

VIRAL SKIN DISEASES

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Viral Skin infections are:

1. Herpes Simplex Infections.
2. Herpes Zoster Infections.
3. Human Papilloma Virus Infections.
4. Molluscum Contagiosum.

objective

- D**efinition.
- E**tio-**P**athogenesis.
- C**linical features.
- D**iagnosis.
- D**ifferential **D**iagnosis.
- T**reatment.
- C**omplications.
- C**onclusion.



Herpes Simplex Virus Infections

Herpes Simplex Virus Infections

Its very common acute self-limiting vesicular eruption due to infection with HSV.

Etiology:

- Caused by HSV, which is a double stand DNA virus.
- There are two types of HSV.
- HSV type **1**, associated with **facial** and **oral** infection, that affecting young children.
- HSV type **2**, affecting the **genitalia, mainly occur after puberty.**

Pathophysiology;

- **Close contact** is required for HSV infection.
- Contact must involve **MM** or **abraded skin**.
- After an I.P (**2-20days**) , the primary attack will occur which is **asymptomatic** in 90% of cases.
- Following the 1^{ry} attack there will be **a latency** period where the virus remain **dormant in sensory ganglion**.
- **Reactivation** of the virus will lead to **recurrence of the infection**.

Precipitating factors for viral reactivation

1. Ultraviolet rays.
2. Febrile illness.
3. Common cold.
4. GIT disturbances.
5. Stress.
6. Menstruation.
7. Immunosuppression's.

PATHWAY OF PRESTNATION

Erythematous patch



Grouped umbilicated vesicles



Pustules



Crusting

2-3 Weeks



Post-inflammatory hyper or hypo-pigmentations

Clinical presentations of HSV

1. Herpetic Gingivostomatitis.
2. Herpes Labialis.
3. Herpetic Whitlow.
4. Herpetic Keratoconjunctivitis.
5. Neonatal Herpes Simplex.
6. Herpes Genitalis.
7. Eczema Herpeticum.
8. Disseminated Herpes Simplex.

Primary facial oral herpes (Herpetic Gingivostomatitis)

- Most cases occur between 1-5 years.
- After the constitutional symptoms in the form of fever and sore throat, the **stomatitis** began, The gums swollen, red and bleed easily.
- Vesicles presents as **white plaques** which seen on tongue, pharynx, palate and the buccal mucosa.
- **Regional L.N** may be enlarged and tender.
- Fever subside after 3-5 days and recovery is completed in two weeks.







Herpes Labialis

(cold sores, fever blisters)

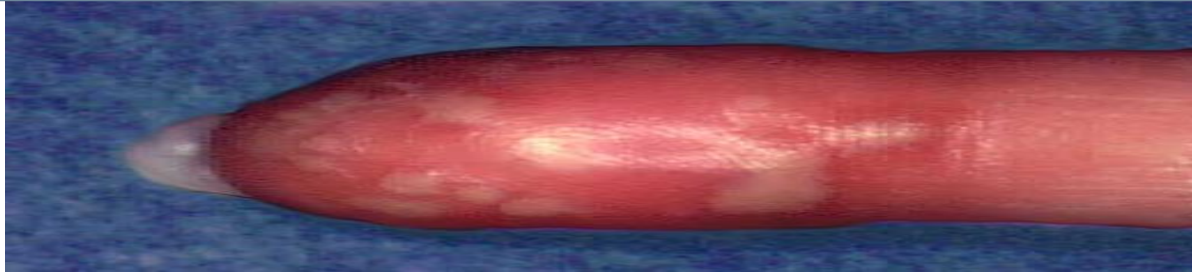
- *Is The **most common** variety.*
- Often occurred in **childhood**.
- Affecting the lips, but nose and cheeks can be affected.
- Commonly caused by HSV type 1.
- **1 / 3 of patients** will have recurrence of the disease & half of those will get 2 recurrence annually at least.
- ***Post herpetic Erythema Multiforme* may occur.**





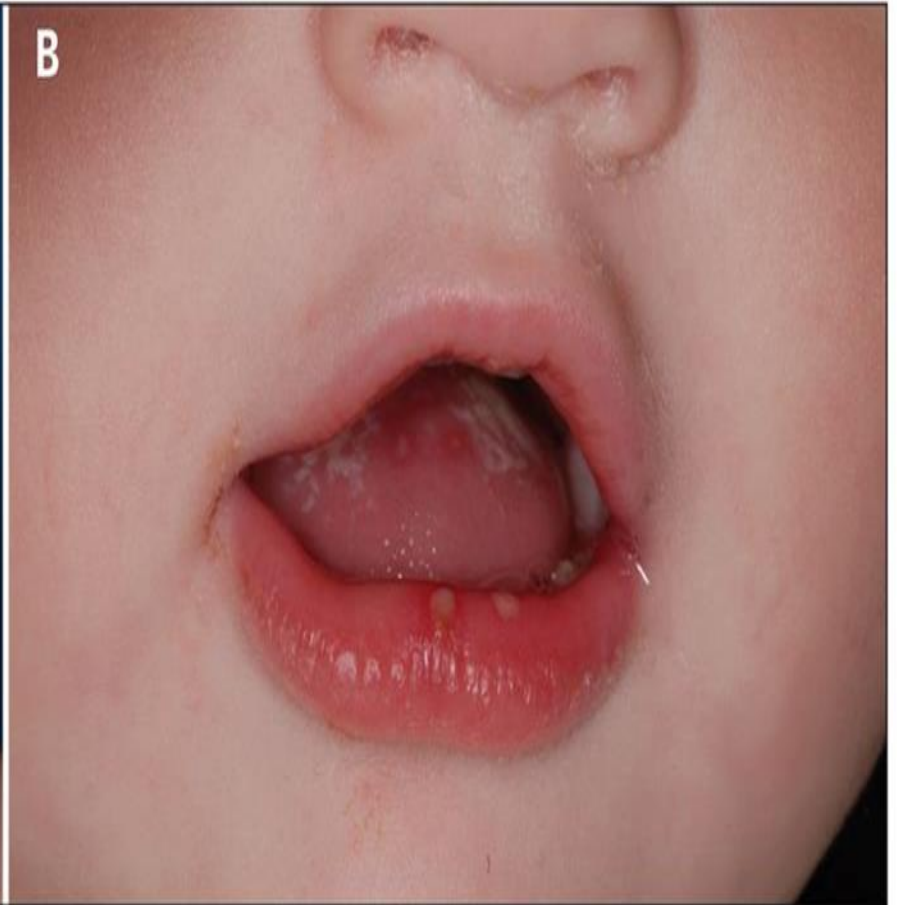
Herpes Labialis Grouped and confluent vesicles on an erythematous base on the lips and lower cheek..

Herpetic whitlow



- ❑ **It's a herpetic viral infection that Occur as a result of direct inoculation of the virus and Commonly seen in the fingers or hands.**
- ❑ **Painful**, grouped, confluent vesicles on an erythematous & edematous base are seen.
- ❑ **The disease is a common occupational hazard for medical and dental personnel, who work in and around the mouth.**

Herpetic whitlow



Herpes Genitalis

- commonly caused by **HSV type II**.
- Age of onset: Young (sexually active) adult.
- Risk **increases with multiple sex partners**.
- **1st infections** mostly asymptomatic but mild fever, headache, and local pain is noted.

Distribution:

- ✓ **Male:** it affect penis (glans, shaft or sulcus), scrotum and buttocks.
- ✓ **Female:** both labia, perineum and thigh.

Herpes Genitalis.



Eczema Herpeticum

- Also known as **Kaposi varicelliform** eruption.
- It is a HSV infection occurring in **atopic dermatitis** patient.
- Characterized by systemic symptoms e.g. fever, malaise, irritability and lymphadenopathy.
- Clinical examination reveals **generalized vesicles** which often becomes **hemorrhagic and crusting**.
- Commonly affecting the **face, neck** and trunk.
- The **primary** attack **is sever** but the **recurrence** tend to be milder.

Eczema Herpeticum



Disseminated Herpes Simplex

- It's potentially **fatal systemic** HSV infection.
- Characterized by generalize mucocutaneous vesicles, pustules and erosions along with **widespread visceral involvement** (*lung, liver, GIT & CNS*)

Risk Factors Includes:

1. Immunodeficiency; e.g. *AIDS, drugs, malignancy etc..*
2. Malnutrition.
3. **Eczema herpeticum.**



Disseminated HSV in immunocompromized patient
note the hemorrhagic and necrotic skin lesions.

Diagnosis

1. Direct Microscopy Examination:

Tzanck smear.

2. Viral culture:

It's the most reliable way to make the diagnosis.

3. Serology:

Polymerase Chain Reaction (PCR).

Useful in the diagnosis if the culture was negative or atypical lesion.

Tzanck's Test

It is of considerable help in rapid diagnosis of;

1. Pemphigus
2. Herpes infections (simplex & zoster).

Technique:

1. Cut the roof of the blister.
2. Scrap the base with a cotton swap.
3. Spread on glass slide.
4. Stain it with **Giemsa stain**.
5. Examine the slide under light microscope.
 - in Pemphigus..Rounded, acantholytic cells.
 - Herpes infections..Multinucleated giant cell.

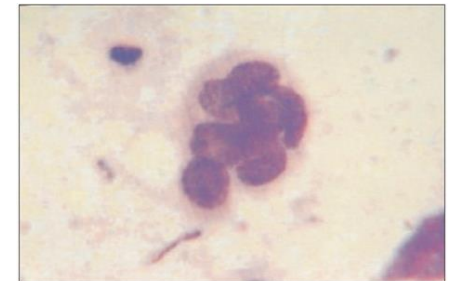


Figure 3: Multinucleated syncytial giant cells of herpes

Treatment

Most HSV infections are self-limited. However antiviral therapy shorten the course of the disease, prevent dissemination, and recurrence.

Treatment of 1st attack

Acyclovir (Zovirax) 200mg orally 5 times for 7 days.

Treatment of recurrence

Acyclovir 400mg twice daily for one year suppresses recurrence by 75%



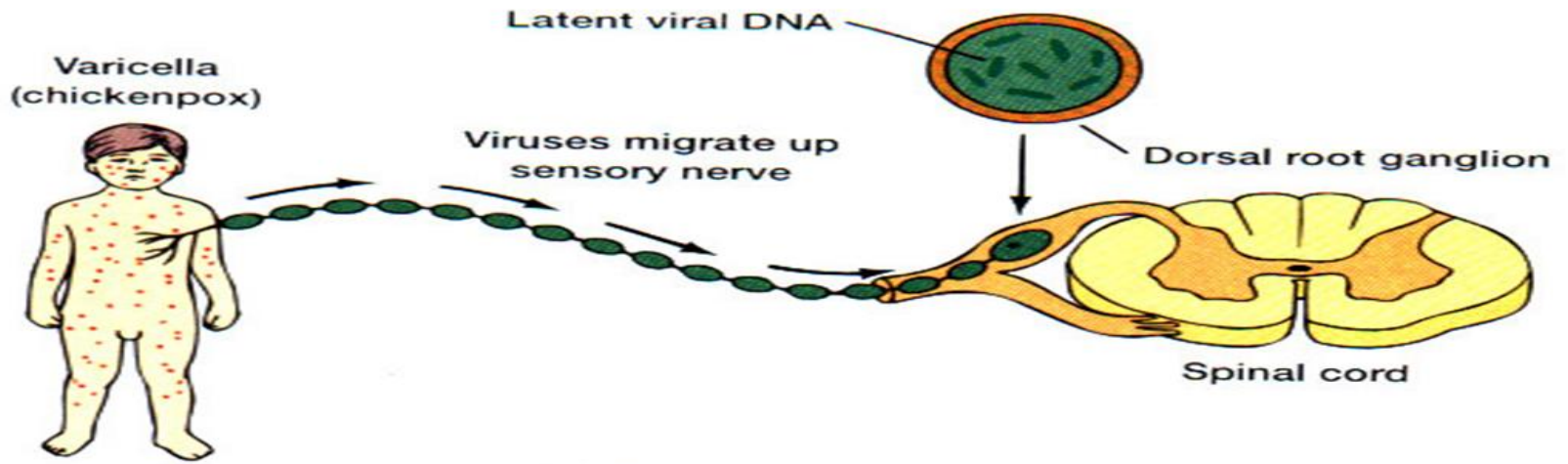
Herpes zoster

Herpes zoster

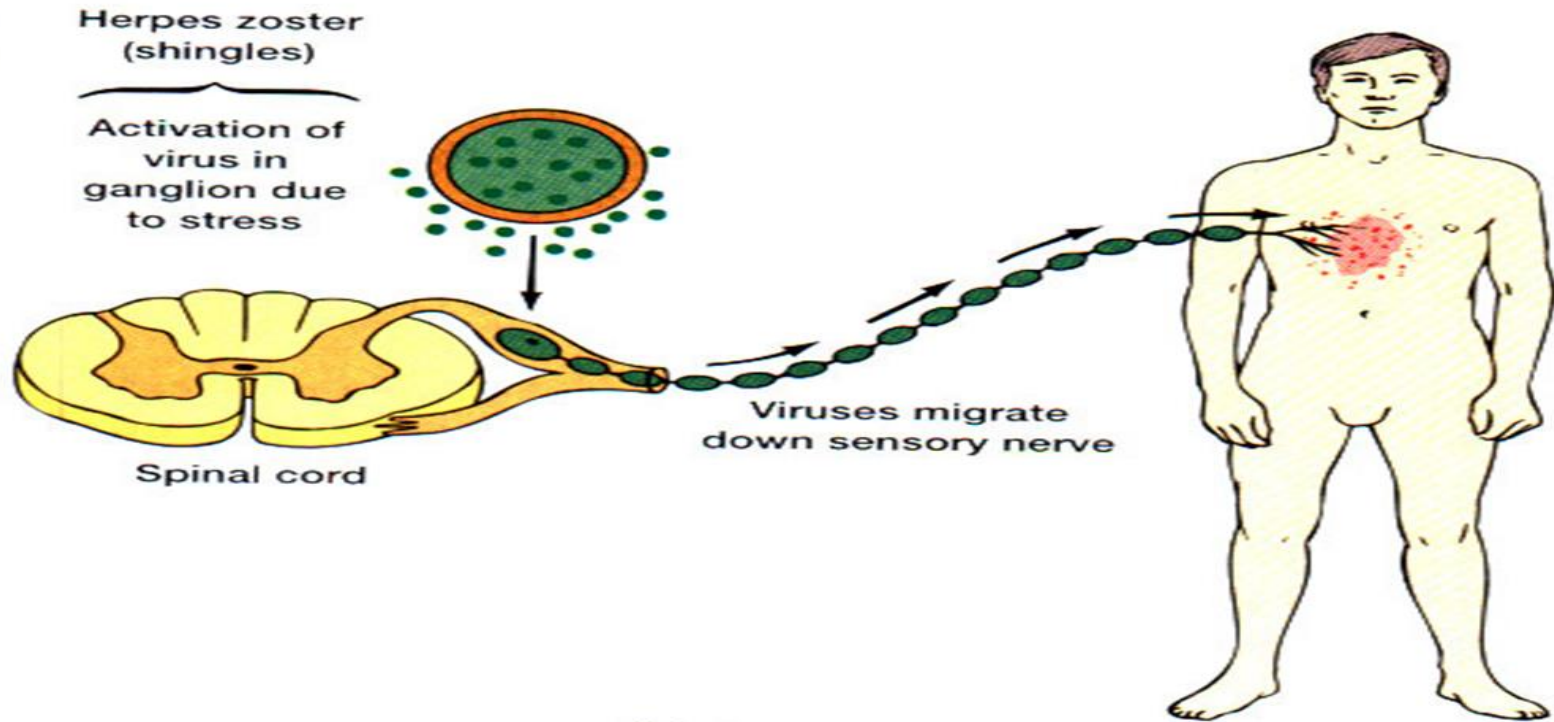
- ❑ It's acute localized viral infection.
- ❑ It is caused by the **reactivation** of **varicella-zoster virus** which is **DNA** type.
- ❑ It's **C**haracterized by **unilateral pain** and vesicular eruption limited to a **dermatome** innervated by the corresponding sensory ganglion.

Etiopathogenesis

- The causative virus is VZV (*varicella-zoster virus*).
- The same virus causes varicella (**chicken pox**).
- During **varicella** the virus travel through, the sensory nerves to the sensory ganglion where it remain **dormant** and **establish the latency**.
- When **immunity** to the virus decreased, the virus will replicate within the ganglion, and travel back through the sensory nerve to the skin resulting in dermatomal pain and skin lesion.

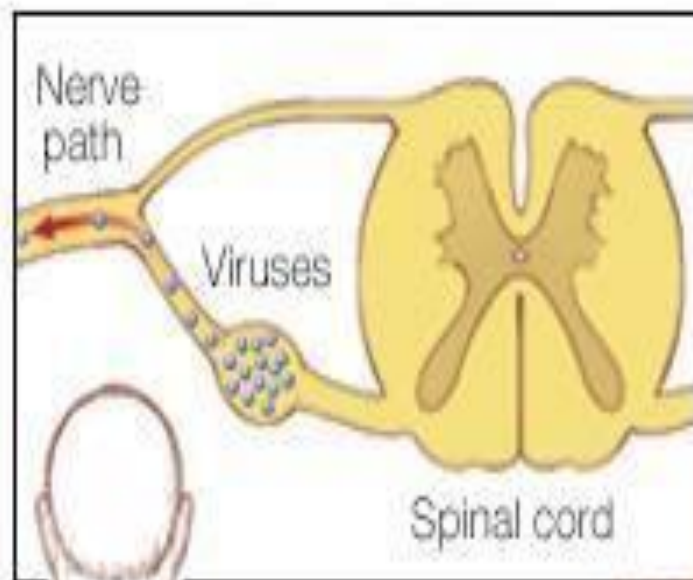


(a) Primary infection

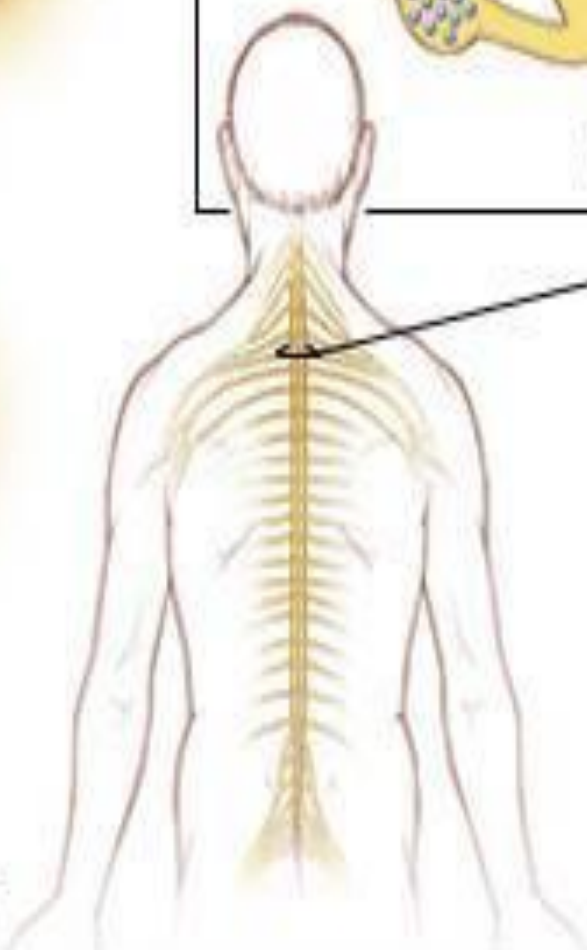


(b) Recurrence

SHINGLES



Virus



Epidemiology

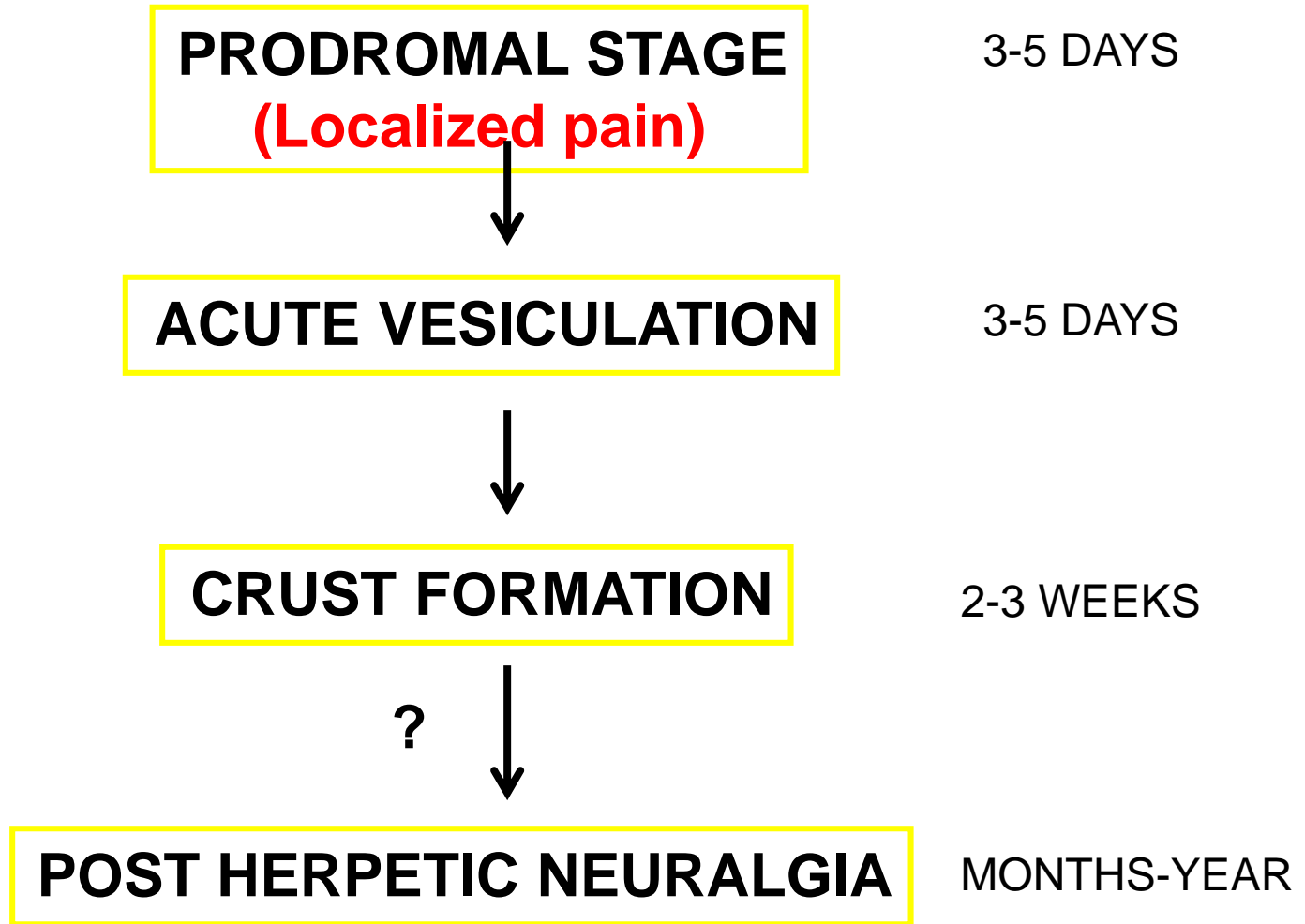
AGE AND SEX:

- There is no racial or sex predilection.
- Most cases are older than **50 years** .

RISK FACTORS:

1. Diminished immunity with aging.
2. Immunosuppression's.
3. HIV-infection.

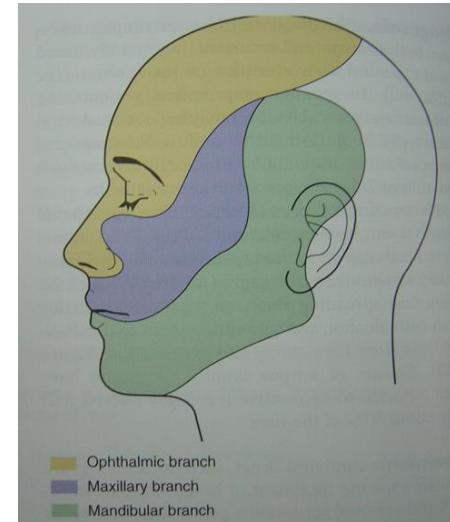
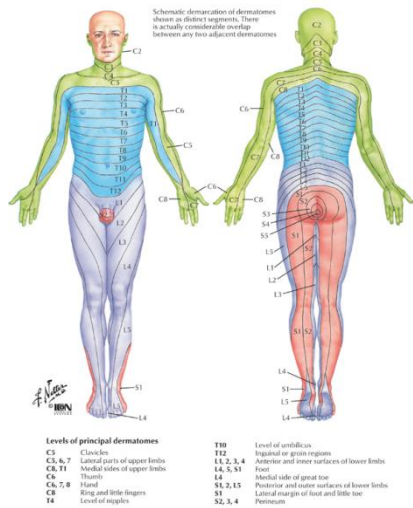
Clinical Picture



Clinical Picture

- Closely grouped vesicles & pustules.
- On an erythematous base.
- They may appear umbilicated.
- Segmental (dermatomal) distribution.
- New lesions continue to appear for a week.

Sites of predilections



- ❑ Thoracic region (>50% of cases)
- ❑ Trigeminal region (10 - 20%)
- ❑ Lumbosacral and cervical (10 - 20%)

**Typical grouped
vesicles and
pustules on an
erythematous
base involving
upper left
thoracic
dermatomes.**





Typical grouped **vesicles and pustules** on an erythematous base involving thoracic dermatomes on the left chest wall.

Ophthalmic herpes zoster



DIFFERENTIAL DIAGNOSIS

1. Prodromal Stage (Localized Pain):-

Migraine, cardiac or pleural disease, an acute abdomen.

2. Cutaneous Eruption:-

- ✓ **H**erpes simplex virus infection,
- ✓ **C**ontact dermatitis,
- ✓ **E**rysipelas,
- ✓ **B**ullous impetigo.

DIAGNOSIS

- ✓ **C**linical picture usually diagnostic.
- ✓ **C**onfirmed by Tzanck test.
- ✓ **V**iral culture to rule out HSV infection.

Treatment

The disease is self limited

The goals of treatment are;-

1. Minimize the pain.

(Analgesic).

2. Speeding the healing.

(Topical & systemic antibiotic if 2ry bacterial infection).

3. Prevention of dissemination.

(Acyclovir 800mg /5 hourly for 7-10 days).

Complications

1. Post-herpetic neuralgia.
2. Ophthalmic zoster.
3. Ramsay Hunt syndrome.
4. Disseminated zoster.
5. Zoster encephalomyelitis.

Exercise

- Q. What's the causative organism for HZ, which types?
- Q. What are the criteria for lesions in HZ?
- Q. How to Dx HZ?
- Q. What are the Rx line of HZ?
- Q. Enumerate five Complication follow missed Rx of HZ?
- Q. Enumerate two side effect of Zovirax?