

Chickenpox

Learning Objectives:

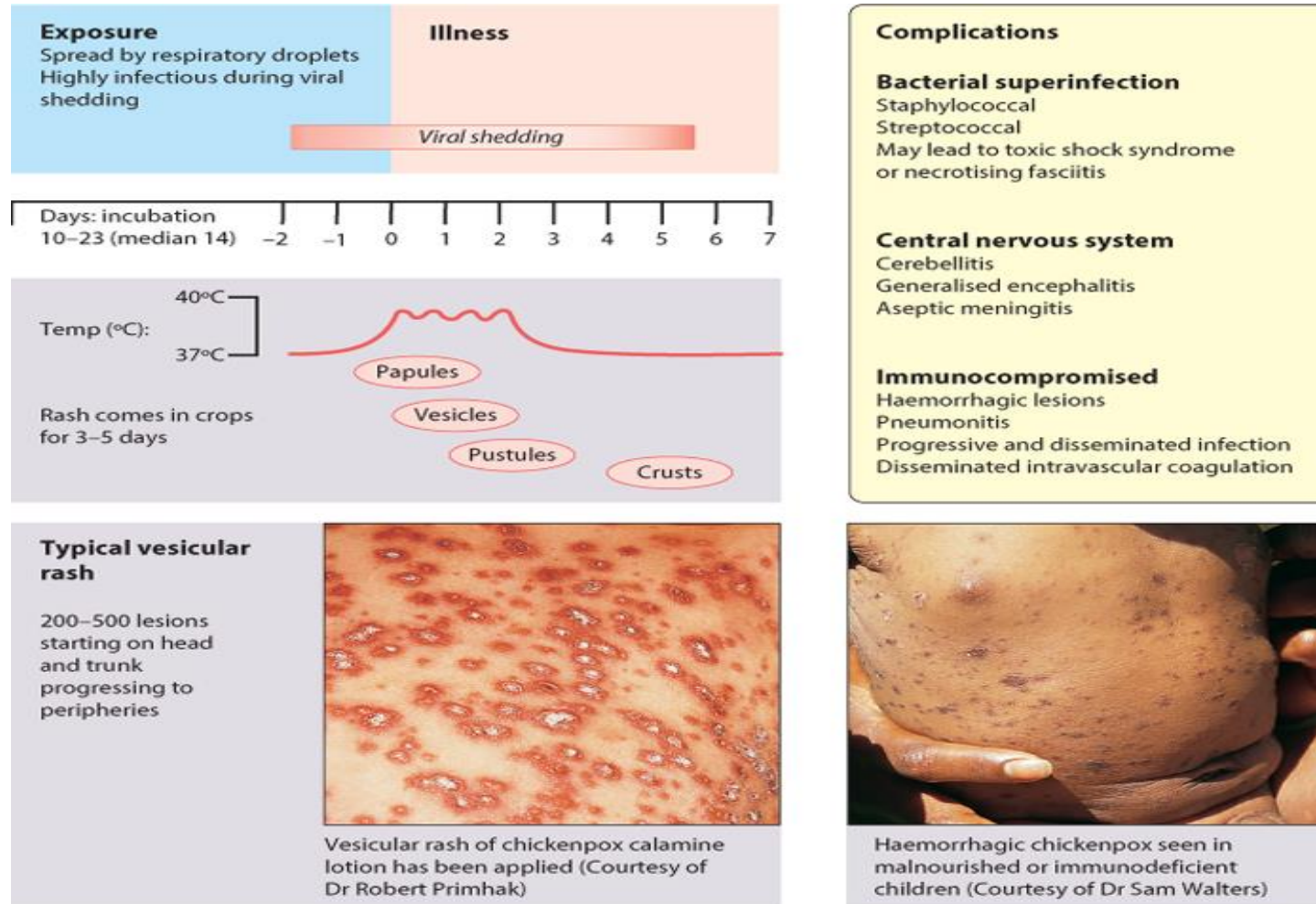
1. Define the Concept,
2. Identify the etiology
3. Describe the clinical presentation of chickenpox
4. Mention the differential diagnosis of chickenpox
5. Identify the complications of chickenpox
6. Clarify the prevention
7. Outline treatment

Chickenpox

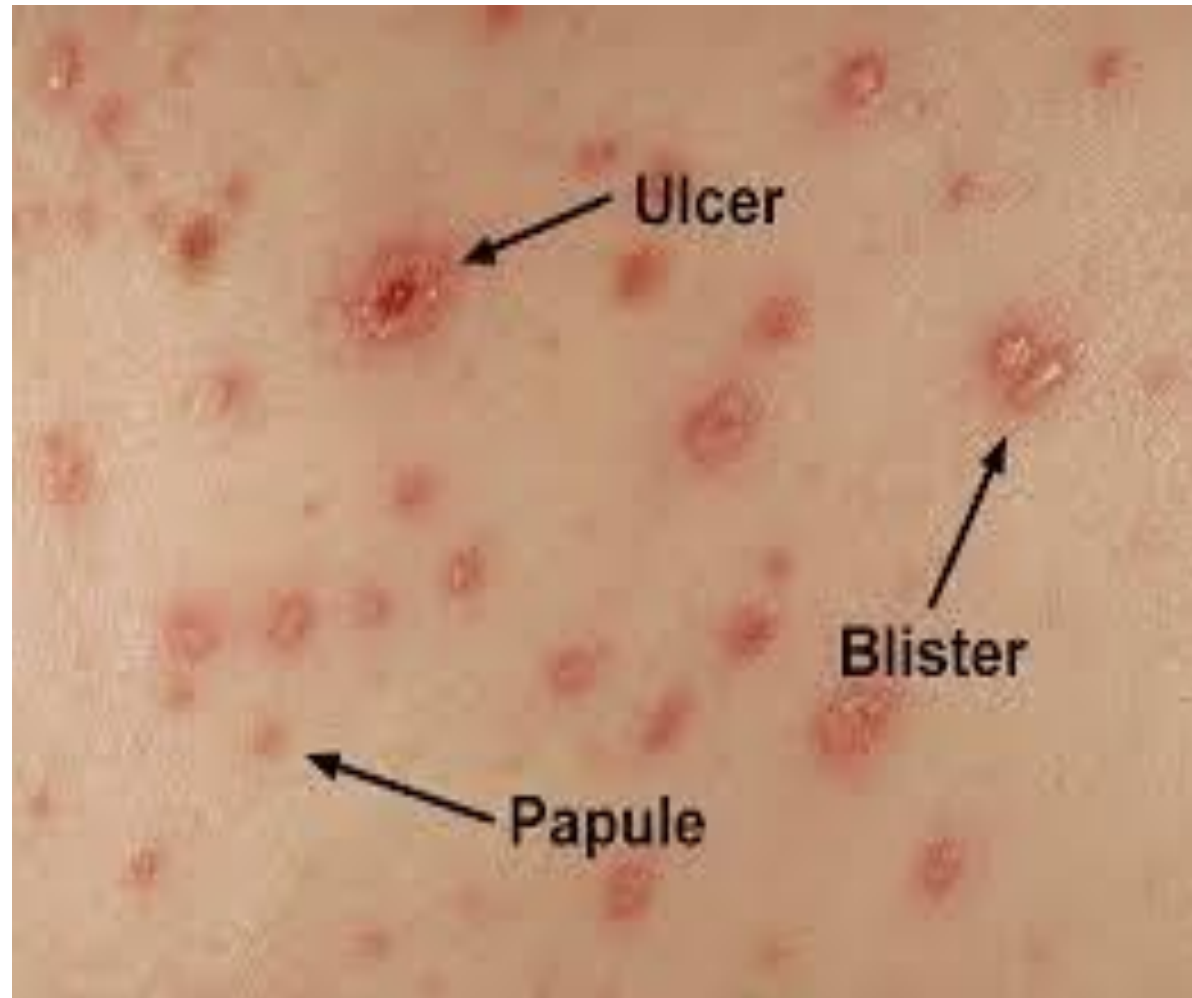
Varicella zoster virus (VZV) shares many features with HSV, as both produce a vesicular rash. In contrast to HSV, however, varicella zoster is spread by the respiratory route, progressing via the blood & lymphatics to cause vesicular lesions in the skin. > 90% of primary VZV infections are clinically symptomatic with a vesicular rash

In the **immunocompromized**, primary varicella infection may result in severe progressive disseminated disease, which has a MR of up to 20%. The vesicular eruptions persist & frequently become hemorrhagic

Clinical features & complications of chickenpox



Illustrated Textbook of Paediatrics 4th ed.



Nelson Textbook of Pediatrics 20th ed



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Although an effective [varicella vaccine](#) exists, there are concerns that adults may become susceptible to infection when immunity wanes



Complications which can occur in previously healthy children:

2ndary bacterial infection with staphylococci, streptococci or other organisms. further complications such as toxic shock syndrome or necrotising fasciitis.

Encephalitis. usually occurring early during the illness. In contrast to the encephalitis caused by HSV, the prognosis is good.

Most characteristic is a VZV-associated **cerebellitis**. This usually occurs within a week of the onset of rash.

The child is ataxic with cerebellar signs. It resolves over a few days.

Purpura fulminans. This is the consequence of vasculitis in the skin & s.c tissues. It can lead to loss of large areas of skin by necrosis. It may occur after VZV infection due to production of **antiviral antibodies** which cross-react & inactivate the coagulation factor **Protein S**. There is subsequent dysregulation of fibrinolysis & an ↑ risk of clotting, most often manifest in the skin.

Strokes. very rare, there is an ↑ incidence of strokes in children after VZV infection, due to either vasculitis or protein S deficiency.

Human (ZIG) is recommended for high-risk immunosuppressed individuals with deficient T-lymphocyte function, following contact with chickenpox. They include:

- *BM transplant recipients
- *Pts with congenital or acquired immune deficiency affecting T cell function
- *Pts on high doses of steroids or other immunosuppressive drugs within the previous 3 mo.
- *NN whose mothers develop varicella within 5 days before or 2 days after delivery
- *NN born at < 30 wks' gestation who have been exposed to varicella

Vaccine is available.

Protection from infection with zoster Ig is not absolute

I.V aciclovir should be given in severe chickenpox & in the immunocompromized

Latent varicella zoster

Can reactivate, causing a vesicular eruption in the distribution of sensory nerves (shingles).

It occurs most commonly in the thoracic region, although any dermatome can be affected .



Herpes zoster involving the lumbar dermatome