Skin manifestations of Sexually Transmitted Diseases

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What I will discuss

Why it is important to suspect an STD?

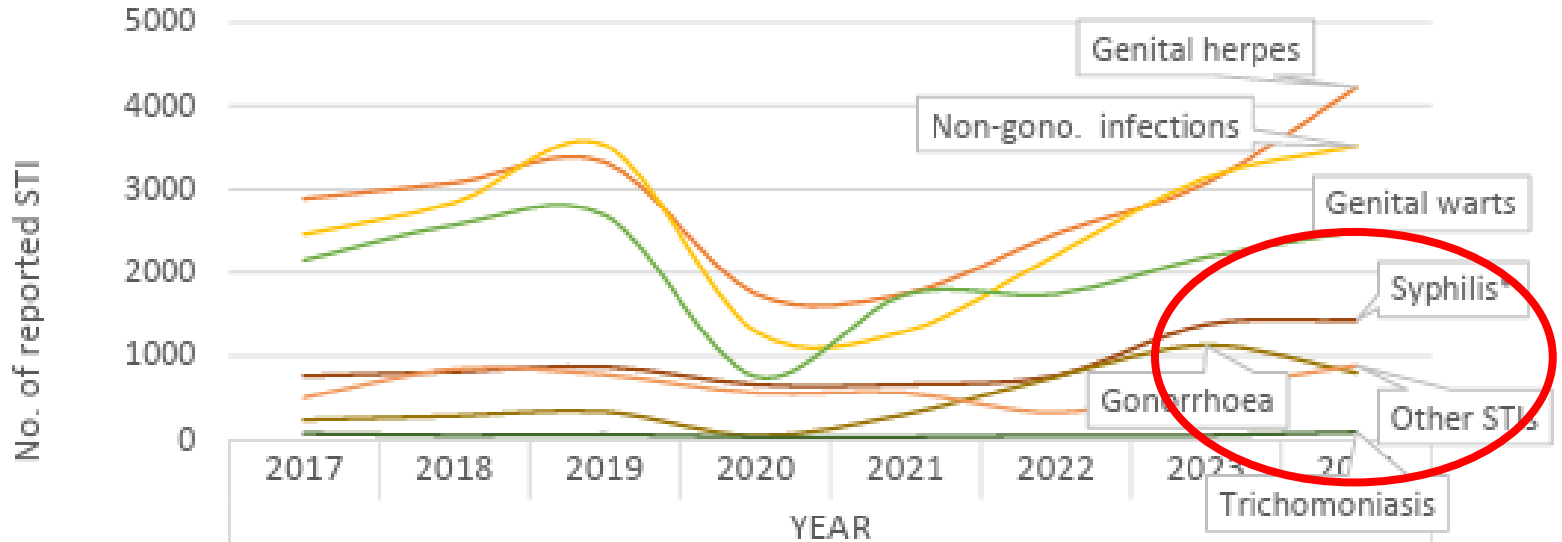
How common are skin manifestations in STD?

What are the specific diseases we will see in our day to day practice?


Local epidemiology

Figure 1: illustrate the trend of reported STIs in Sri Lanka from 2017 to 2024.

Figure 1: Trend of reported STIs, 2017-2024



	2017	2018	2019	2020	2021	2022	2023	2024
Genital herpes	2893	3081	3326	1753	1753	2469	3077	4222
Non-gono. infections	2461	2842	3527	1302	1302	2213	3139	3515
Genital warts	2153	2572	2687	757	1741	1743	2189	2500
Syphilis*	768	815	876	666	666	770	1383	1436
Gonorrhoea	237	282	331	46	301	754	1128	800
Trichomoniasis	78	53	63	36	36	56	51	92
Other STIs	506	850	782	563	563	326	622	889

Figure 3: Early syphilis cases by sex, 2019-2024

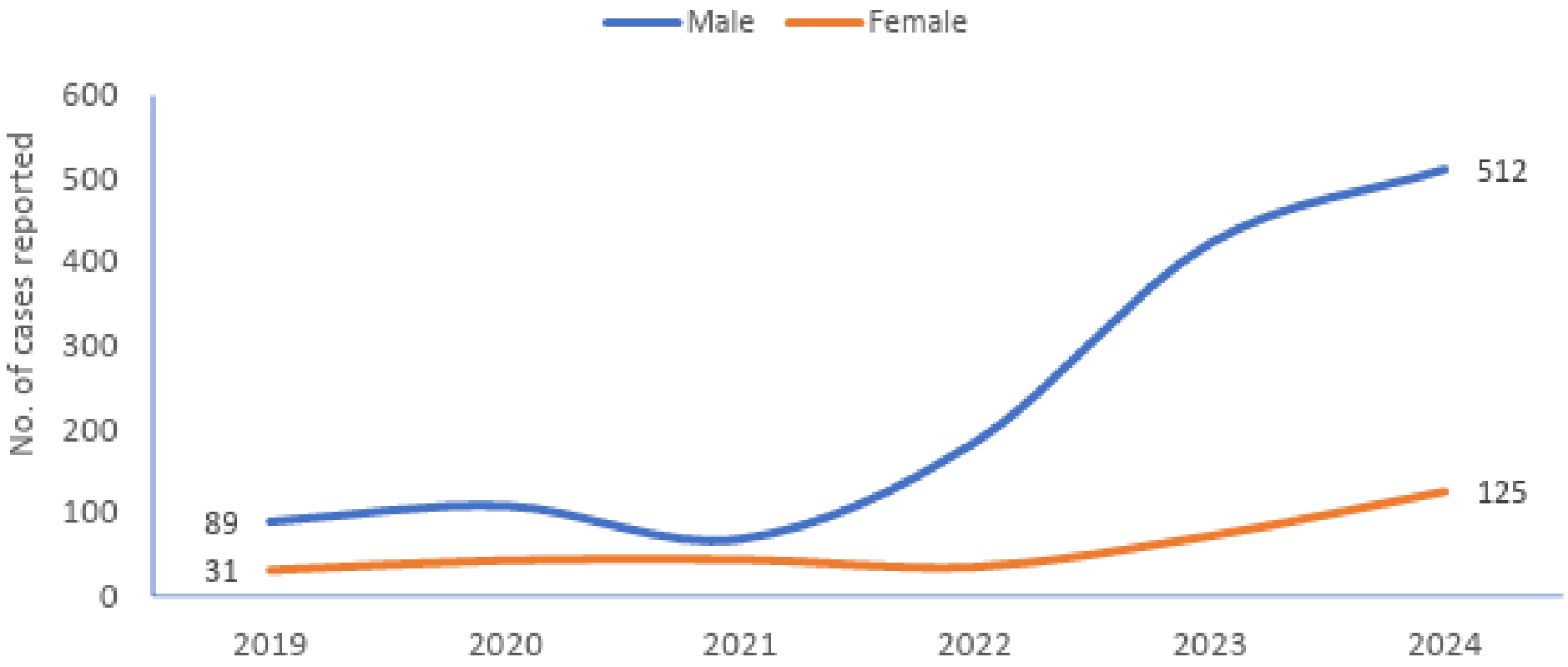


Figure 4: Late syphilis cases by sex, 2019-2024

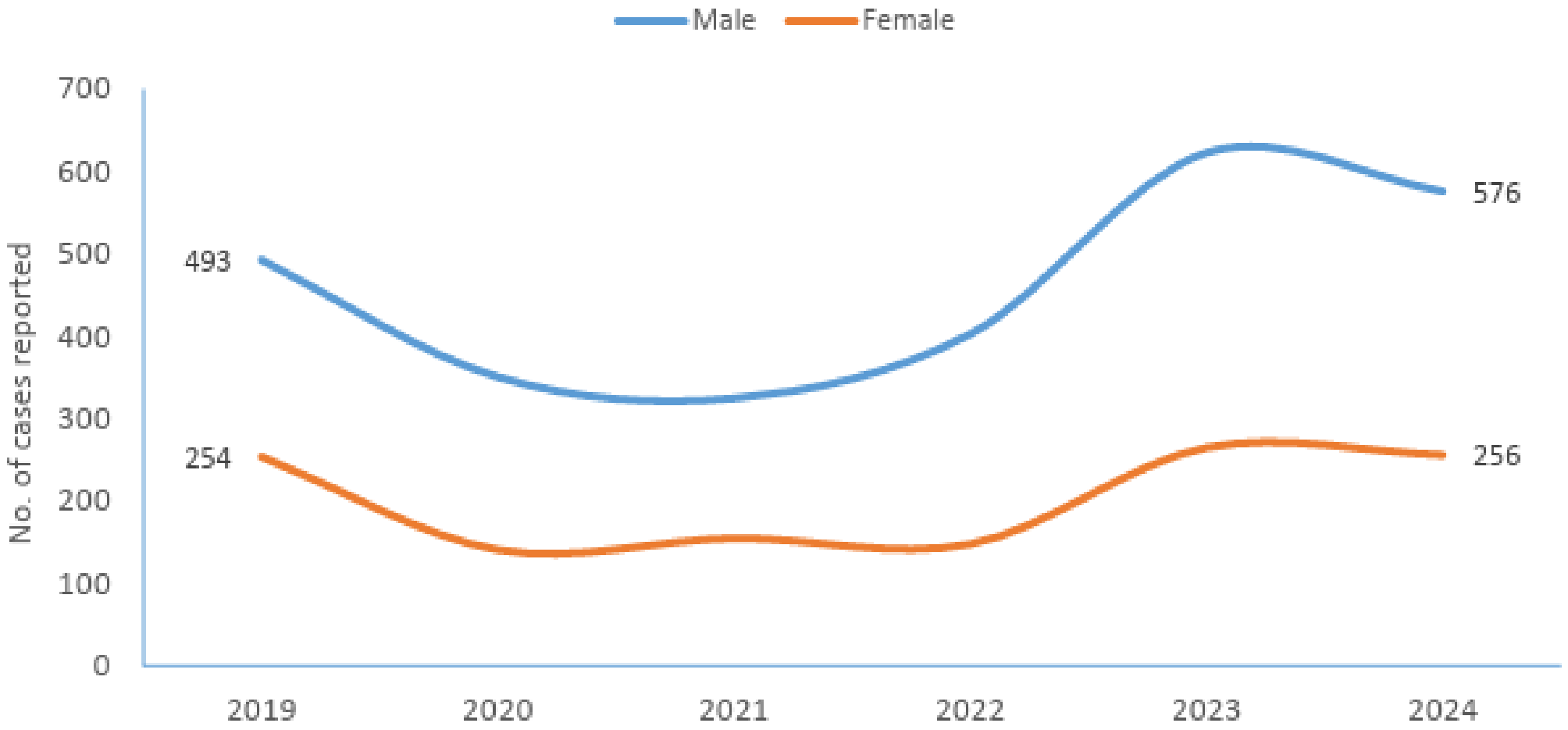


Figure 6: Gonorrhoea cases by sex, 2019-2024

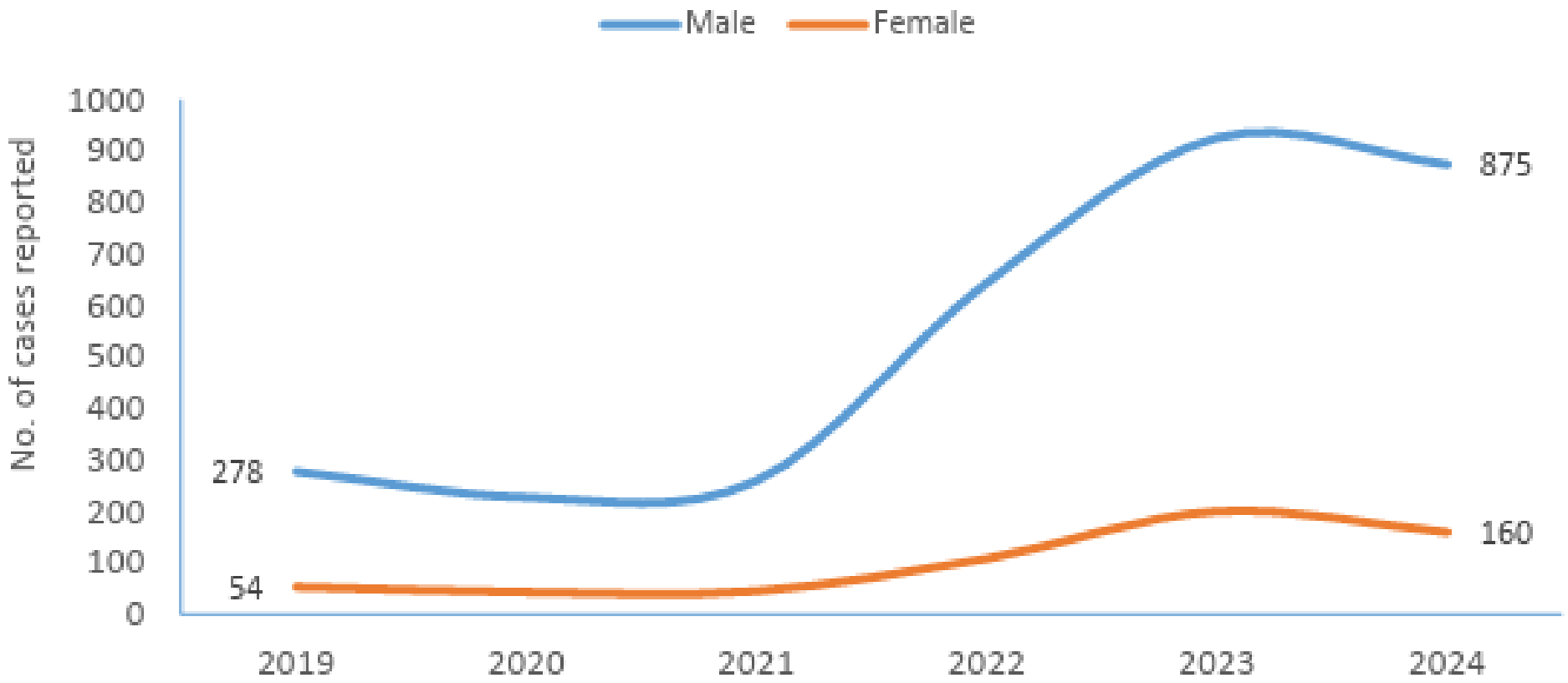


Figure 9: Genital herpes cases by sex, 2019-2024

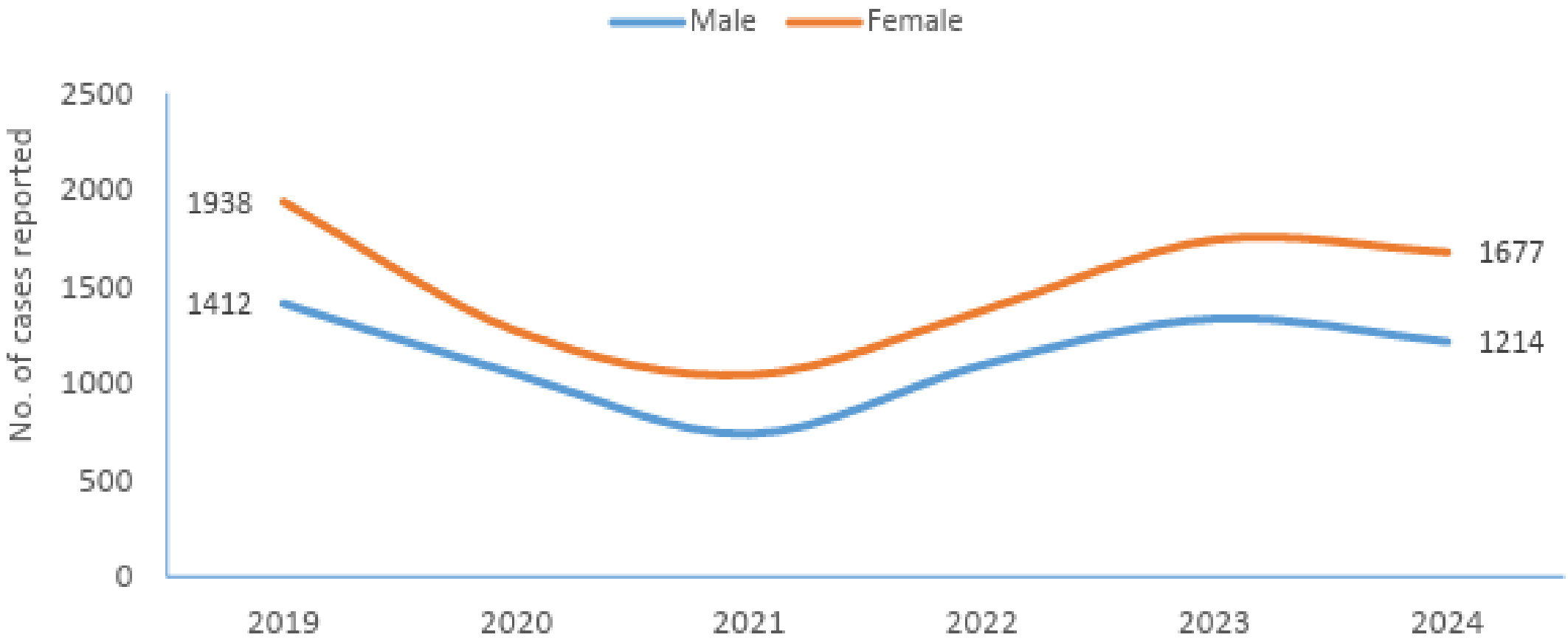
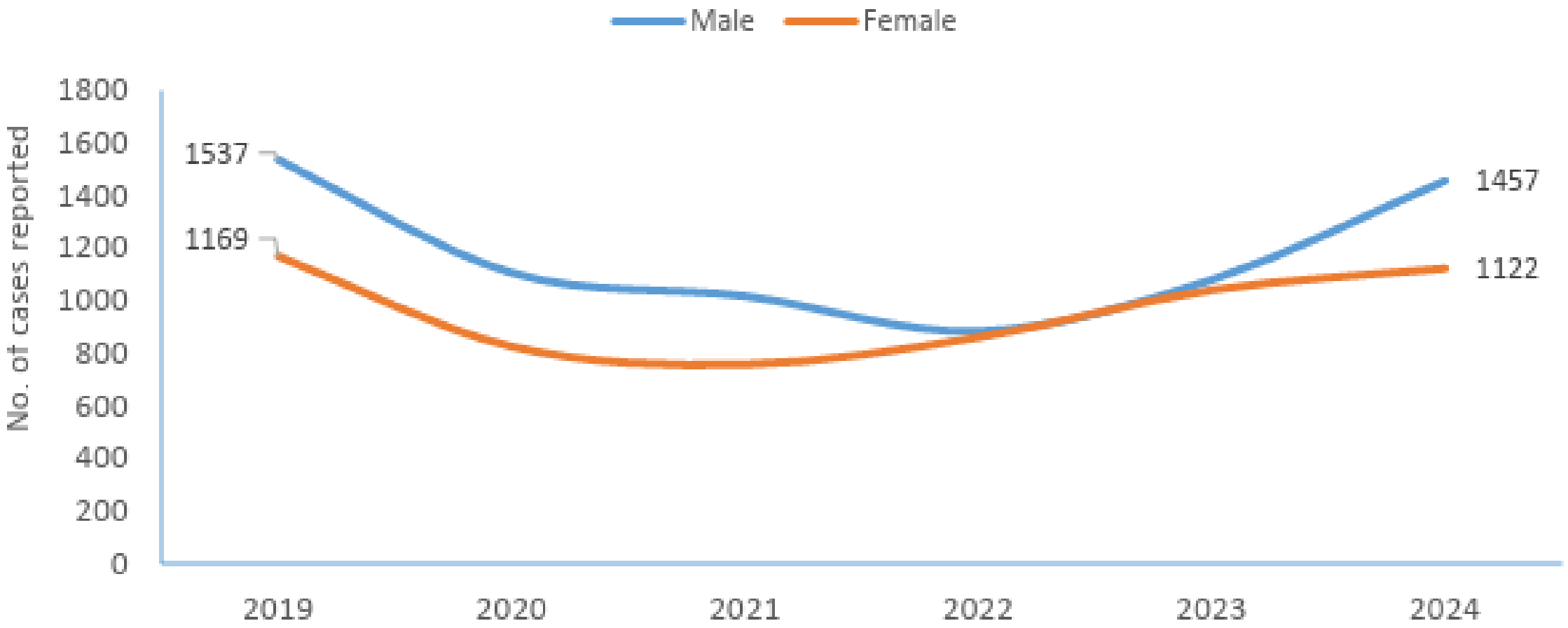


Figure 9: Genital wart cases by sex, 2019 and 2024



How common are skin manifestations?

- Genital skin – very commonly affected
- Non genital skin – can be affected and be the primary presentation
  - Unless suspected, can be missed as a STD by a non trained eye
  - Secondary syphilis rash suspected as a hand foot mouth disease

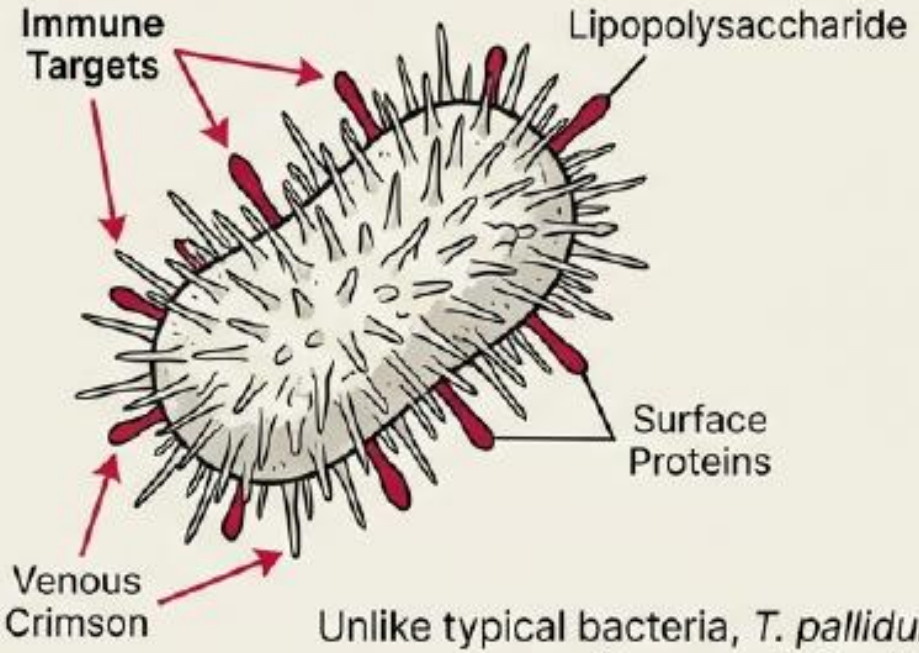
He who knows syphilis knows medicine

~ William Osler

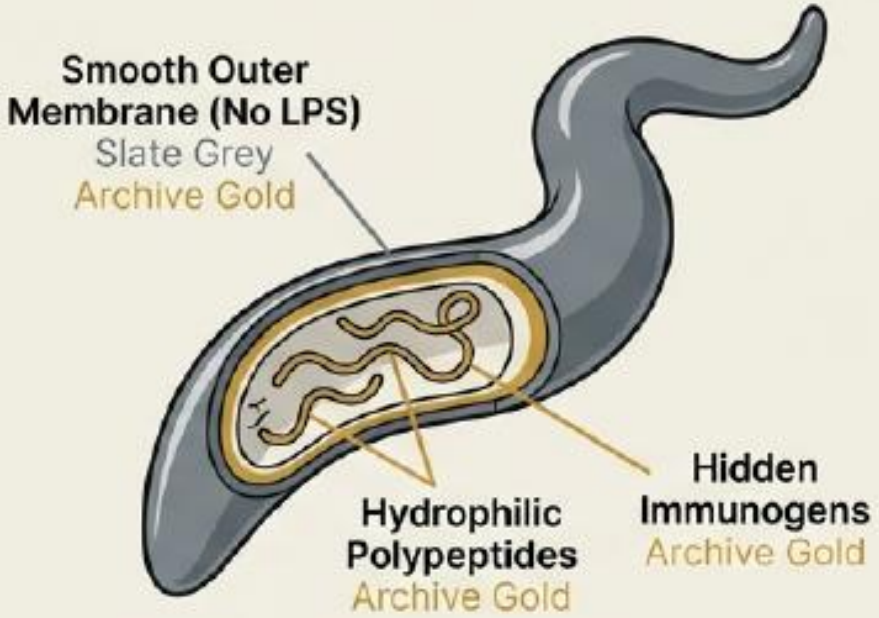
AZ QUOTES

The Stealth Pathogen

Standard Gram-Negative Bacterium
Inter



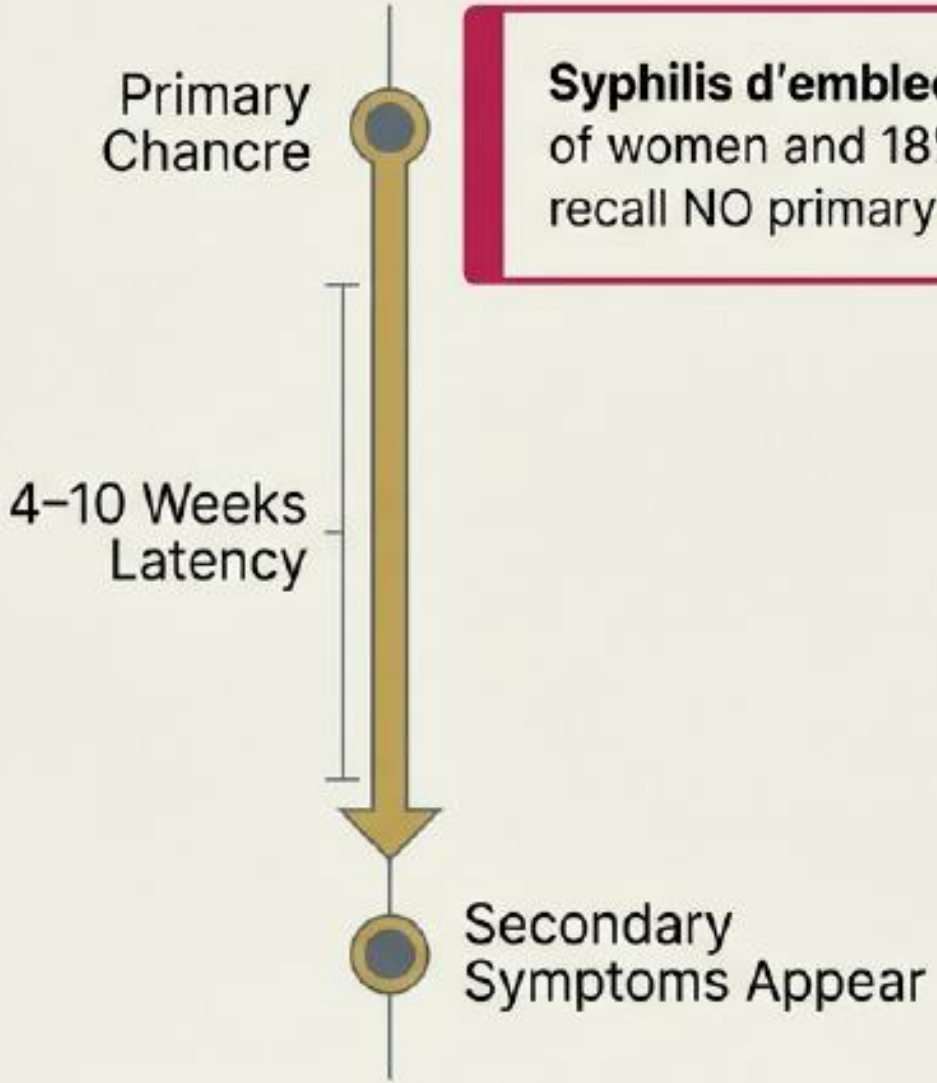
Treponema pallidum
Inter



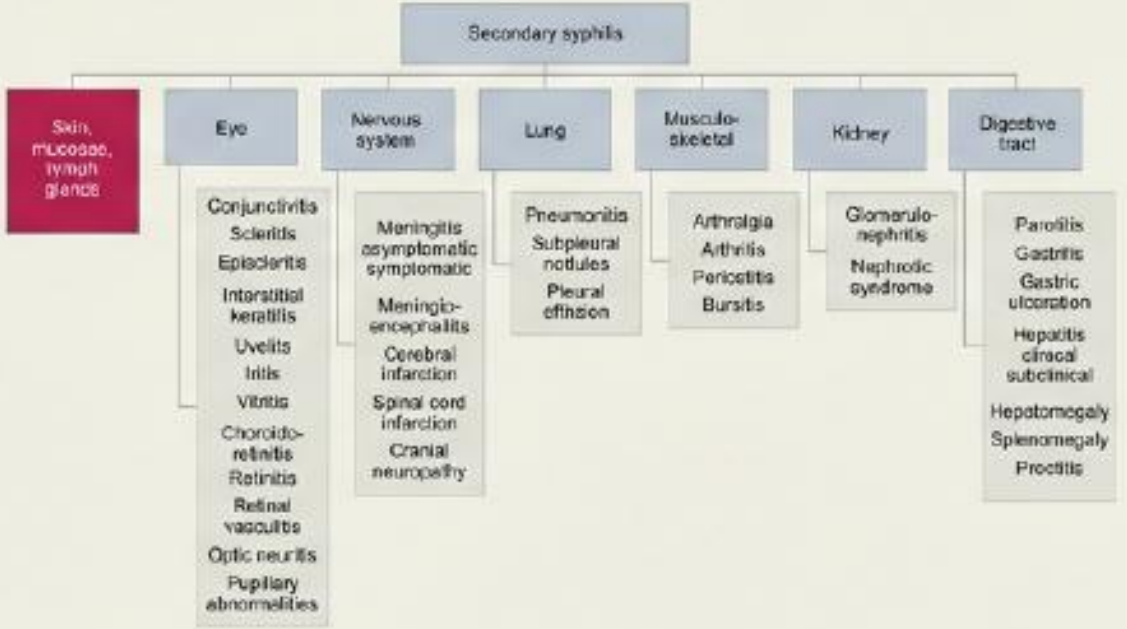
Unlike typical bacteria, *T. pallidum* hides its immunogens below the surface, rendering it invisible to antibodies.

Result: Rapid disseminaton throughout the body—often within hours of infection—occurring long before clinical signs appear.

The Timeline and the Triad



Syphilis d'emblee: 42% of women and 18% of men recall NO primary lesion.

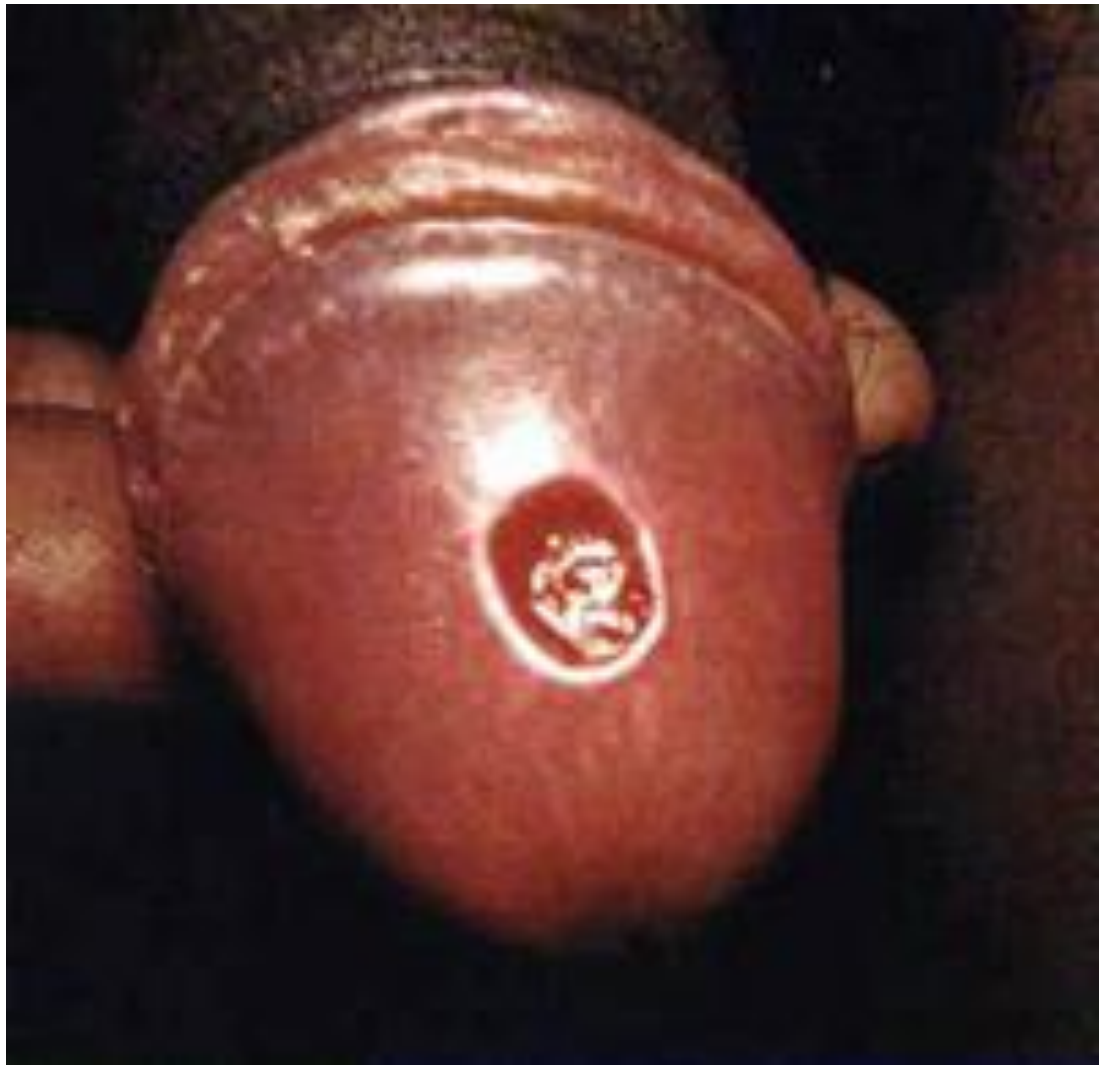


Classical Triad

- 1. Skin Rash (81–100%)
- 2. Lymphadenopathy (63–86%)
- 3. Mucosal Lesions (7–56%)

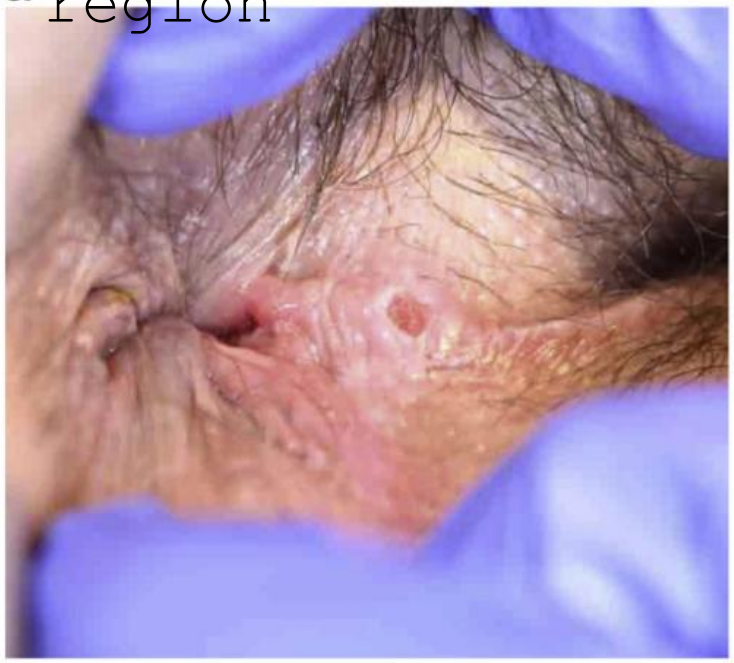
Primary chancre

- Characterized by a lesion **at the inoculation site.** (IP 9-90 days)
- Initially, a solid papule arises, -> breaks in the center to form a **painless indurated ulcer** in few days (Chancre/ulcus durum).
- Regional lymphadenopathy in 80%.
- Primary syphilitic lesions contain

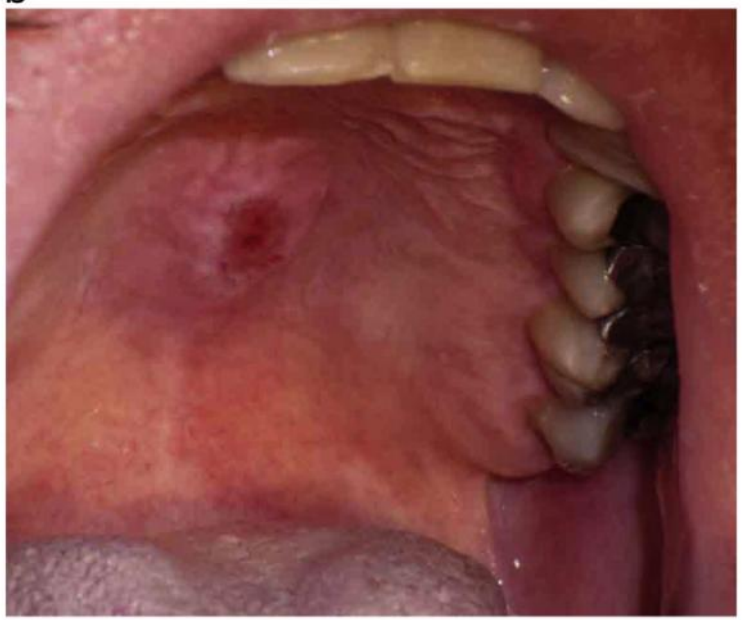


Extragenital chancres

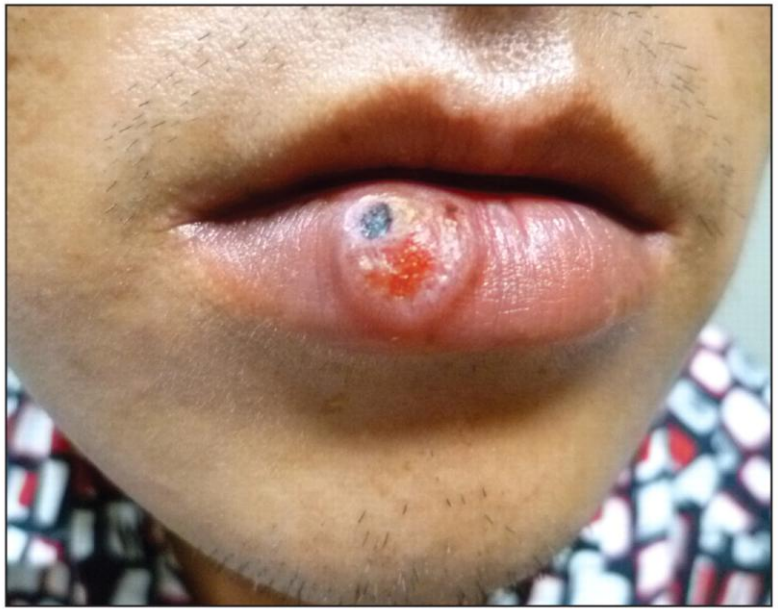
Chancre – perianal region



Chancre – Palate

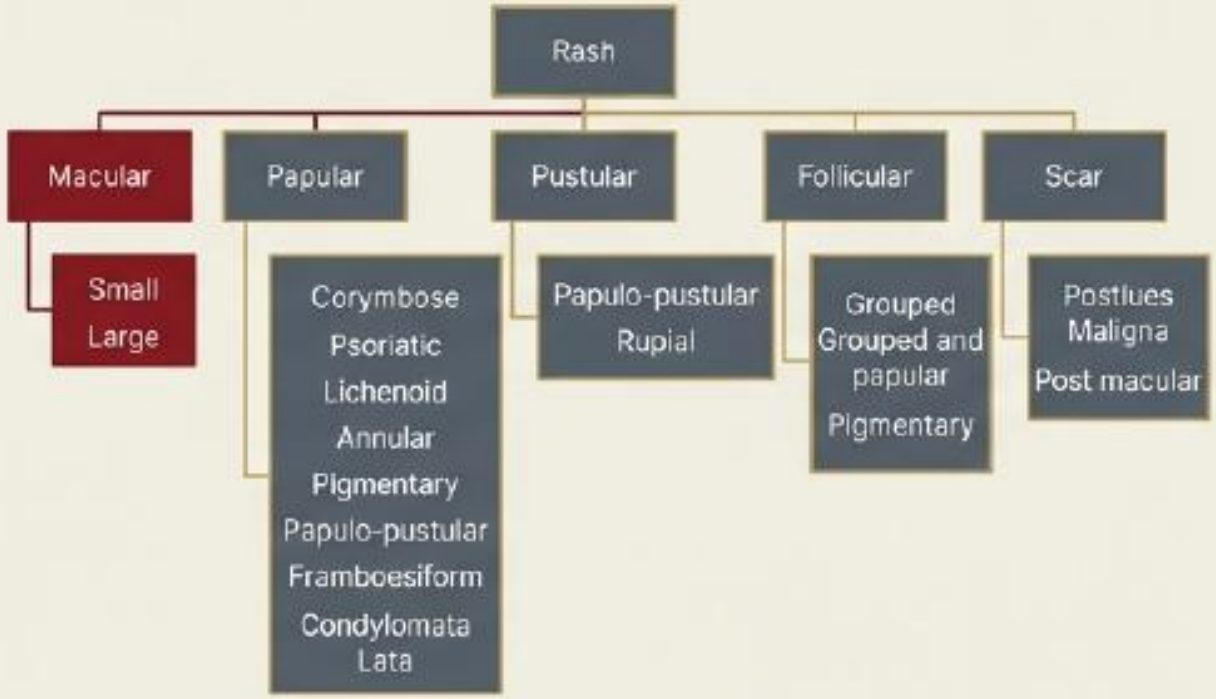


Chancre on lip



Secondary syphilis

The Fugitive Sign: Macular Rashes



Appearance: Hyperaemic spots (5–10mm) that blanche on pressure.

Location: Flanks, abdomen, shoulders, and back.

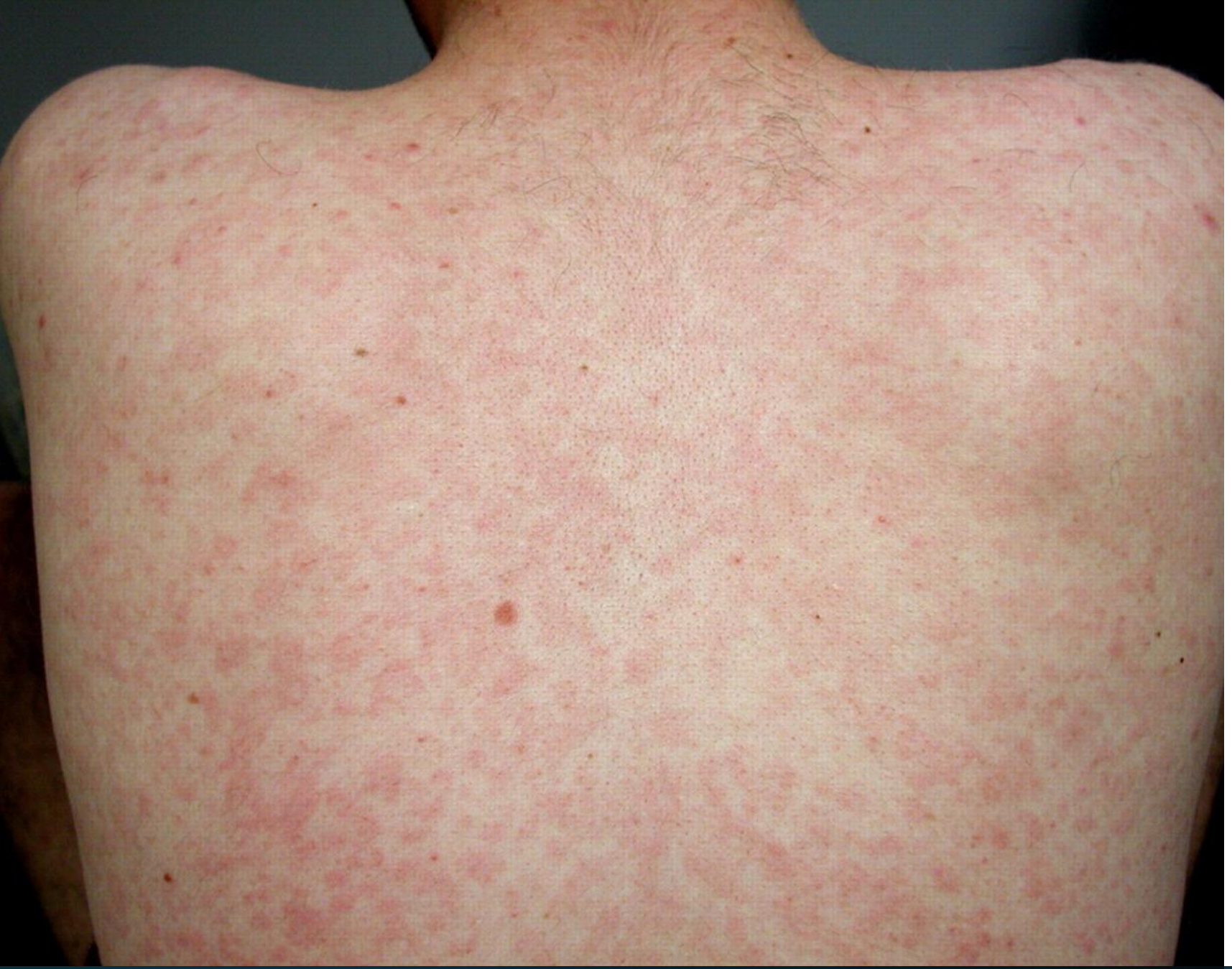
Crucial Distinction: The macular rash never occurs on the face.

Clinical Note

The macular rash is ephemeral, often lasting only 1–2 days. It is frequently unnoticed by the patient.

The Collar of Venus

A rare residuum of the rash presenting as depigmented patches (leucoderma) on the neck. Often misdiagnosed as vitiligo.



- May not be very prominent in a dark-skinned person

Collar of Venus

- Papules resolve leaving residual depigmentation on skin of the neck in some – Leucoderma colli (collar of venus)

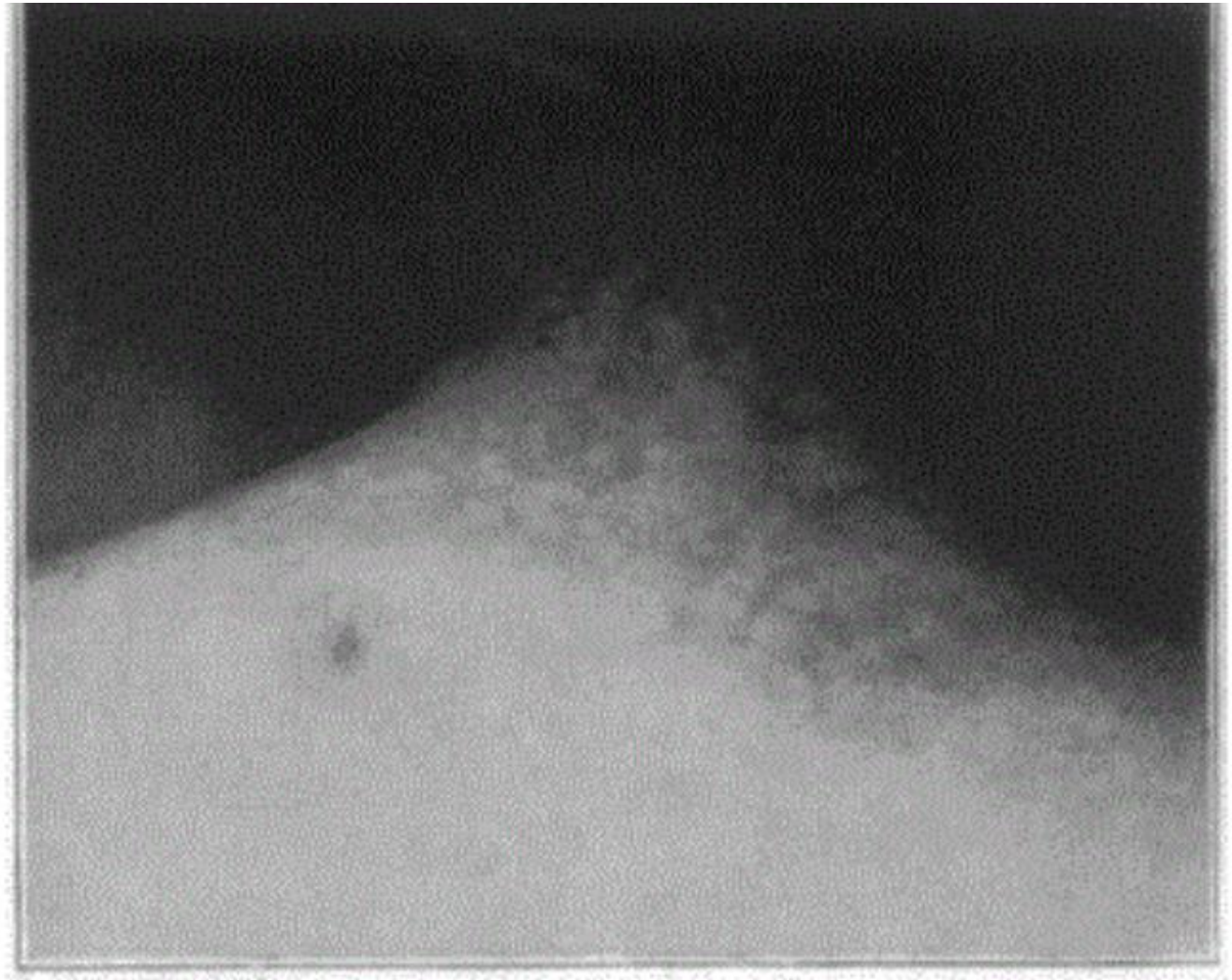
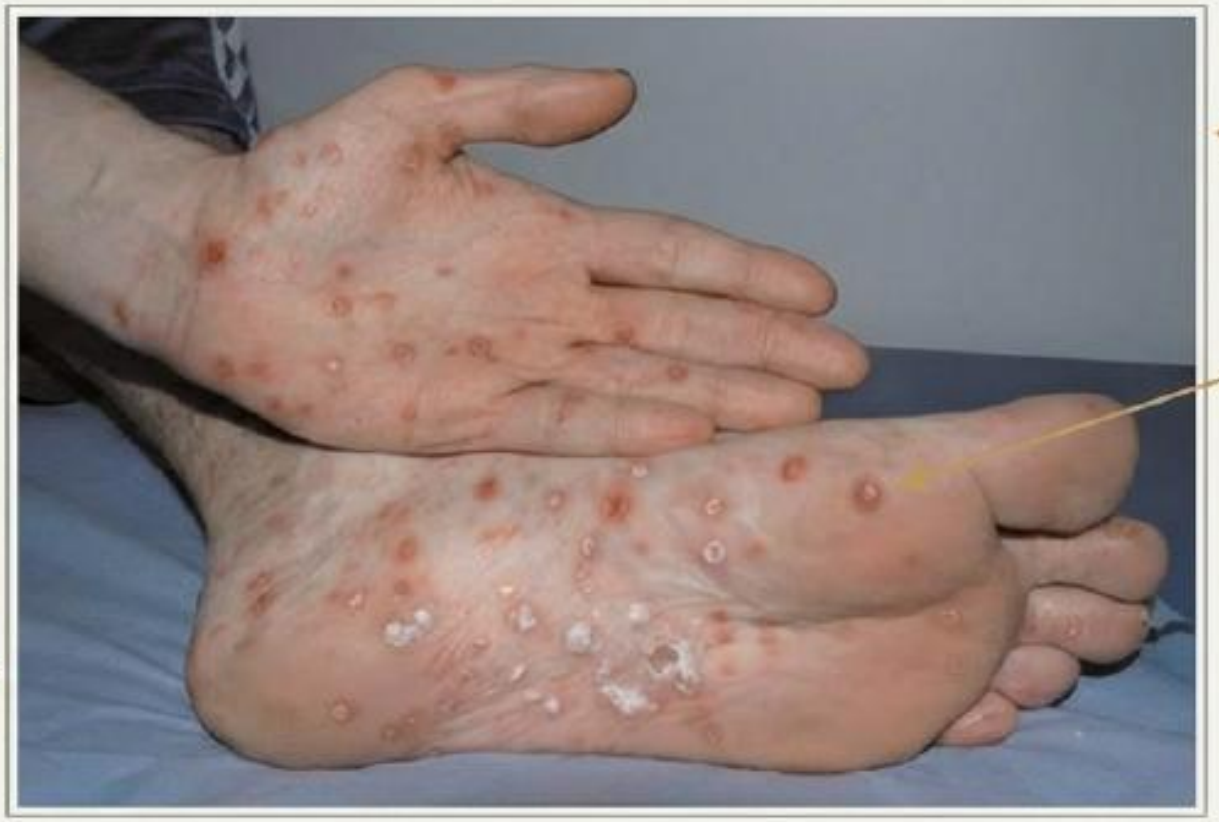


Fig. 1.—Melanoleukoderma colli: extensive figuration of dark and light skin of neck in woman patient.

The Palpable Facade: Papular Lesions

Key Sites: Unlike macular rashes, frequently involves palms and soles.



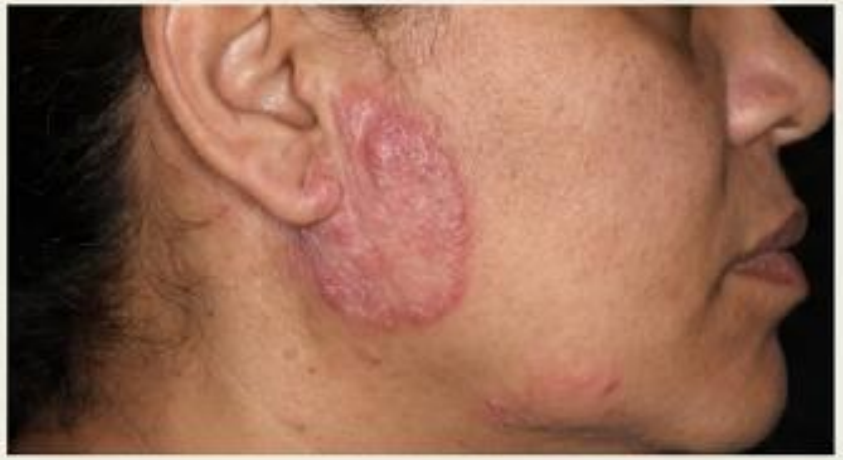
Morphology: Discrete elevations, brownish on pale skin. Palpable due to dense inflammatory infiltrate.

Variations & Mimicry:

- Split Papules: Fissured lesions at mouth angles.
- Collarette Scale: Rim of scale at margins.
- Differential Diagnosis: Lichen planus, Psoriasis, Erythema multiforme.

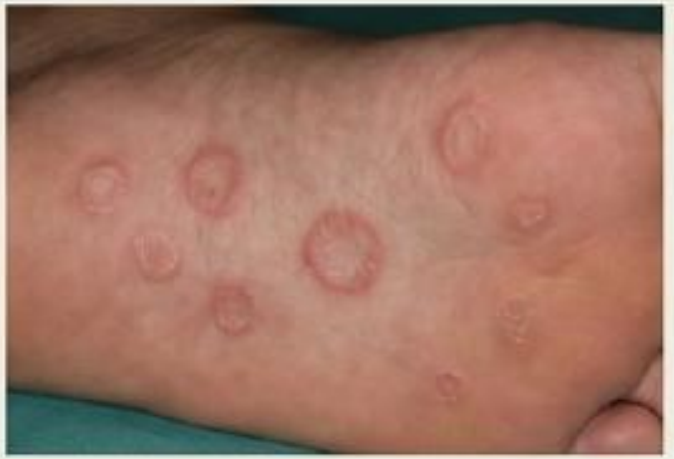
Master of Mimicry: Morphological Variants

Psoriasiform



Plaque-like, red, scaly. Unlike psoriasis, does not occur in scalp and does not bleed upon de-scaling.

Annular



Ring/coin–like lesions. Resembles sarcoidosis or tinea (fungal). Commoner in black-skinned patients.

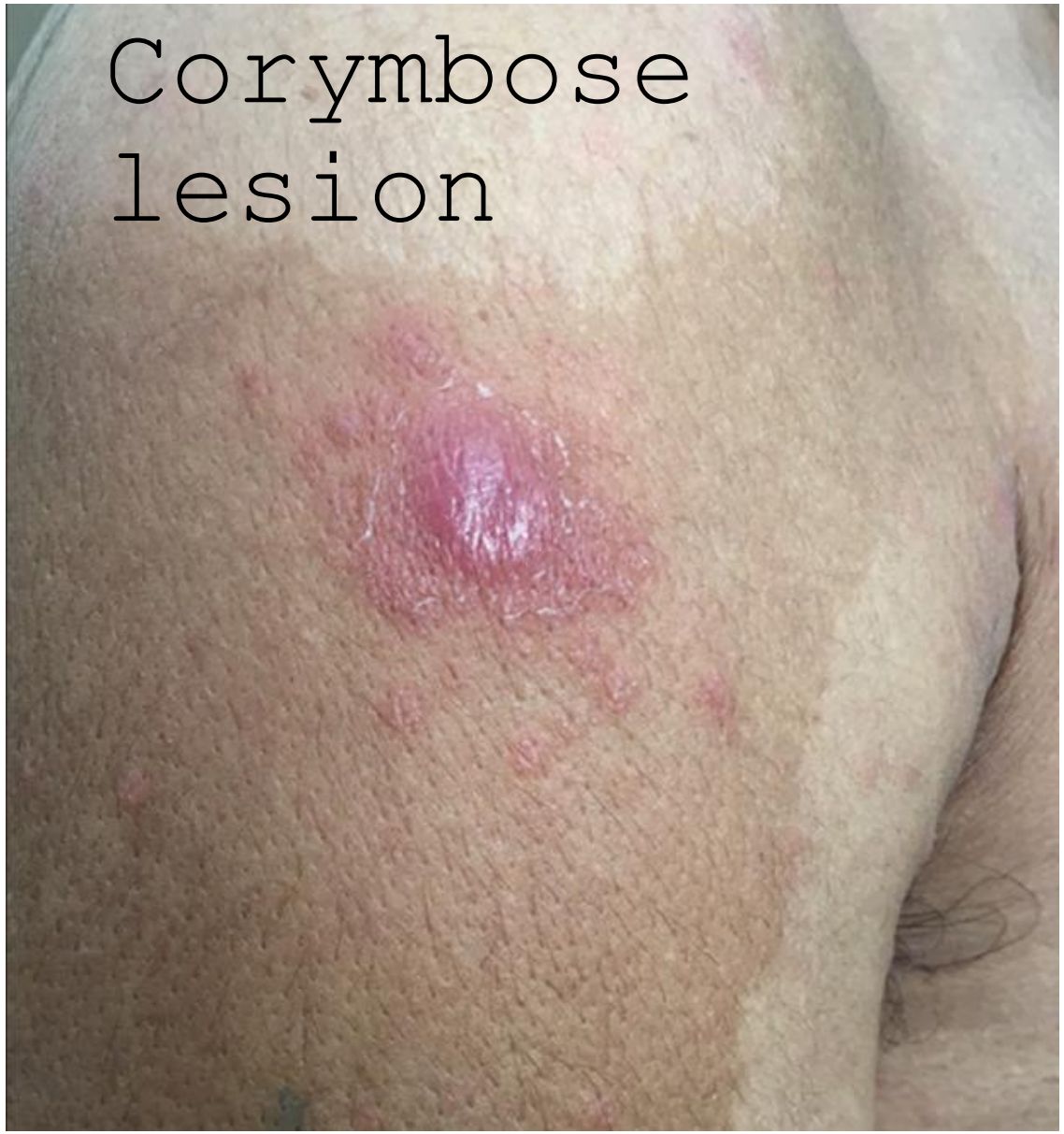
Lichenoid

Flat, angulated, shiny surface resembling lichen planus.

Corymbose

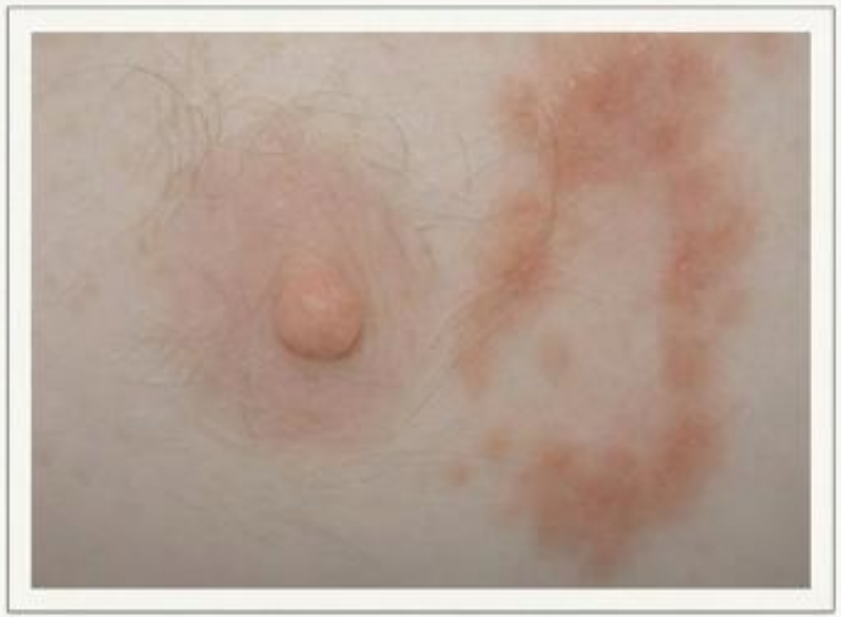
Central large papule surrounded by satellite lesions (nipple-like).


Lichenoid
lesion


Corymbose
lesion

High Infectivity: Condylomata & Mucosal Lesions

Condylomata Lata

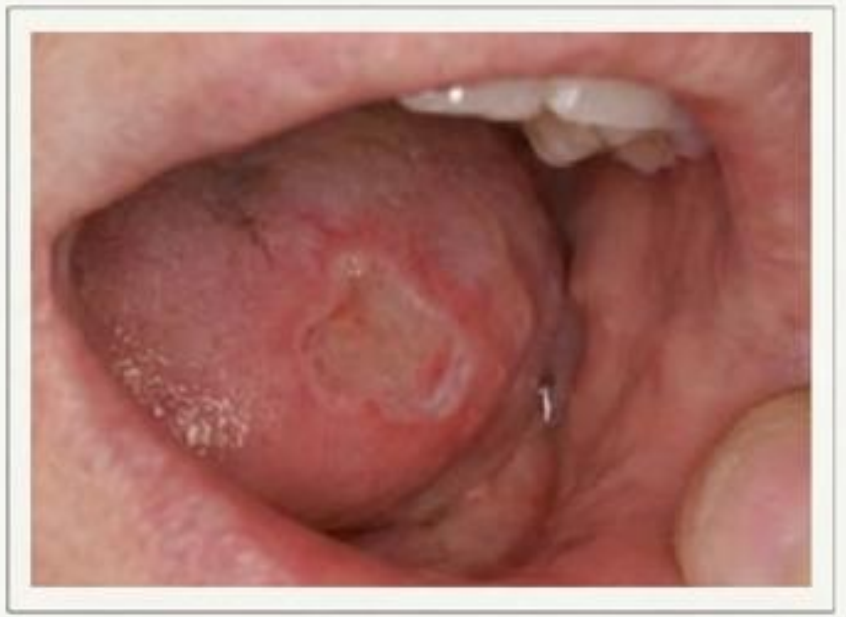


Flat, wart-like papules in moist areas (anogenital, axillae). Covered in greyish mucoid exudate.

Highest infectious risk due to treponeme concentration.

Vector for Transmission

Mucous Patches



'Snail-track" ulcers on lips, palate, tonsils. Often painless and transitory (changing daily).

Can cause pharyngitis or laryngitis.

Chondylomata lata

May mimic genital warts

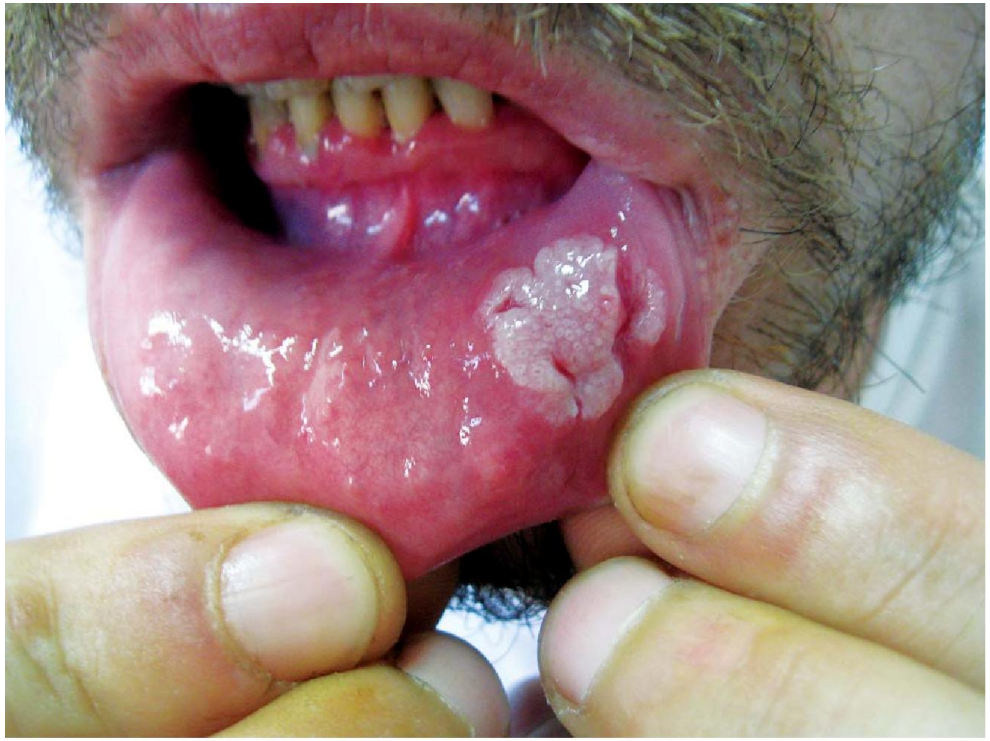
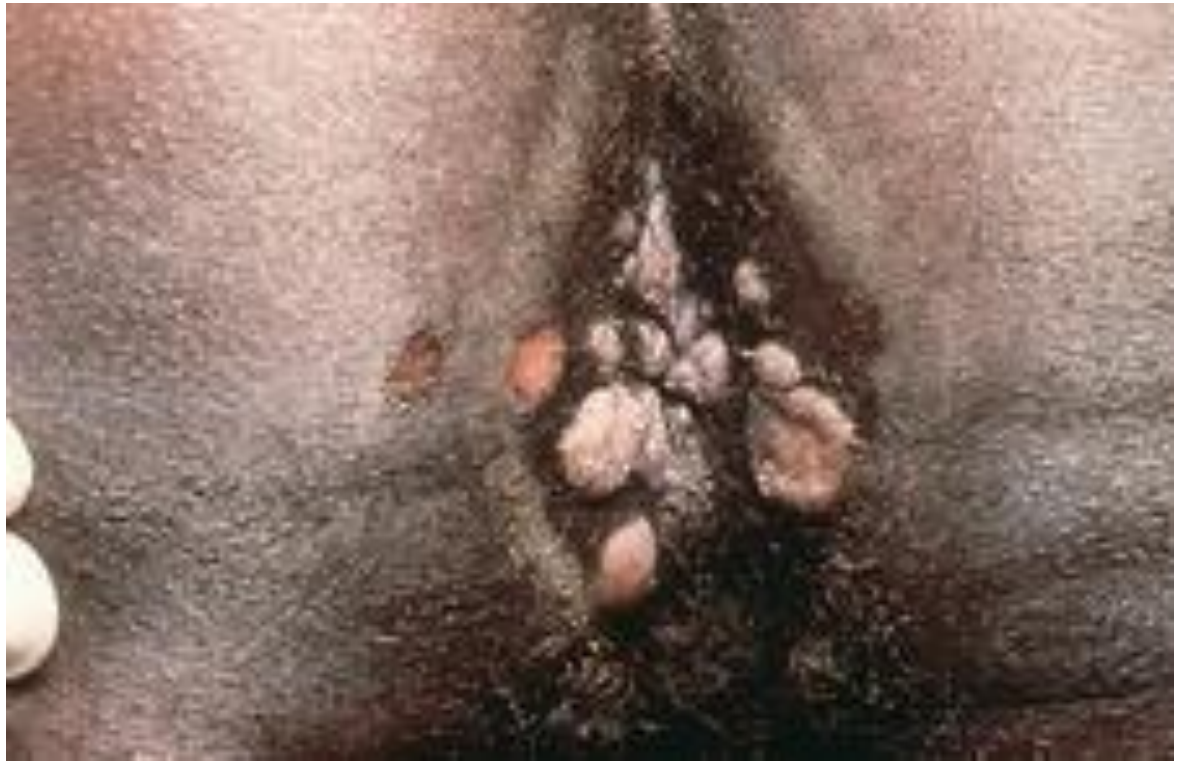


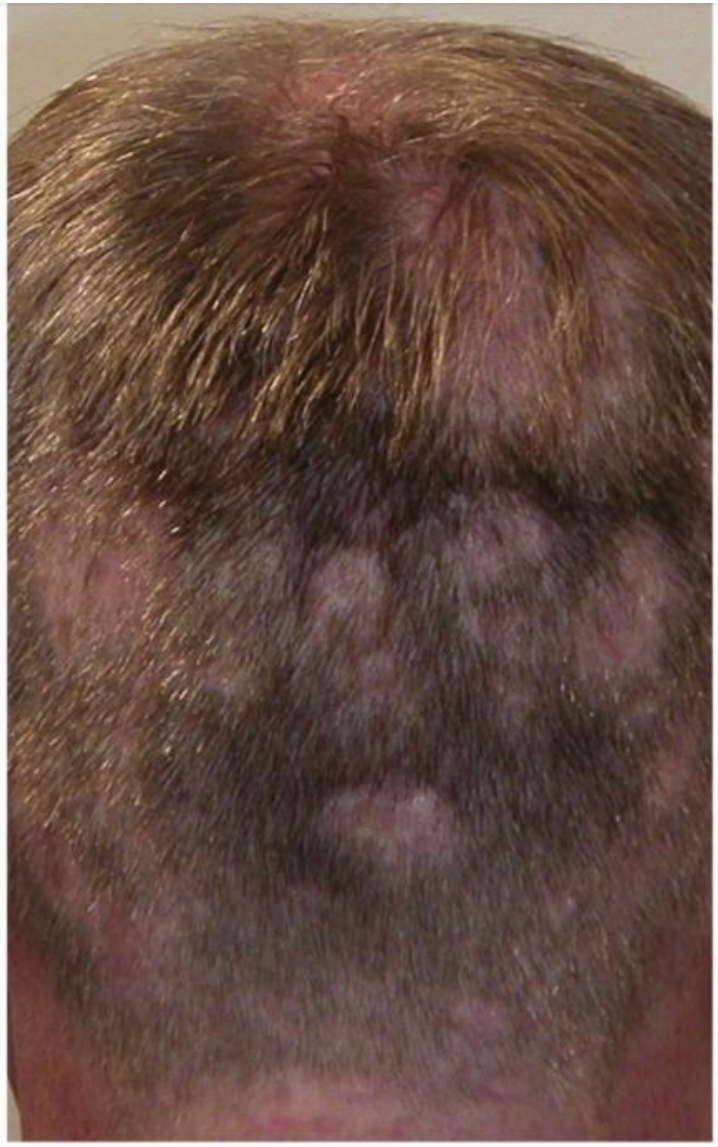
Figure 1 Hypertrophic, raised, papillomatous lesion on the lower lip partly split with peripheral fissures



Secondary Syphilis – Patchy alopecia

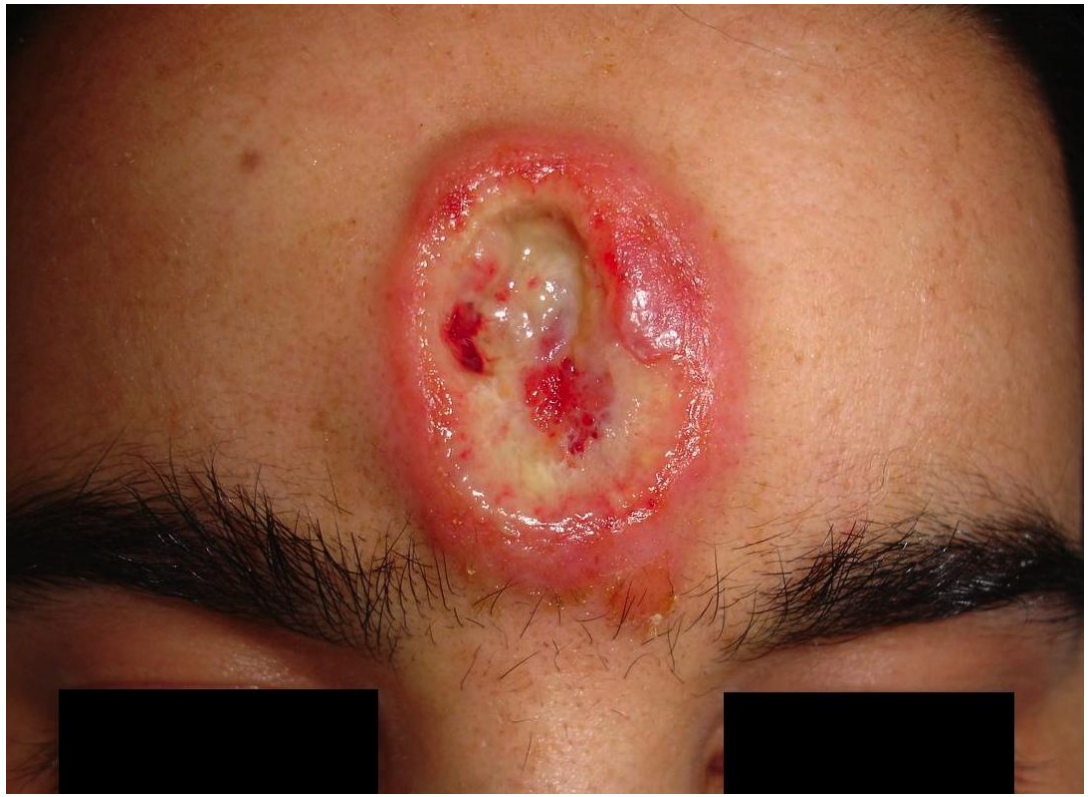
- Follicular siphilide involving hair follicles
- Sudden alopecia is a remarkable sign.
- When multiple spots, its referred to as “moth-eaten” alopecia. (Non scarring)
- Eye lashes / beard may be involved

- DD- Alepecia areata, Trichotillomania, Lichen planus pillaris or taenia

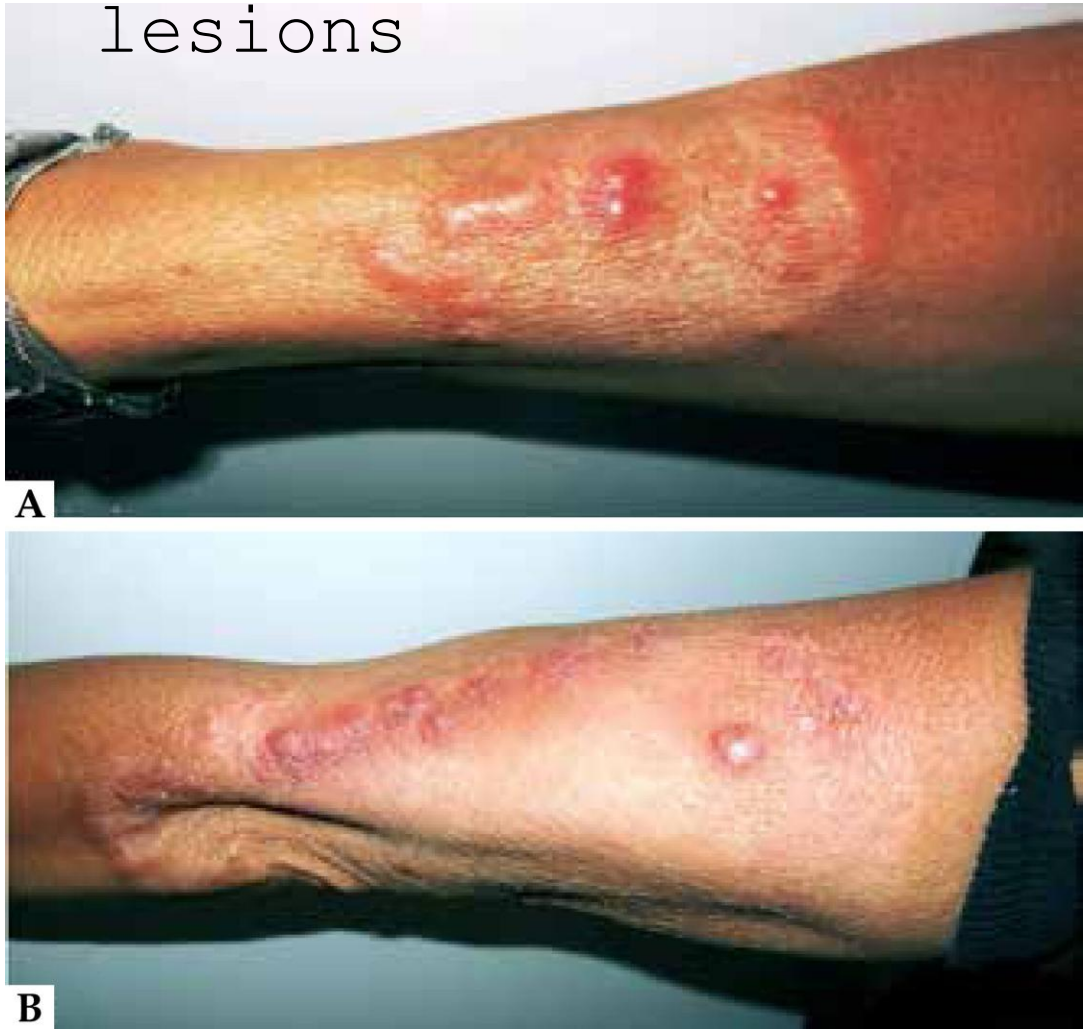


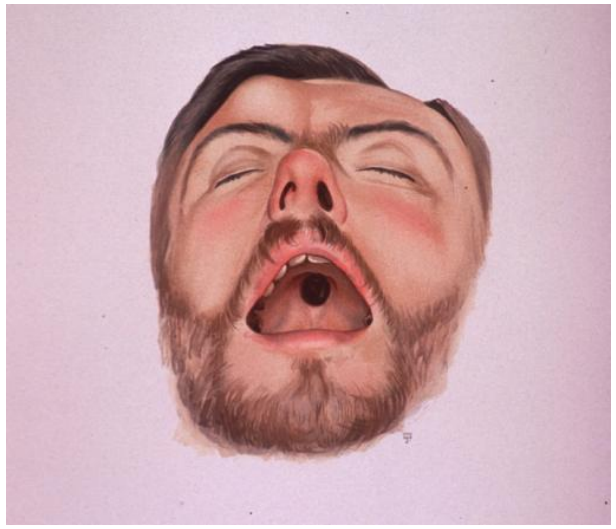
Tertiary syphilis

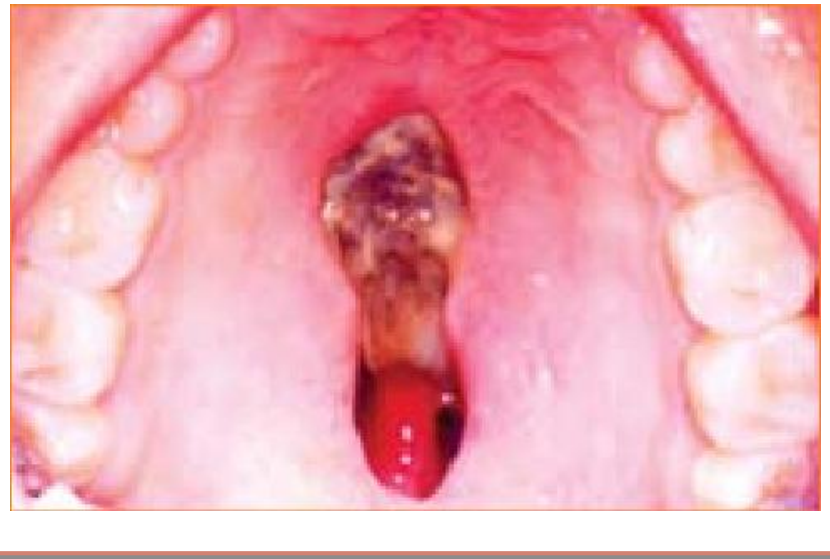
Subcutaneous gummata

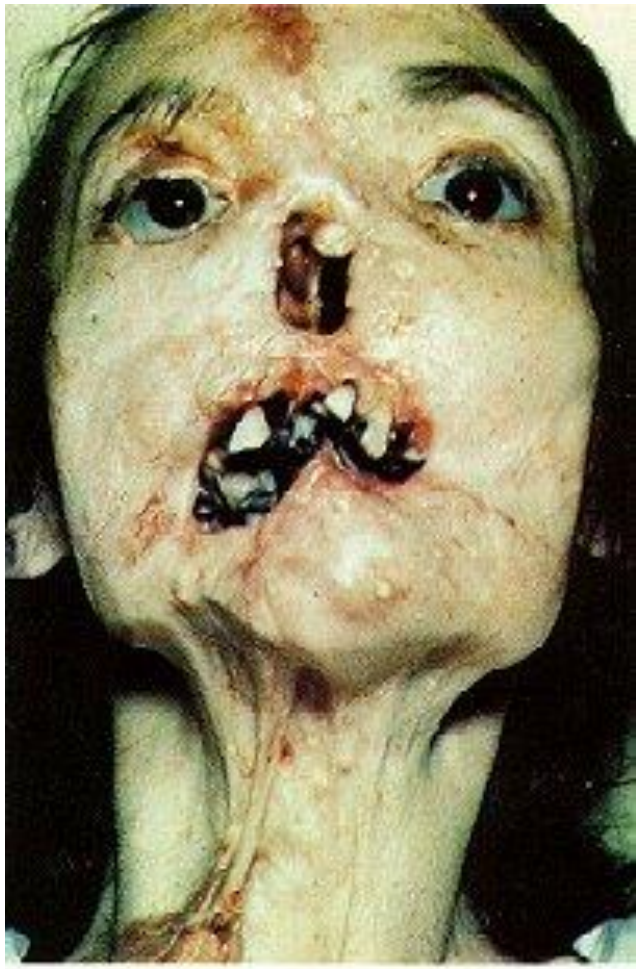


- Nodular lesions



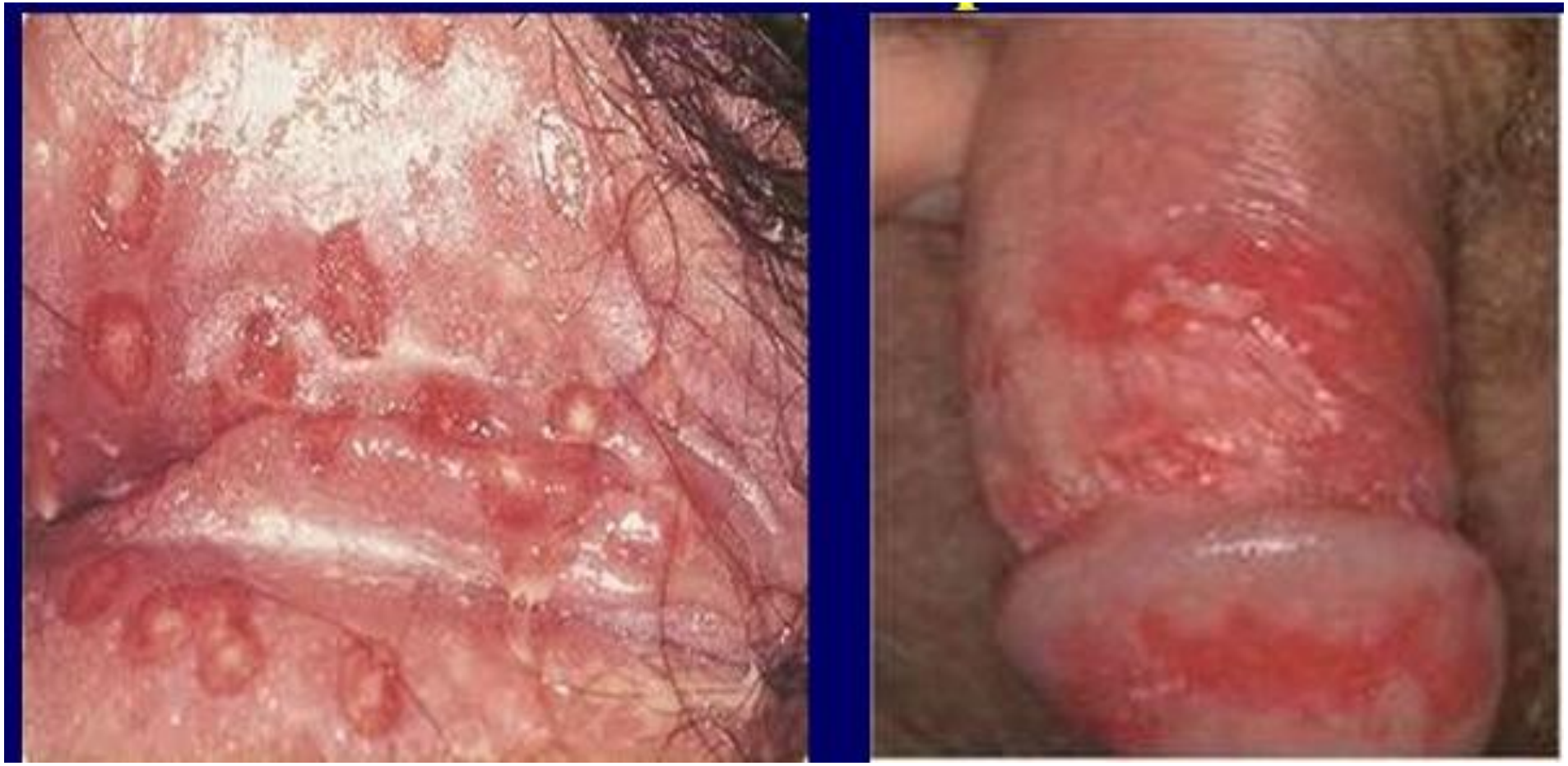




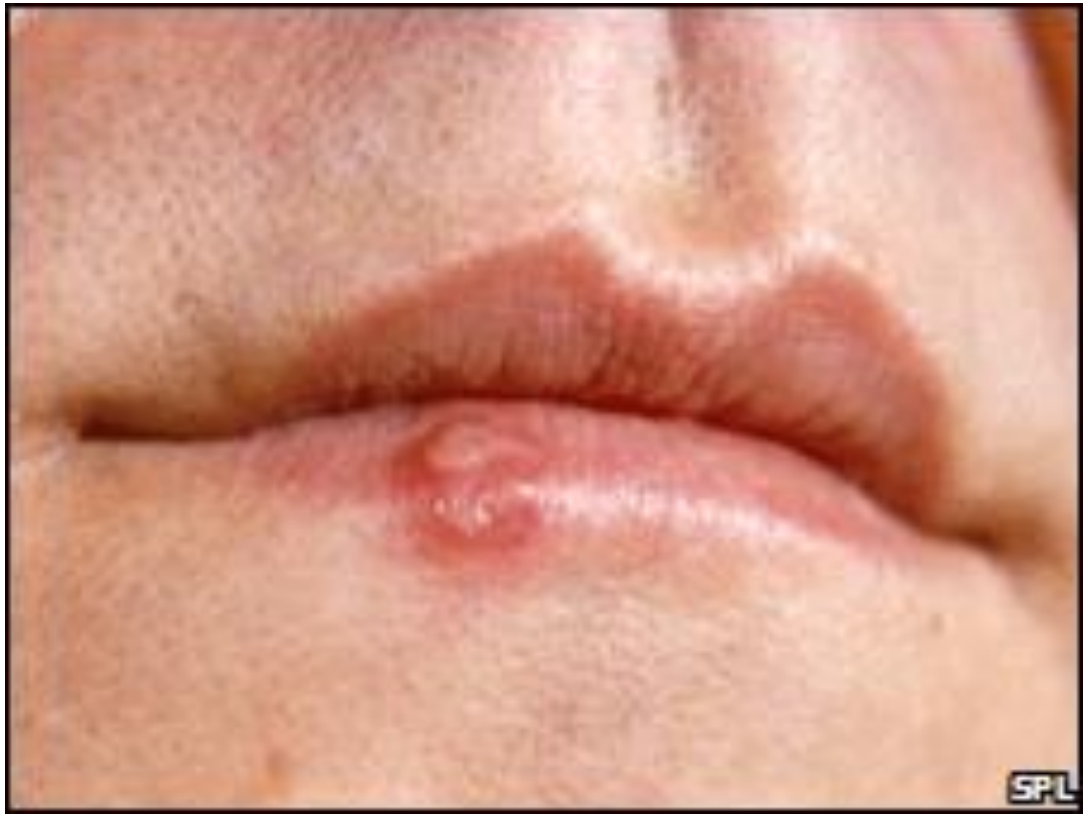


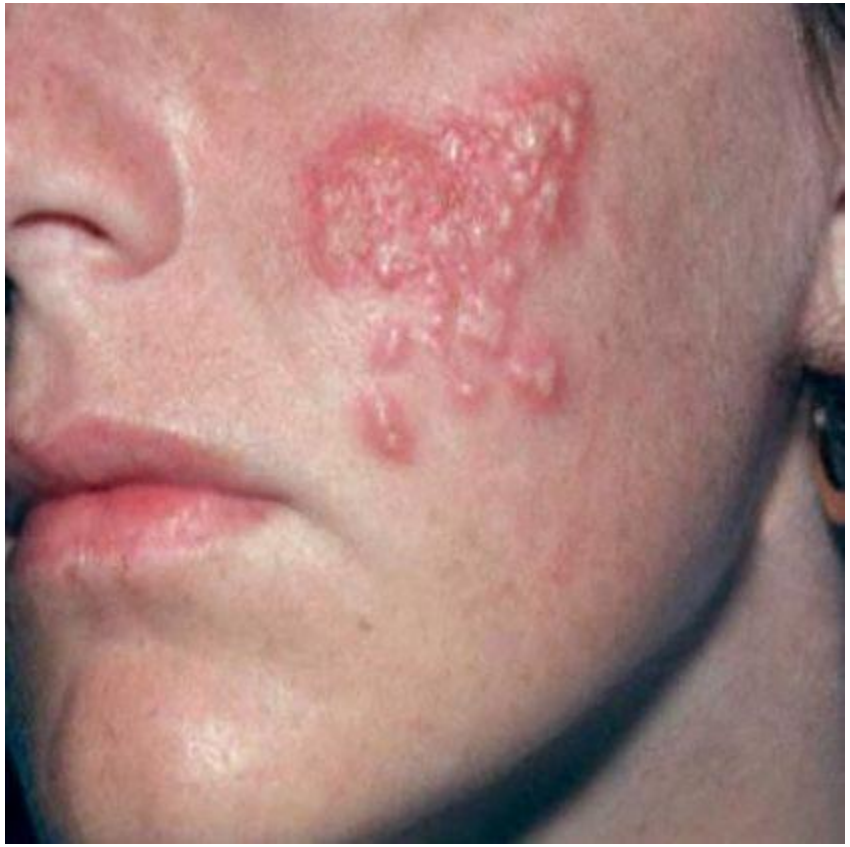
Tertiary syphilis: Gummatous destruction of face.
A. Wisdom. Color Atlas of Venereology. 1973.

Genital herpes- Usual lesions



Orolabial HSV- Usual lesions

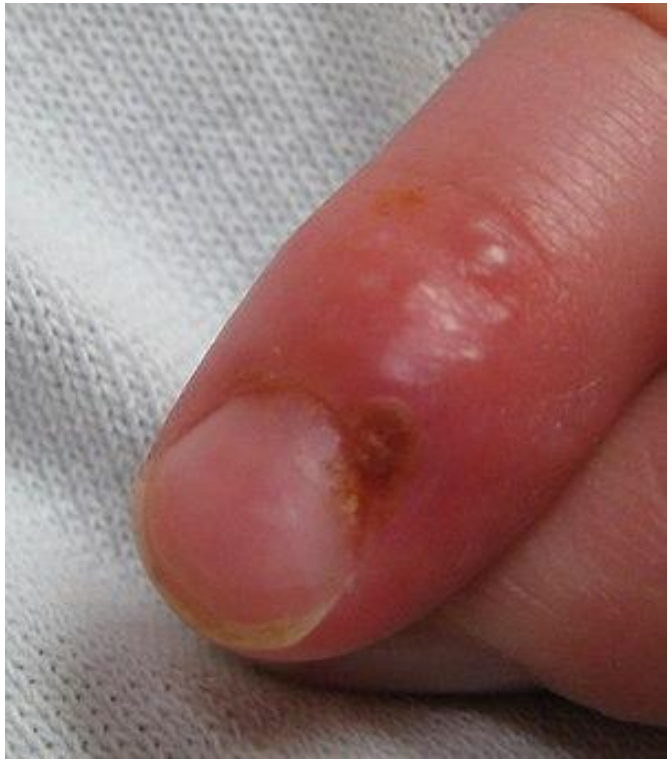


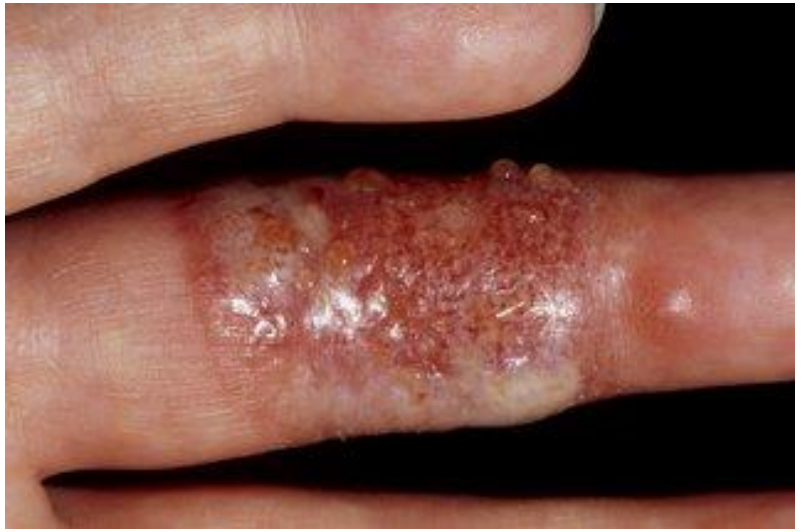


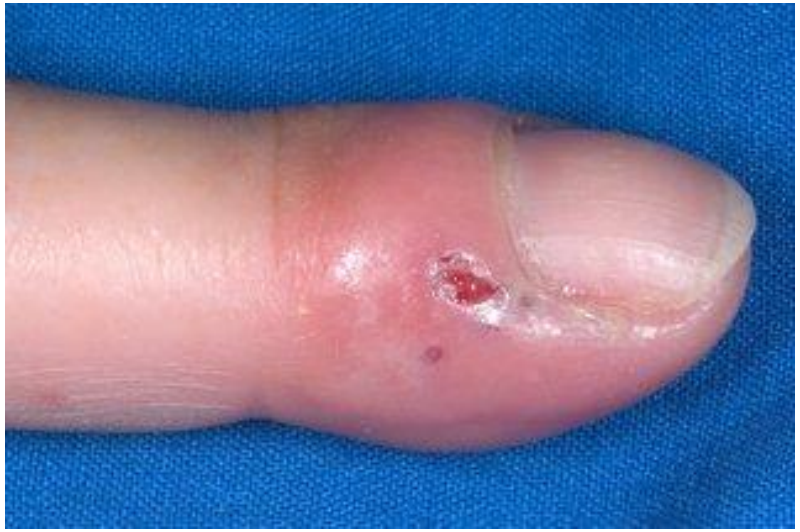
Genital herpes– Extra genital lesions

- HSV infection on sites other than that around the mouth or genitals
- Suggested mechanisms
  - **by direct inoculation** at the time when genital herpes is contracted. (HCW/ contact sports / exposure of an abraded skin)
  - **Autoinoculation**
  - **Intraneuronal spread;** (not explain those at more distant sites.)
  - **haematogenous spread** at the time of primary

Herpetic whitlow

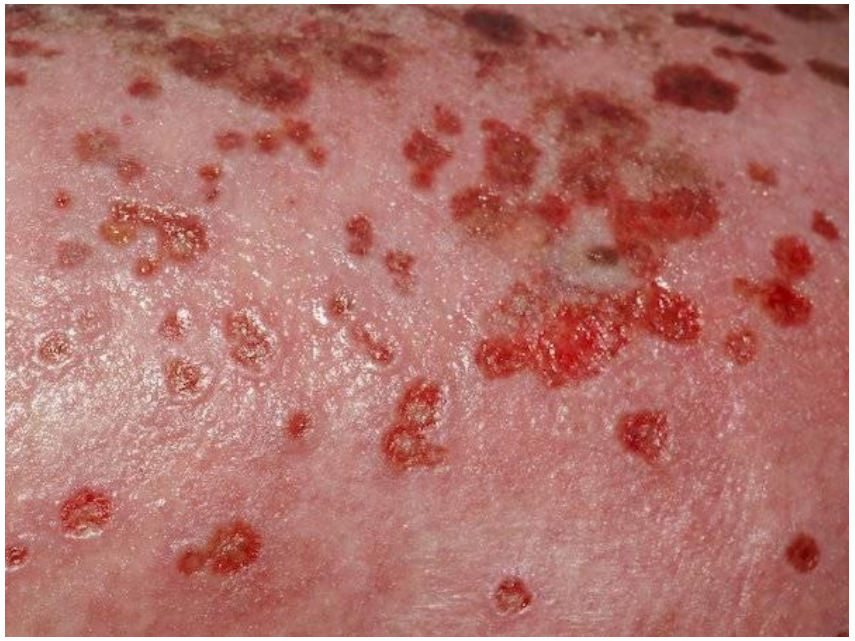


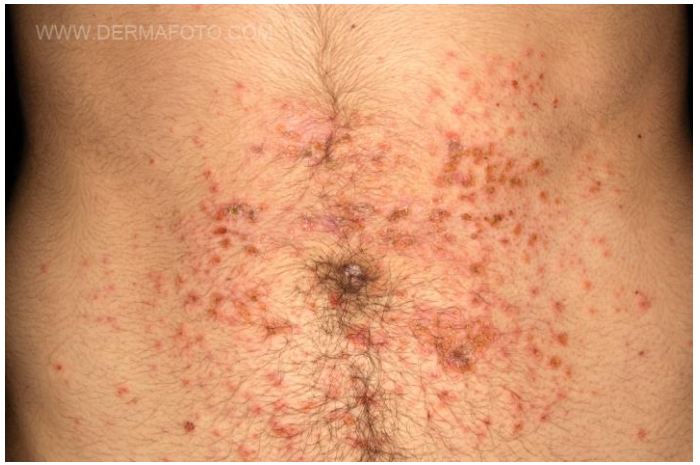




Extragenital HSV- **Eczema Herpeticum**

- Patients with atopic dermatitis are at risk of this complication
- Usually during first episode of HSV infection
- cutaneous pain/itching and new lesions (clusters of itchy/ painful blisters - ulcers) secondary to a viral infection (usually HSV1)
- Can spread rapidly leading to severe morbidity/mortality.

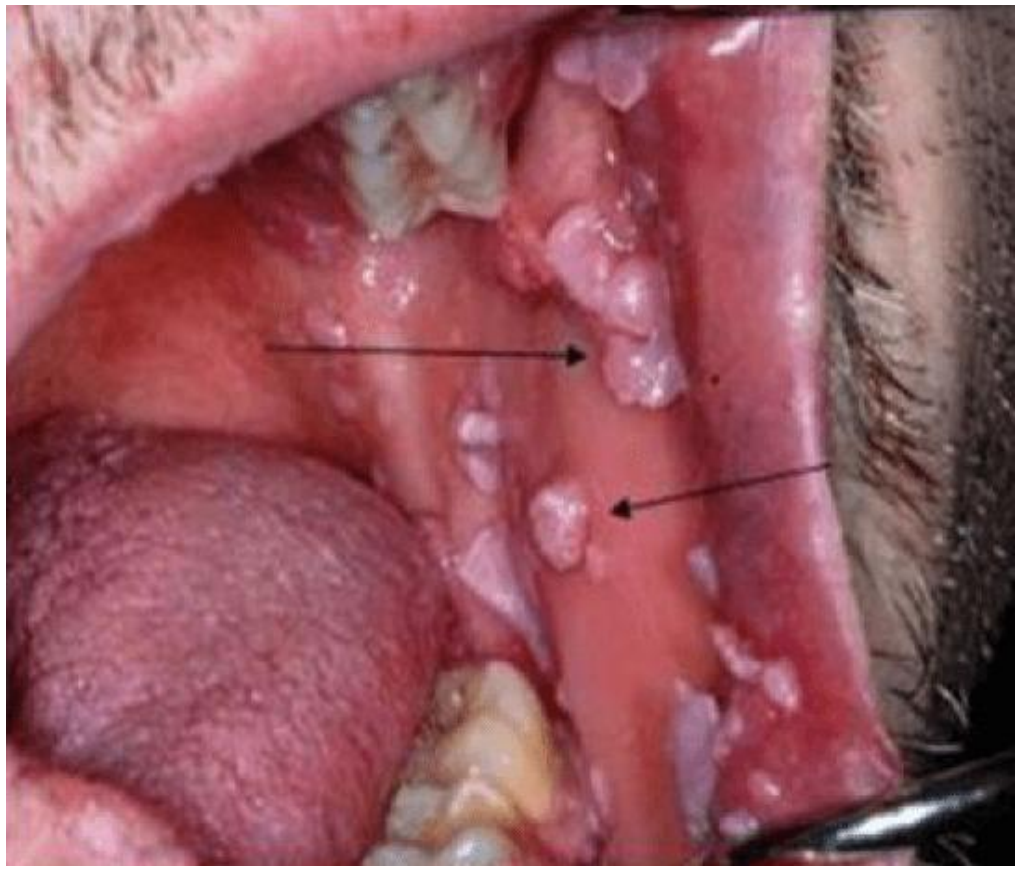


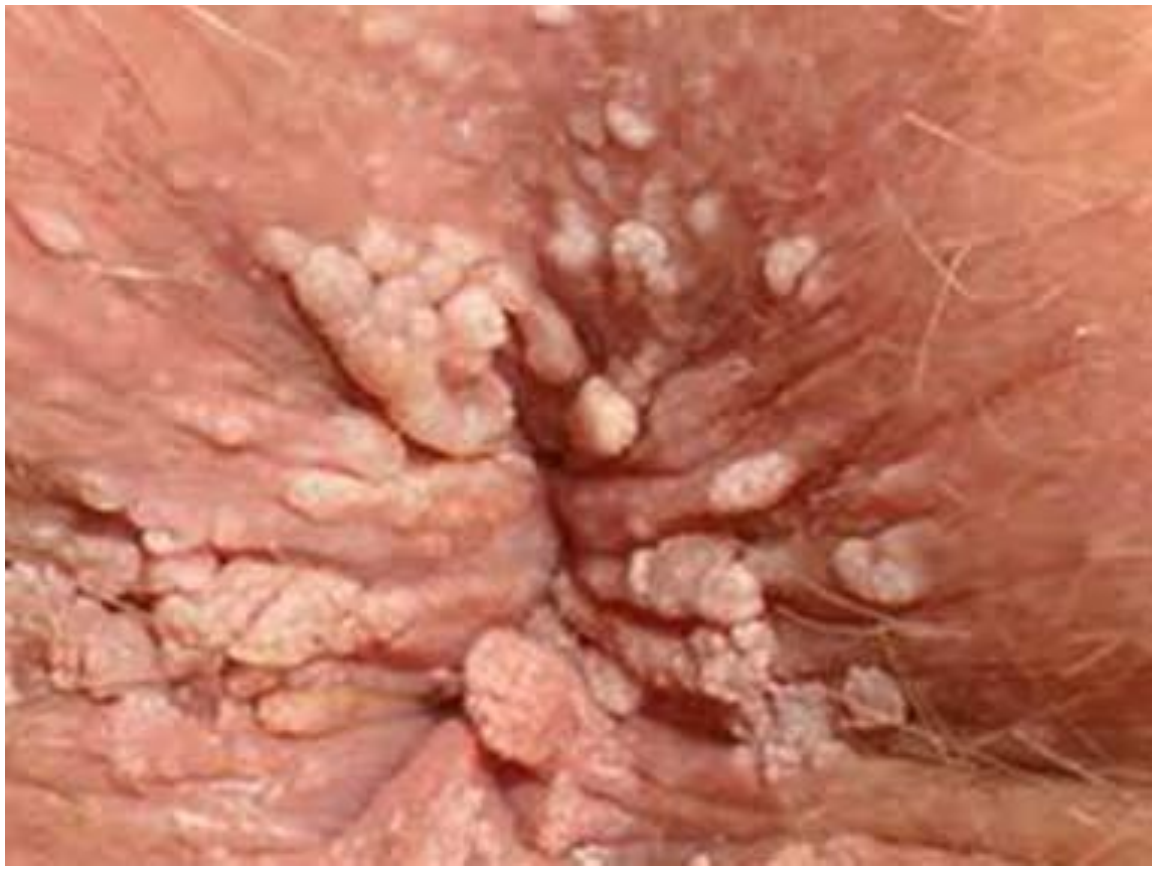


HPV infection

- One of the most common STIs globally
- Over 40 mucosal HPV genotypes can infect the genital tract.
- Benign anogenital warts - by HPV types 6 and 11(in 90%)
- Common sites for infection -penis, scrotum, perineum, anal canal, perianal region, vaginal introitus, vulva, and cervix.
- Warts in oral cavirty -HPV type 16 (associated with squamous cell carcinoma of the oral cavity)

Extra genital lesions HPV





Disseminated gonococcal infection

diplococcus *Neisseria gonorrhoeae*

- Disseminated gonococci infections (DGI)
  - **Systemic symptoms eg-fever,**
  - **a cutaneous eruption** or pustular dermatosis,
  - a very **painful polyarthralgia** or septic arthritis in the extremities,
  - endocarditis, and meningitis (in <3.0% of women and <0.7% of men.)
- DGI should always be considered in a sick, sexually active patient with pustules in the palms and soles of the

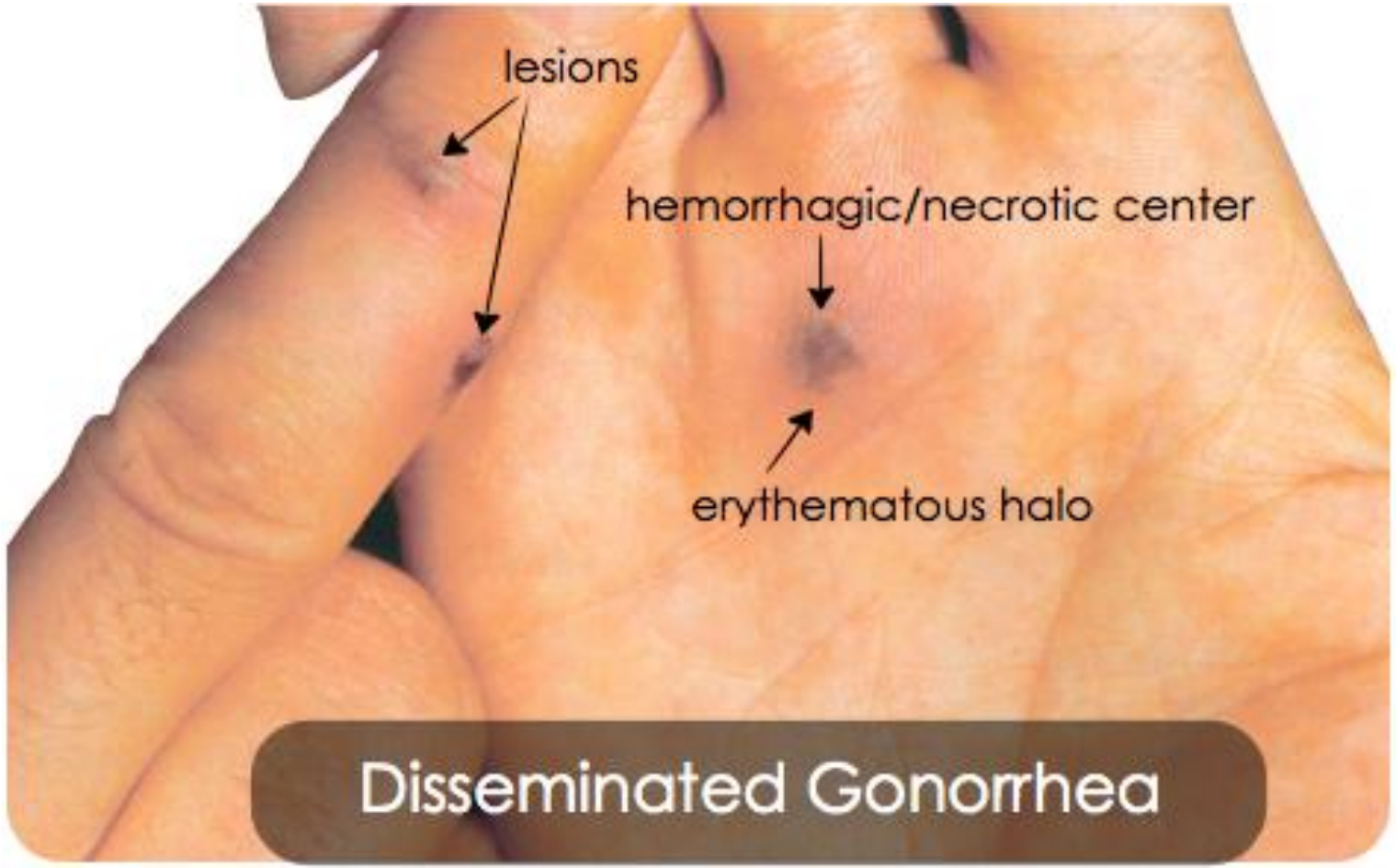
Skin lesions in DGI

- The **early erythematous patch** develops into a **red papule** and then into a **vesicle or pustule.**
- The lesions are **often haemorrhagic and tender** and may be surrounded by an erythematous- halo;
- they then dry up and small crusts are seen after a few days.

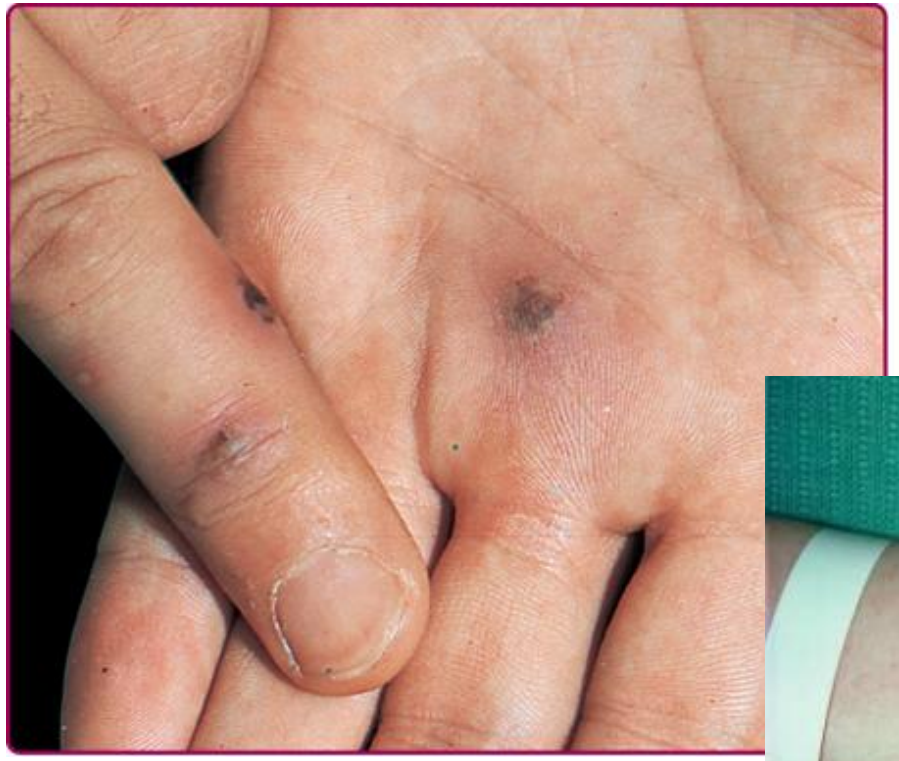
Typical features.

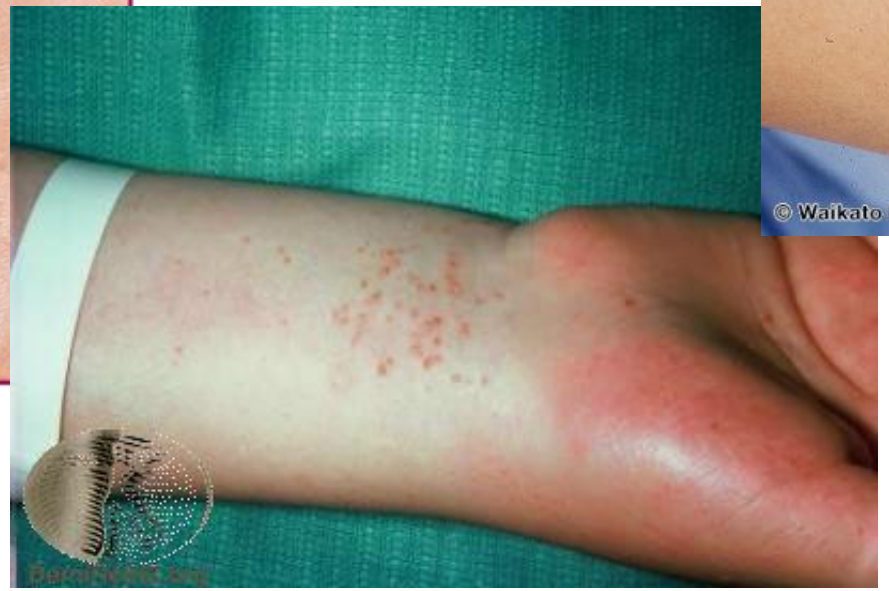
- usually on the **extremities**
- but sometime also on the face and body.
- They are **often transitory** and may be seen in **different stages**.

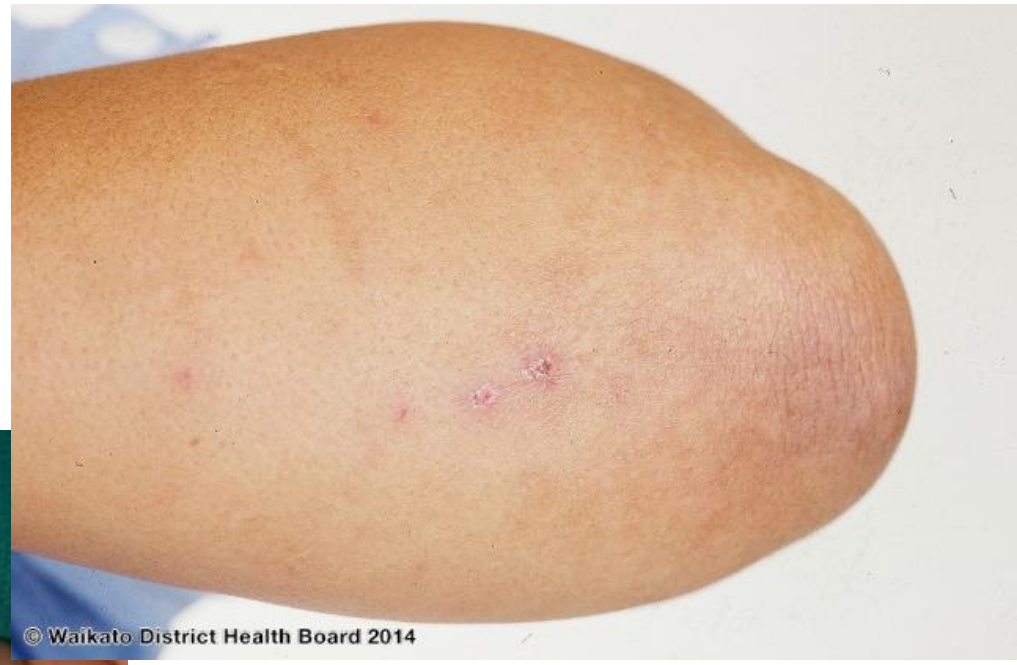
DGI – Skin lesions



DGI – Skin lesions



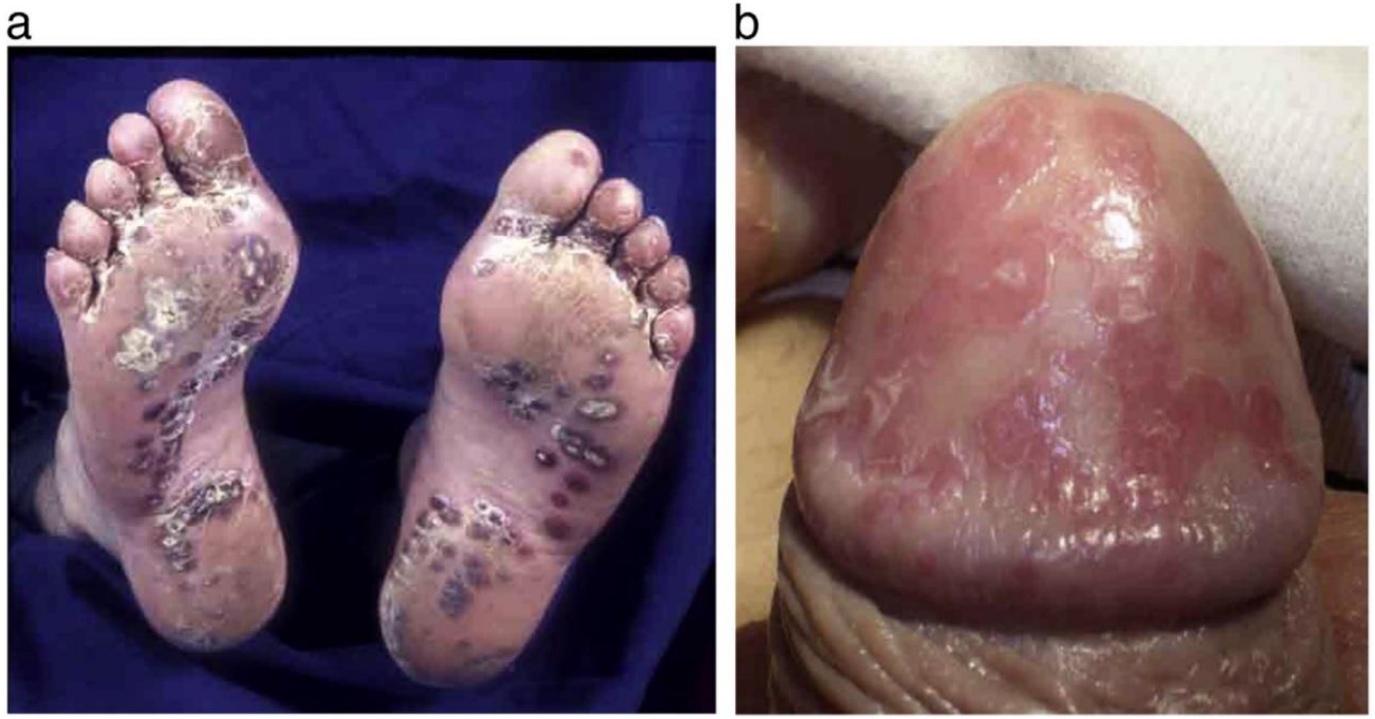




Sexually acquired reactive arthritis (SARA)

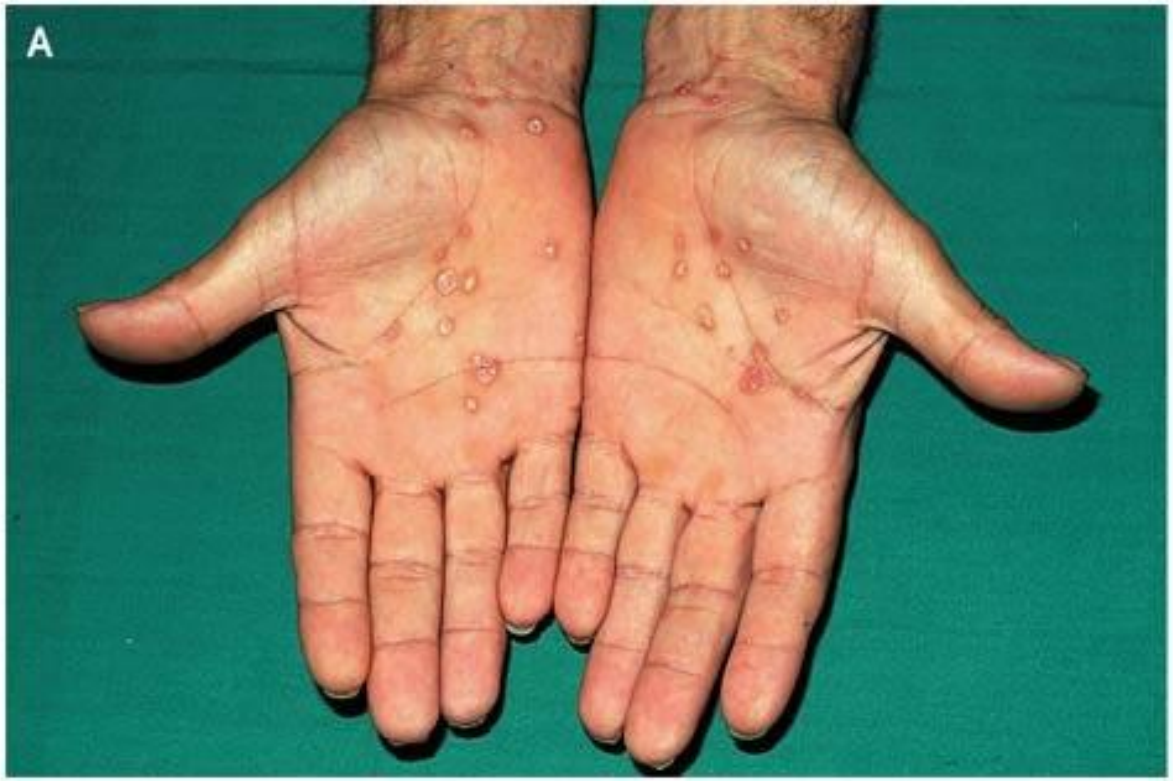
- C trachomatis infection rarely causes a **reactive autoimmune syndrome**, also known as SARA
- Caused by- *Chlamydia trachomatis*, Gonorrhoea, *Yersinia*, *Salmonella*, *Shigella*, and *Campylobacter*. *Escherichia coli*, *Clostridium difficile*, and *Chlamydia pneumoniae*
- form of spondyloarthritis (SpA). occurs in a genetically predisposed individual. HLA-B27

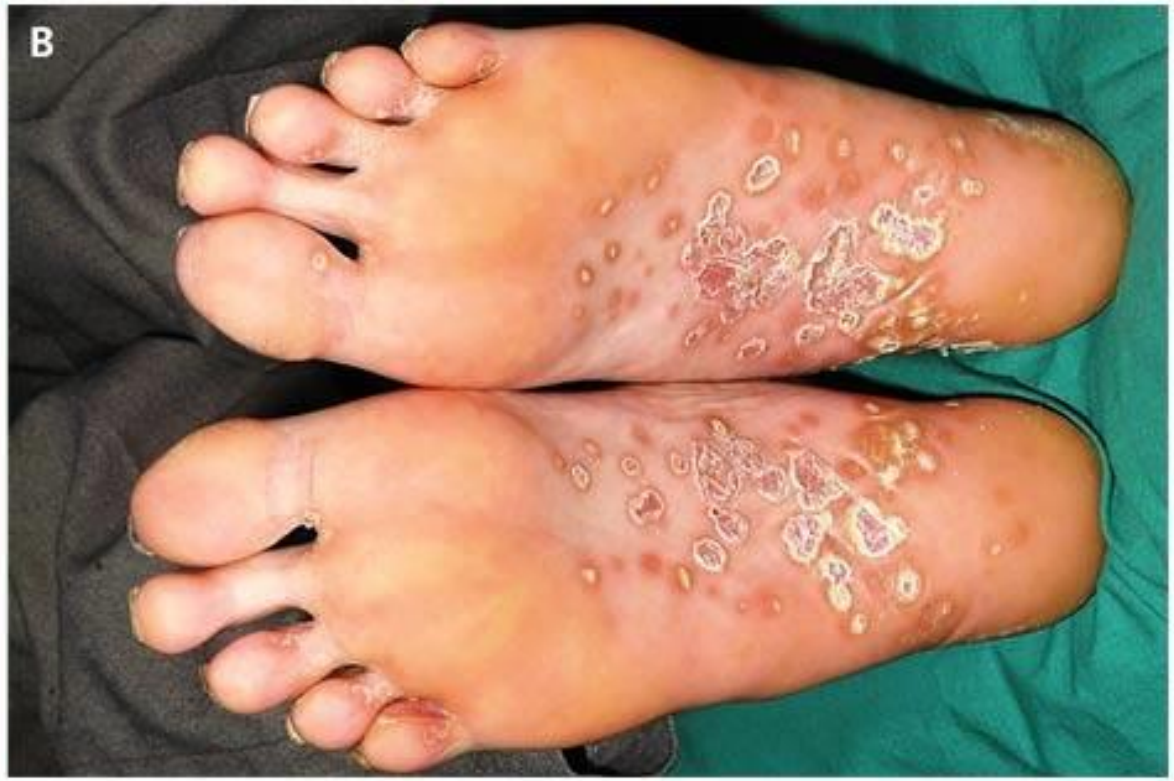
Associated characteristic skin signs



- **keratoderma blenorrhagica** (hyperkeratotic plaques in the palms and soles),
- **Circinate balanitis** (gyrating erythematous lesions with marginal scaling on the penile glans),
- **Aphthous ulcers**,

Keratoderma Blenorrhagica



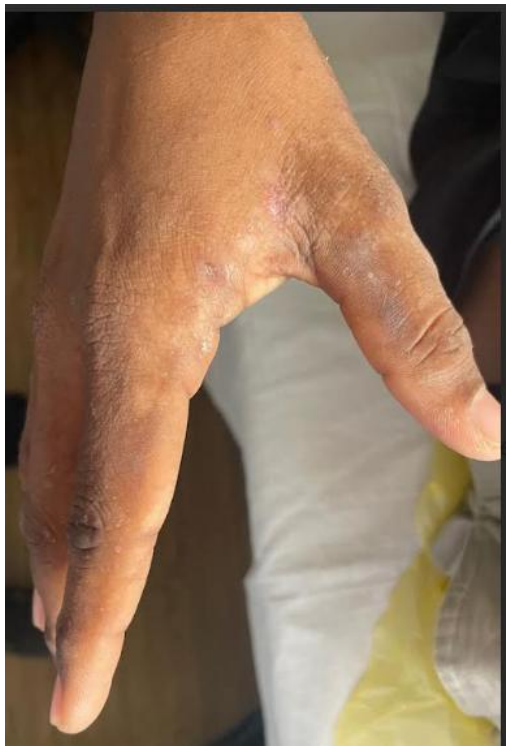


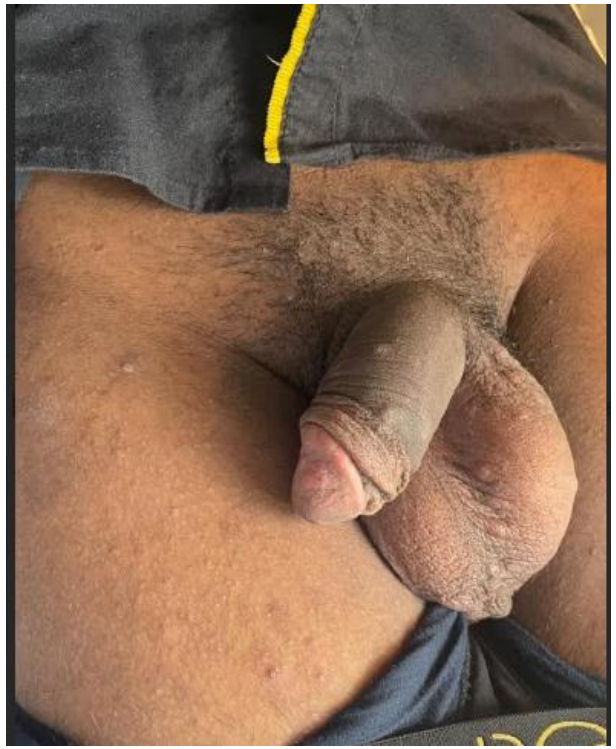
DD- Pustular psoriasis

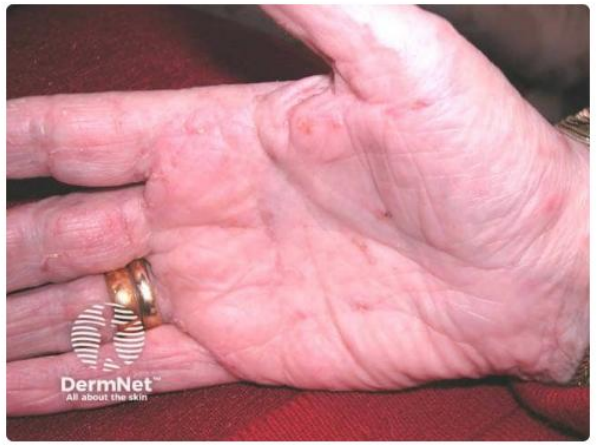
Scabies

- Caused by the ectoparasitic mite *Sarcoptes scabiei var. hominis*
- Presents as a rash with intense itching- worse at night
- Lesions are symmetrical, and mainly affect the hands, wrists, axillae, thighs, buttocks, waist, soles of the feet, areola and vulva in females and penis and scrotum in males.
- The neck and above are usually spared, except in cases of crusted scabies and in infections occurring in infants, the elderly, and the immunocompromised.
- However, the rash may

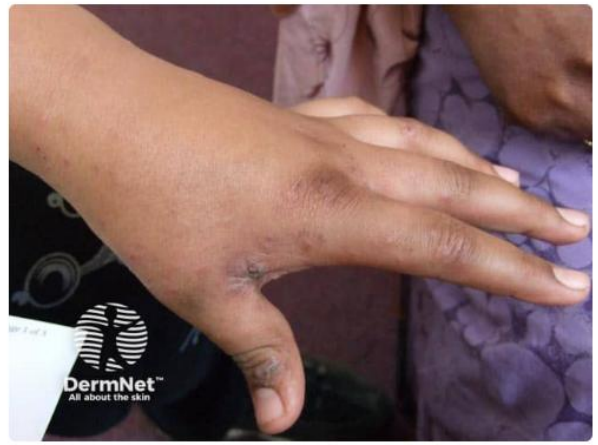
Pathognomic feature - Burrows



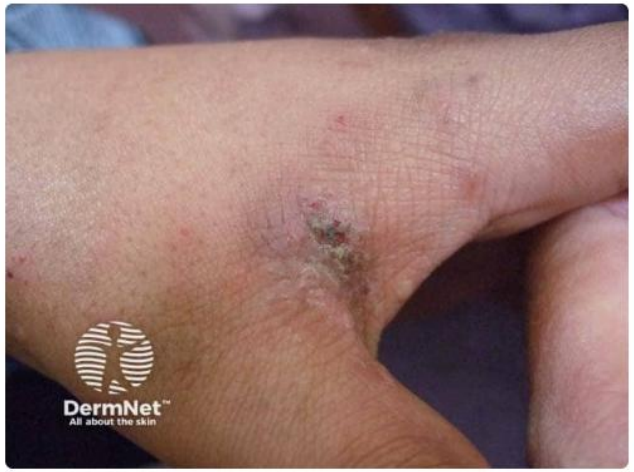




Numerous palmar scabies burrows in an elderly lady



Interdigital scaling in the first web space of the hand



Interdigital scale, crusting and a burrow on the hand

Curvilinear or serpiginous thread-like tracks measuring around 5-10 mm — these can be subtle

•Typically identified in the web spaces, palms, soles, fingers, toes, inner wrists, elbows, umbilicus, and beltline.

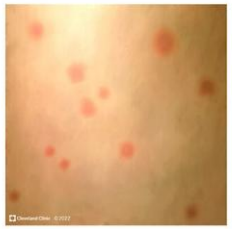
Monkey pox (Mpox)

- Mpox can be passed on from person to person through any close physical contact with mpox blisters or scabs (including during sexual contact, kissing, cuddling or other skin-to-skin contact)
- A rash usually appears 1 to 5 days after the first symptoms. It can be on any part of the body, including the palms of the hands, soles of the feet, mouth, genitals and anus.
- The rash is sometimes confused with chickenpox. It starts as raised spots, which turn into sores (ulcers) or small blisters filled with

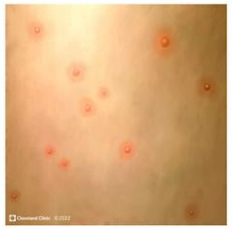
Mpox

Mpox

A visual review of the five stages:

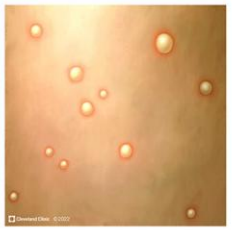


Stage 1 – Macule.
The rash starts as flat, red spots (lasts for 1-2 days).

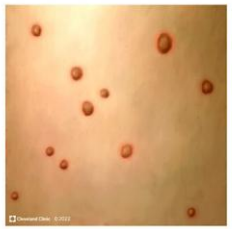


Stage 2 – Papule.
The spots become hard,raised bumps (lasts for 1-2 days).

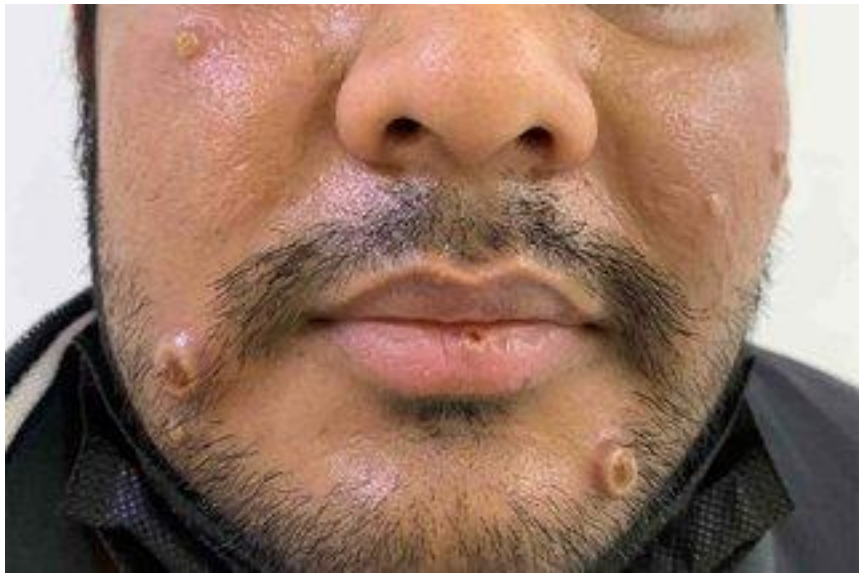
Stage 3 – Vesicle.
The bumps get larger. They look like blisters filled with clear fluid (lasts for 1-2 days).

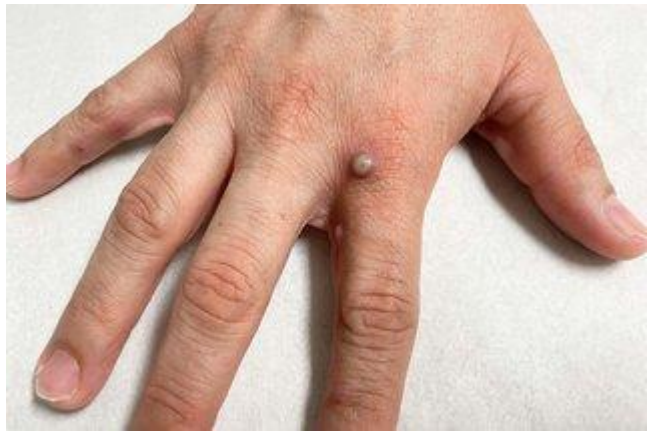


Stage 4 – Pustule.
The blisters fill with pus (lasts for 5-7 days).



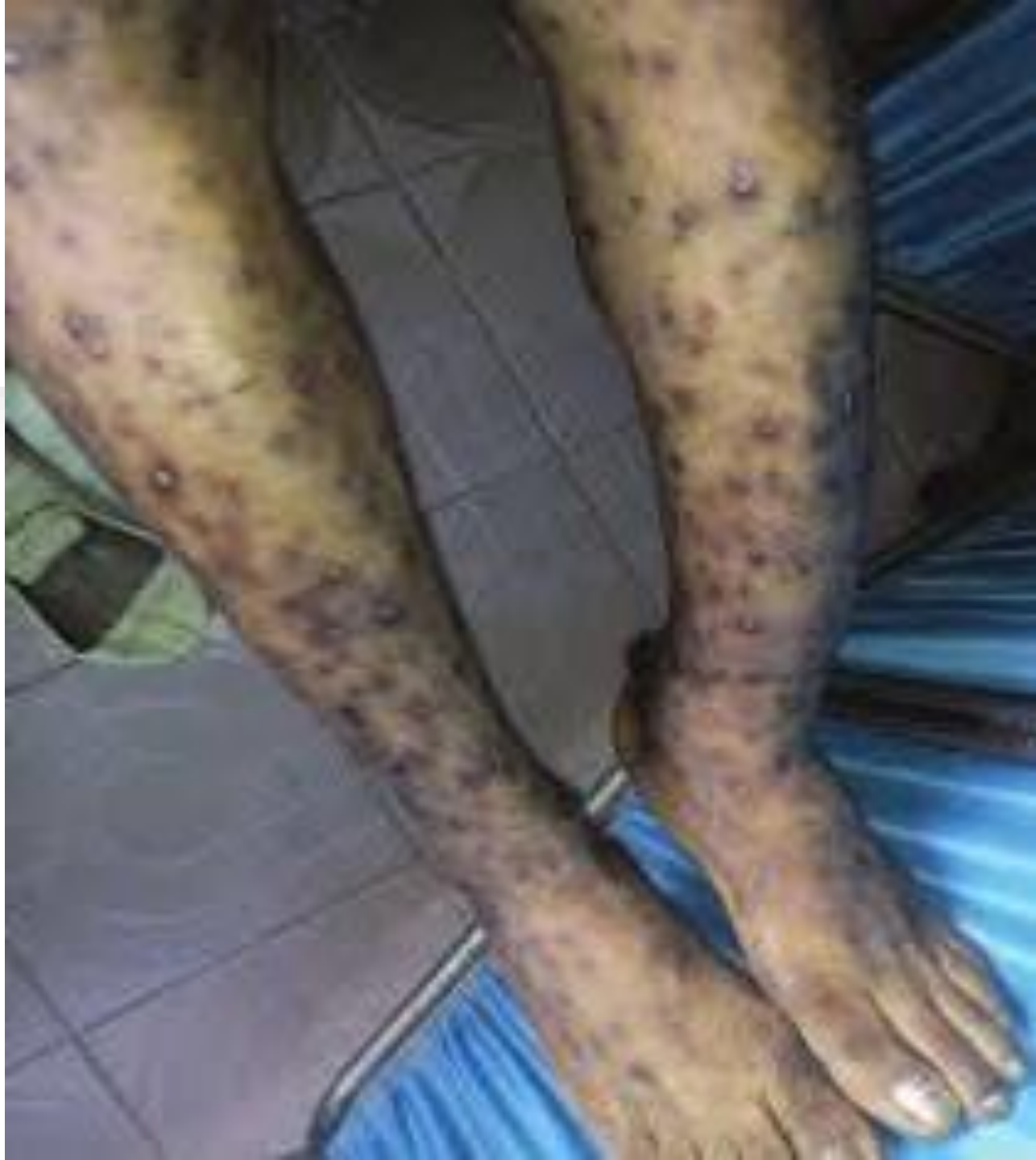
Stage 5 – Scabs.
The spots crust over and become scabs that eventually fall off (lasts for 7-14 days).





Pruritic papular eruptions in HIV

- Pruritic papular eruption of HIV presents as a very itchy chronic rash
- Small, red, intensely itchy, firm papules
- Induce scratching
- Evolve into hyperpigmented macules a nd nodules
- Most common on exposed skin, particularly the extremities
- Sparing of mucous membranes, palms and soles, and web spaces.



Take home messages

01

STDs can present with skin lesions

02

Need to be aware of these presentations and refer to relevant care pathways

03

Do not miss important infections

Thank you

- Contact
- 0772352785
- piyumipp@gmail.com