovaginal fistulae

FIGO staging

I: invasive carcinoma confined to vaginal mucosa

II: Subvaginal infiltration not extending to pelvic wall

III: Extends to pelvic wall

IV: 4a: Involves mucosa of bladder or rectum

4b: Spread beyond the pelvis

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