Differential diagnosis of chickenpox

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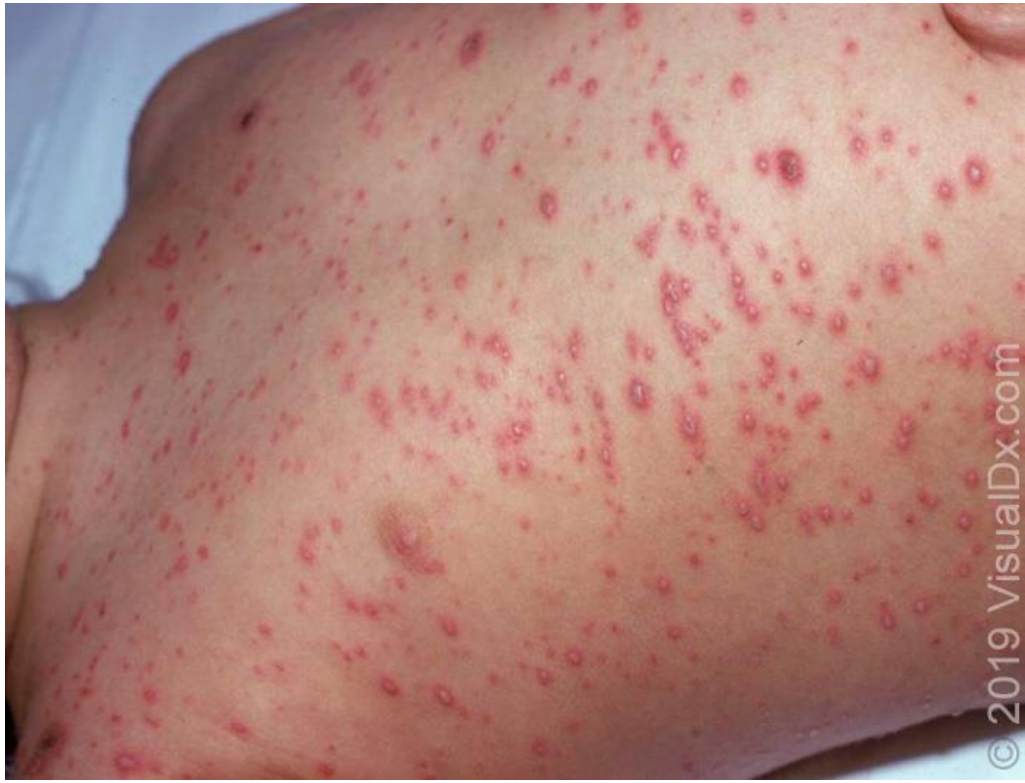
Diagnostic approach

Age
Season of year
Travel history
Geographic location
Exposure , including insects (especially ticks, mosquitoes) , animals , ill contacts
Medications
Immunization
Immune status of the host

Characteristics of the lesions
Distribution and progression of the rash
Timing of the onset in relation of fever
Change in morphology ,such as papules to vesicles or petechiae
Symptoms associated with the rash (pain , pruritus , numbness)

Chicken pox

Prodrome: fever, malaise
followed by :a generalized rash, usually within 24 hours.
The lesions begin as macules ⇨papules characteristic vesicles
Rash is more intense on the trunk and head from on the extremities.
different stages of rash on the face, trunk and extremities.
Exposure(in 14 to 16 days ago)
Winter and spring(peak incidence)

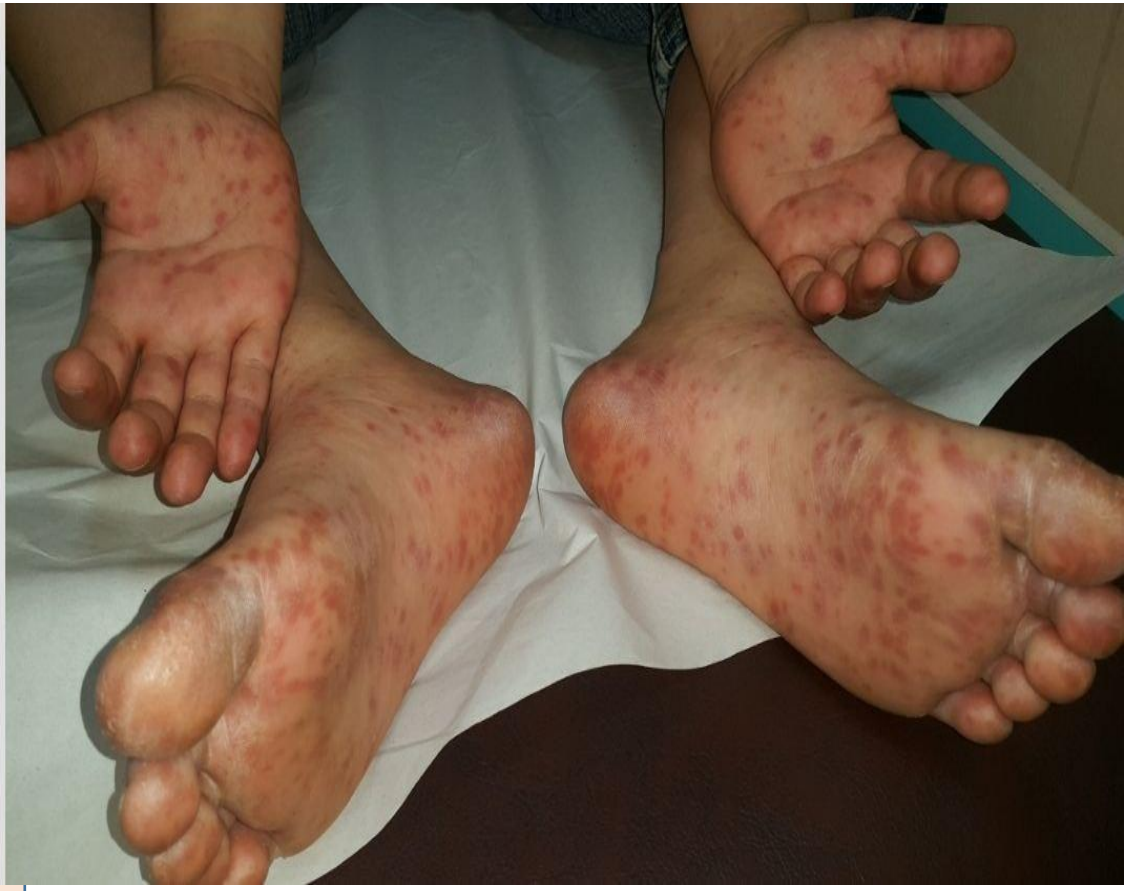


Differential diagnosis

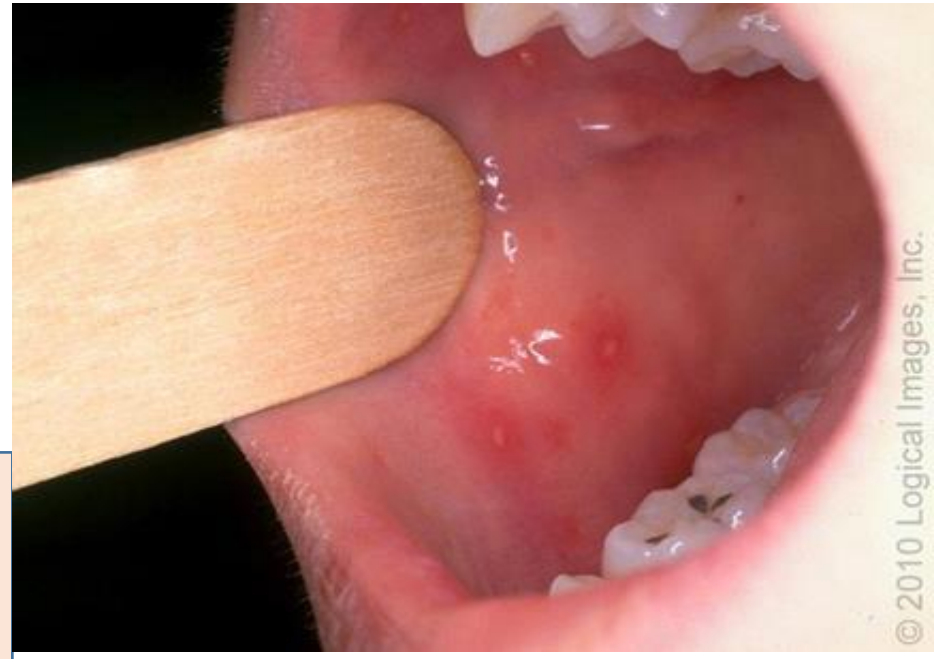
Hand-foot-mouth disease
Stevens-Johnson syndrome(SJS)
Mpox
Disseminated herpes simplex virus infection
Atypical herpes zoster
Drug reaction
Bullous insect bite reaction
Scabies

Hand-foot-mouth disease

Is caused by several enteroviruses
The summer and early autumn(usually)
In infants and children(most cases in < 5-7years)
sporadic cases affecting older children, adolescents, and adults.
The cardinal findings: the oral enanthem and the exanthema.
However, the enanthem may occur without the exanthem and the exanthem may occur without the enanthem.
Fever, if present, generally is below 38.3°C.



The oral lesions of HFMD:
Scattered, painful, vesicles on the tongue, buccal mucosa, posterior pharynx, palate, gingiva, lips

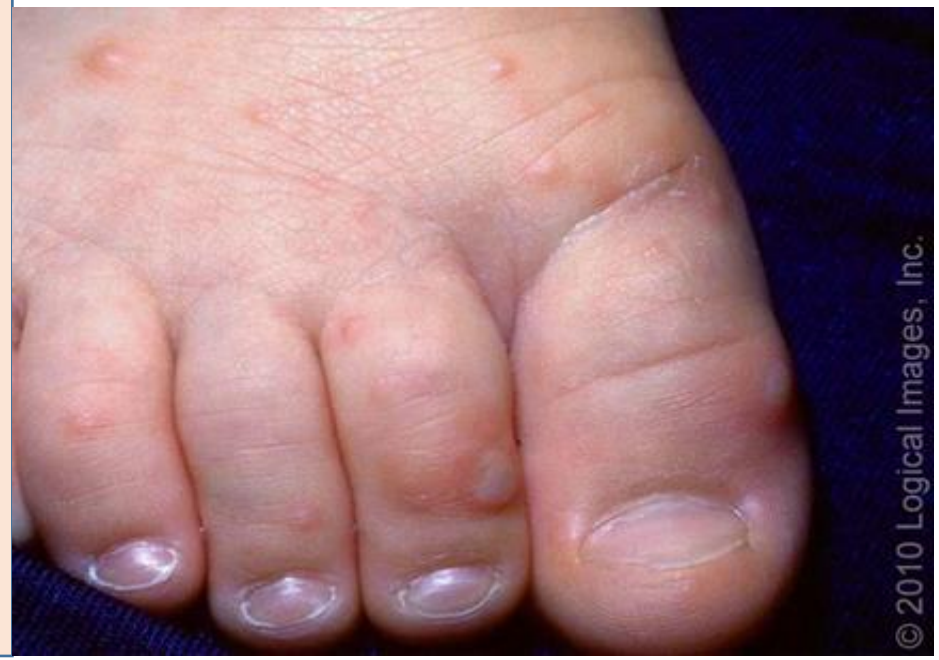


The exanthem associated with HFMD may be macular, maculopapular, or vesicular

The vesicles are thin walled, contain a clear or turbid fluid, and are surrounded by a thin (1 mm halo of erythema.

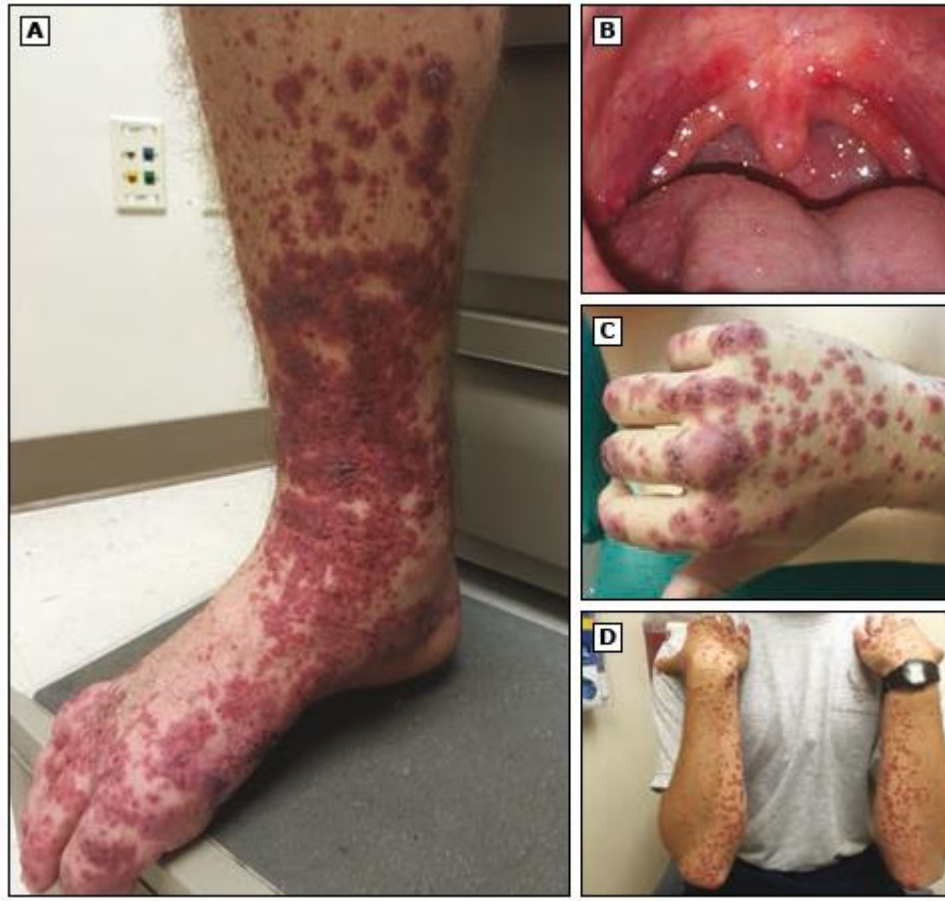
The exanthem typically involves the hands (dorsum of the fingers, interdigital area, palms), feet (dorsum of the toes, lateral border of the feet, soles, heels), buttocks, legs, and arms

no pruritic/ not painful



Coxsackievirus A6 HFMD

More severe: in both children and adults
Higher fever
Wider distribution – Involvement of the extremities, face, lips perioral area, buttocks, groin, and perineum; the lesions are concentrated in areas of active or dormant eczema ("eczema coxsackium")
Longer duration: (mean duration 12 days)
Palmar and plantar desquamation one to three weeks after HFMD
Nail dystrophy(one to two months after HFMD)



Mpox (formerly monkeypox)

Geographic distribution:

Central and West Africa.

in May 2022 a global multi-country outbreak was recognized

lymphadenopathy

submandibular & cervical, axillary, inguinal

The **rash** typically begins as 2 to 5 mm diameter macules.

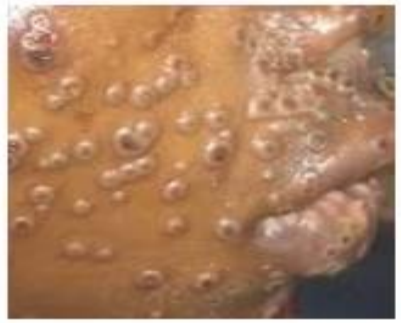
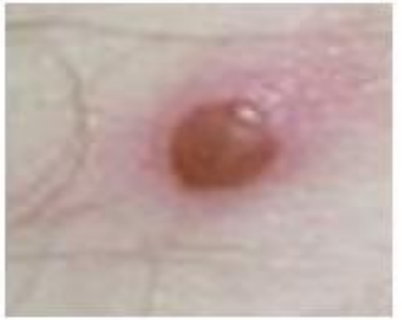
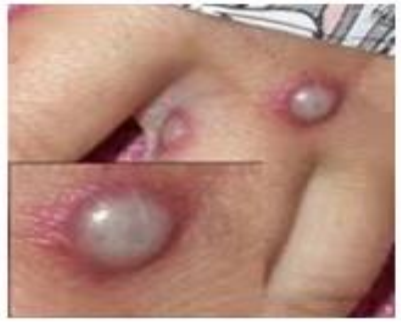
Painful

Itchy(in the healing phase)

The location of the rash has varied in the different outbreaks

(localized (primarily genital) and generalized rashes

Mpox (Rash)

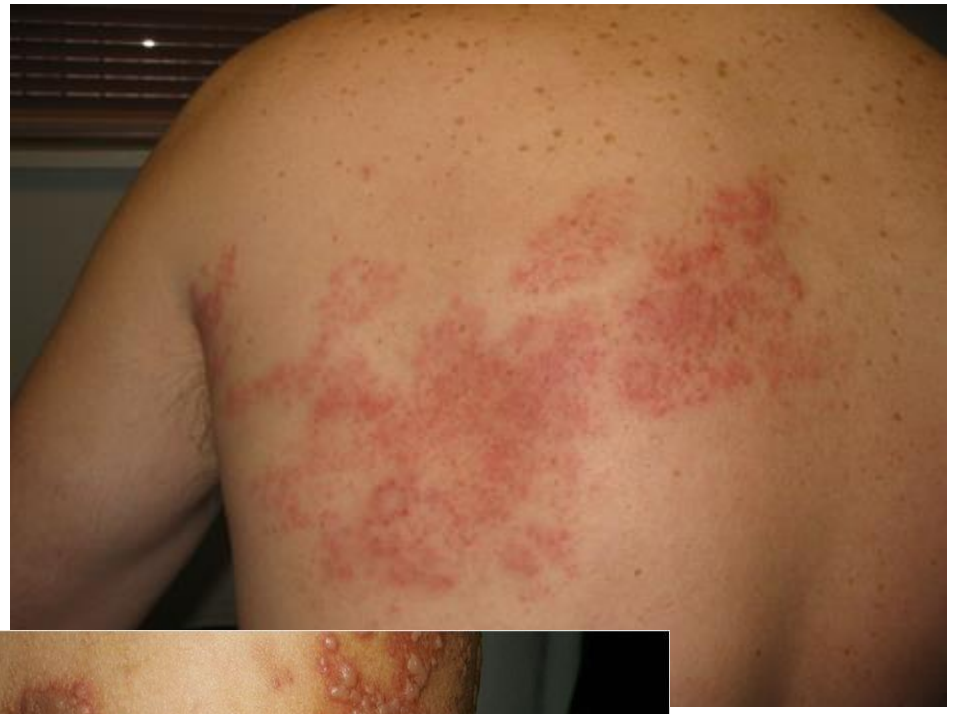

- The lesions subsequently evolve to papules, vesicles, and then **pseudo-pustules** (papules that simulate pustules but are predominantly filled with **cell debris** and do not contain fluid or pus) .
- Lesions: firm or rubbery well circumscribed, deep seated, and often develop umbilication.

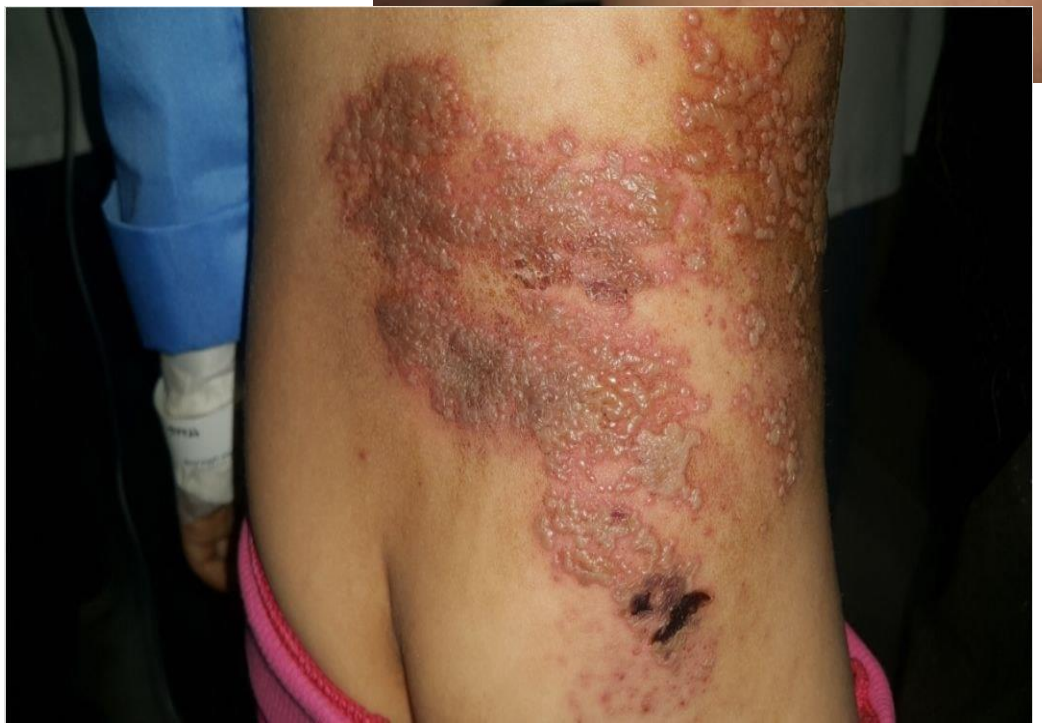
Herpes zoster(shingles)

Painful, **unilateral** vesicular eruption, which usually occurs in a **single or two contiguous, dermatomes**.

Although the rash can occur in any dermatome.

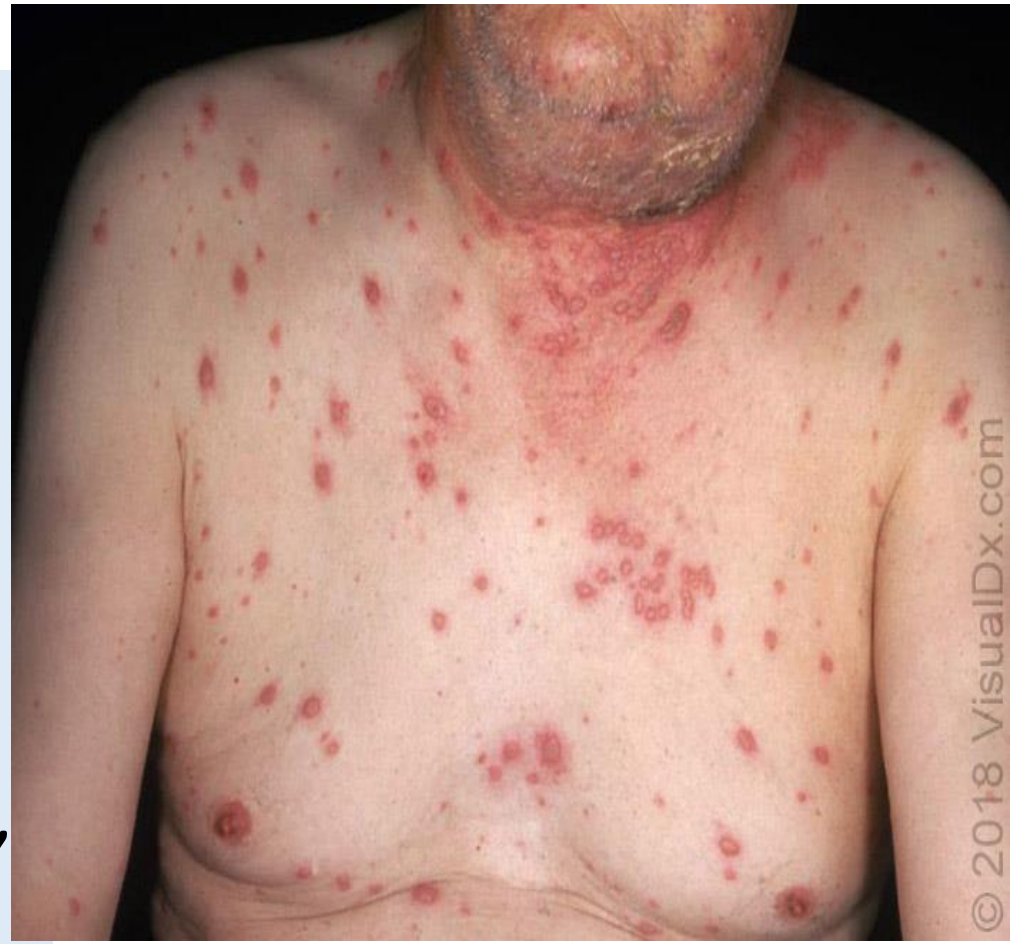
The **thoracic and lumbar** dermatomes are most commonly involved





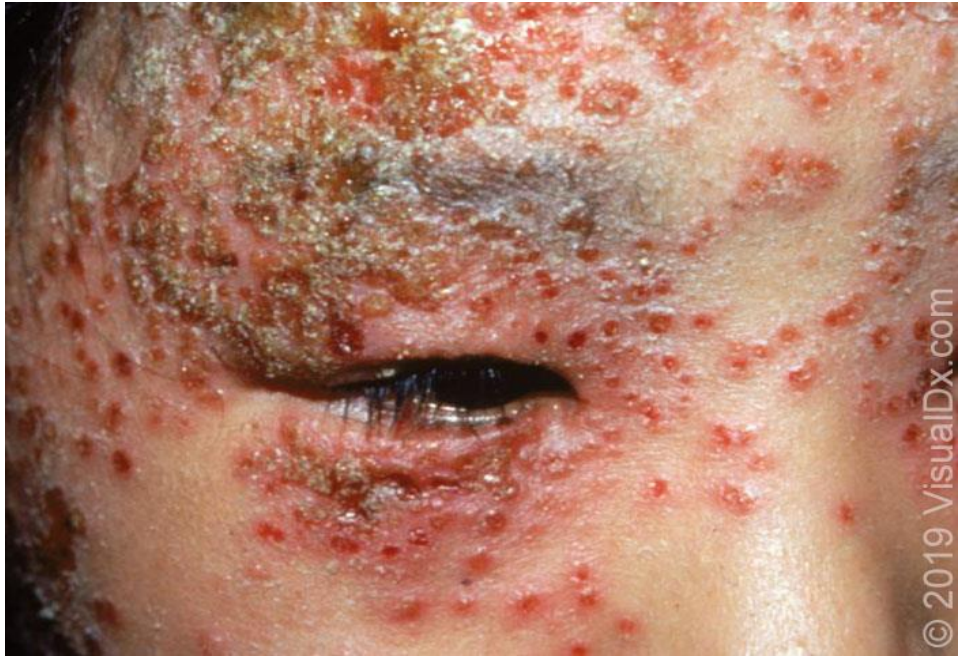
Disseminated infection in immunocompromised hosts

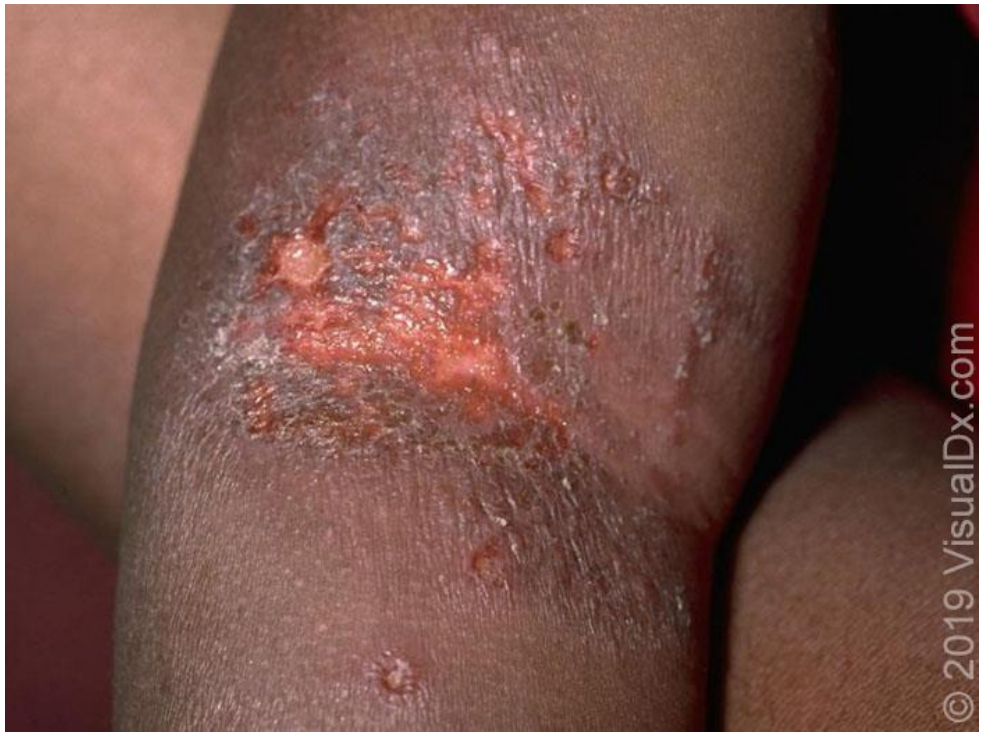
- Immunocompromised hosts are at risk of having more frequent episodes of herpes zoster and/or severe VZV-related complications.
- Cutaneous dissemination is defined by multiple vesicular skin lesions in a **generalized distribution** distant from the dermatomes affected by the herpes zoster rash
- Cutaneous dissemination may be accompanied by **visceral involvement(** severe abdominal pain, hepatitis, or pneumonitis)



Eczema herpeticum

- Patients with **atopic dermatitis** are at risk for developing an HSV-related skin complication
- Eczema herpeticum is characterized by cutaneous pain and vesicular new skin lesions secondary to a viral infection (usually HSV-1).
- Eczema herpeticum can spread rapidly, leading to severe morbidity and mortality in the absence of antiviral therapy
- Intravenous acyclovir in severe cases





Bullous insect bite reaction

- **Local reactions:**

  appears within minutes and consists of pruritic local erythema and edema

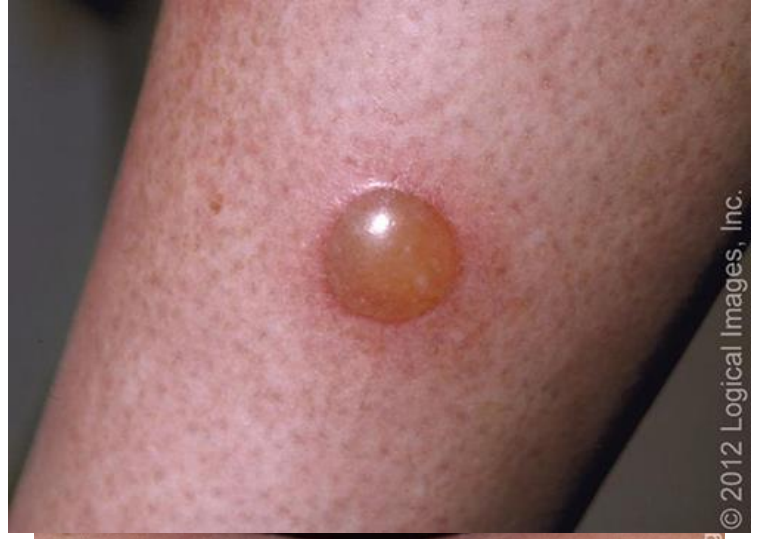
- **Unusual local reactions**

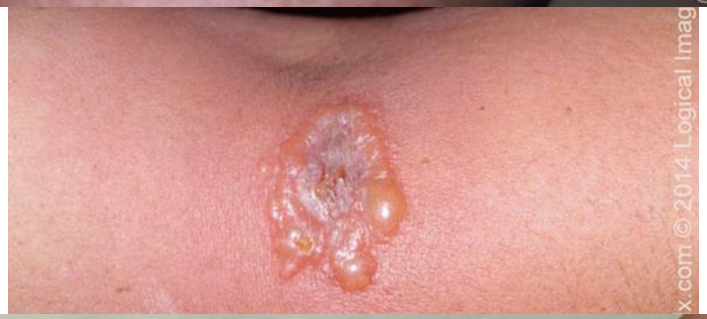
  Uncommonly, local reactions evolve to become vesicular, bullous, or necrotic

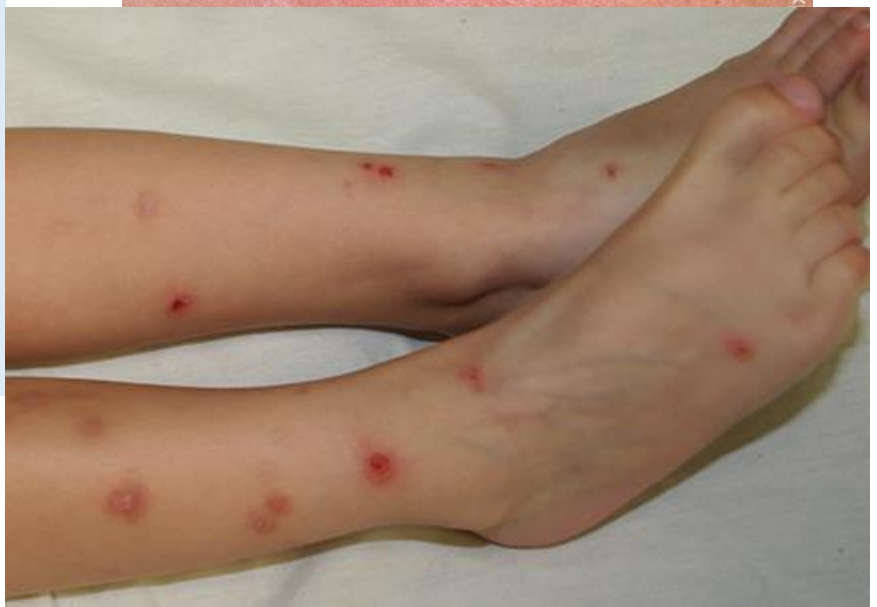
  Lack of systemic symptoms.

  History of exposure

  Covered areas were only rarely involved.







Stevens-Johnson syndrome(SJS)

- **Prodromal** symptoms :

  malaise, fever, myalgia, sore throat, and conjunctivitis.

Cutaneous lesions:

Lesions start on the **face and thorax** before spreading to other areas and are symmetrically distributed

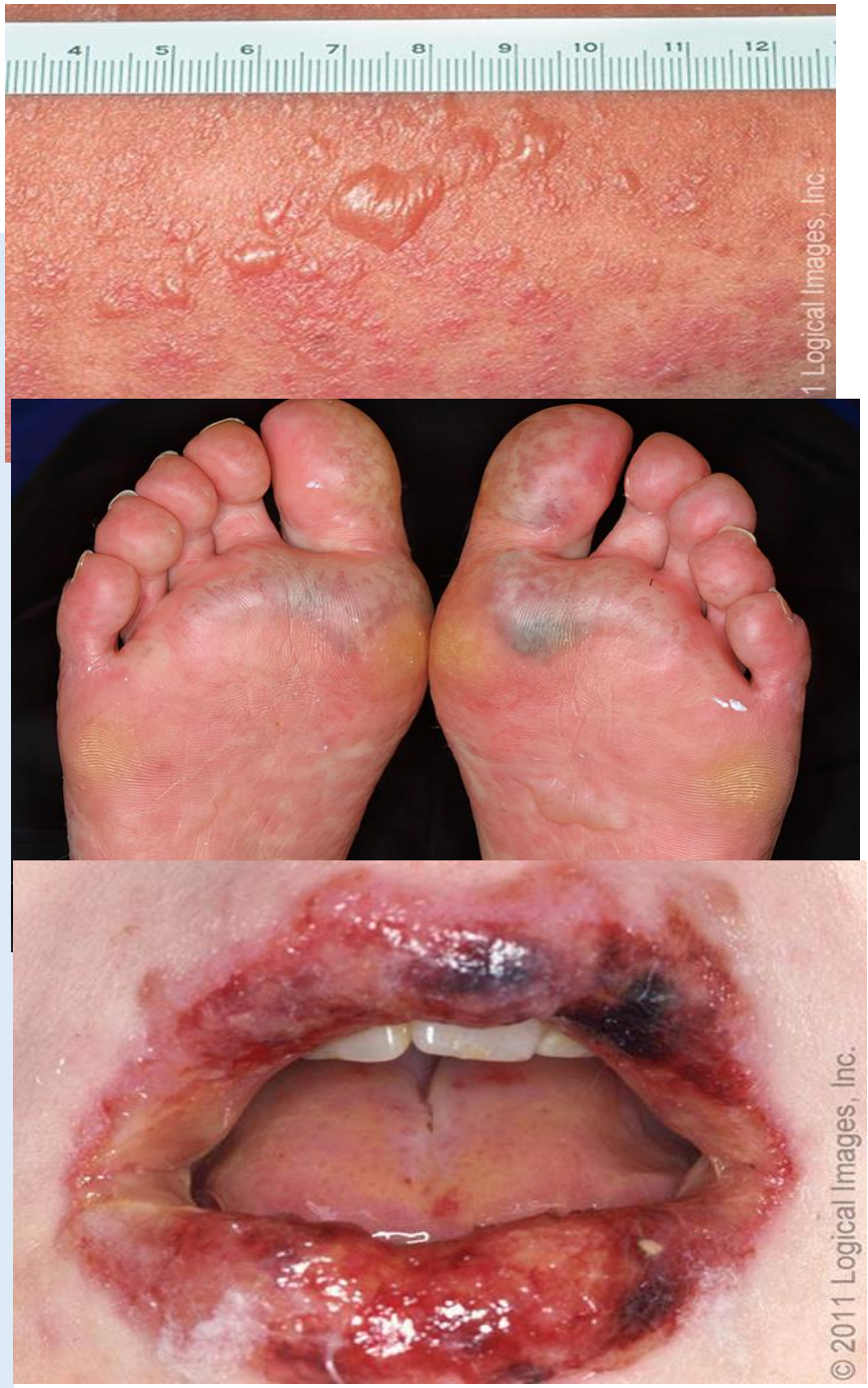
Initially of erythematous macules that rapidly and variably develop central necrosis to form vesicles, bullae.

The nikolsky sign may be positive.

Involvement of two or more mucosal surfaces.

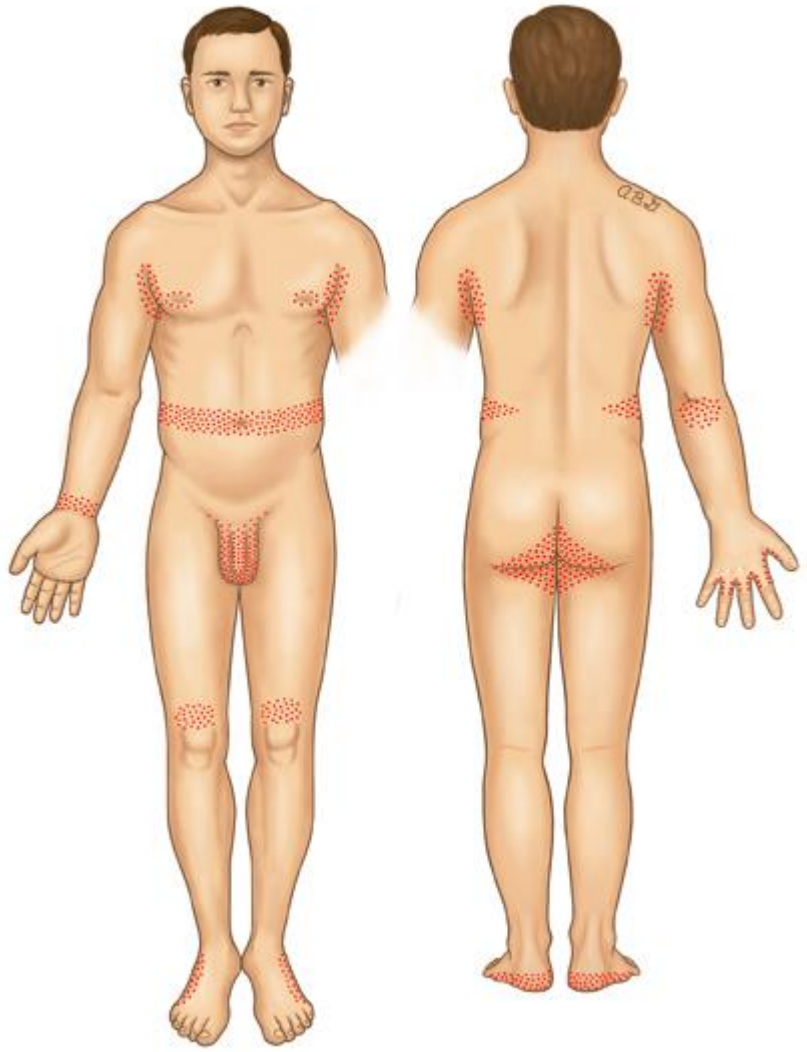
Pain from mucosal ulceration is often severe.

But skin tenderness is minimal to absent in SJS, in contrast to pain in TEN.



Scabies

- **Any age** and socioeconomic status.
- The prominent clinical feature of classic scabies is **pruritus**.
- It is often severe and usually worse at night.
- Other **household members** with similar symptoms
- Typical cutaneous findings are multiple small, erythematous papules, often excoriated.
- The sides and webs of the fingers, wrists, axillae, areolae, and genitalia are among the common sites of involvement.
- The **back** is relatively **free** of involvement, and the **head** is spared except in very young children



Scabies

- Burrows may be visible as 2 to 15 mm, thin, gray, red, or brown, serpiginous lines.
- Burrows are a characteristic finding but often are not visible due to excoriation or secondary infection.
- Young children and infants often show heavy involvement of **the palms and soles** and all aspects of the fingers
- Lesions in children are usually more **inflammatory** than in adults and often are **vesicular or bullous**