

Rubella (German measles)

- Agent – RNA virus (Togo virus family), Genus Rubivirus.
- Source of infection – Respiratory secretion
- Host -3-10 yrs
- Immunity –life long
- Environmental factors –winter and spring season
- Transmission – droplet, vertical transmission
- I.P – 2-3 weeks average 18 days

- Conjunctivitis
- Sore throat
- Headache
- General body aches
- Low-grade fever
- Chills
- Anorexia
- Nausea
- Tender lymphadenopathy (particularly posterior auricular and suboccipital lymph nodes)

Temperature

- Fever is usually not higher than 38.5°C (101.5°F).

Lymph nodes

- Enlarged posterior auricular and suboccipital lymph nodes are usually found on physical examination.

Mouth

- Small petechiae may be present on mucous membrane of mouth



Image in a 4-year-old girl with a 4-day history of low-grade fever, symptoms of respiratory tract infection, and rash.

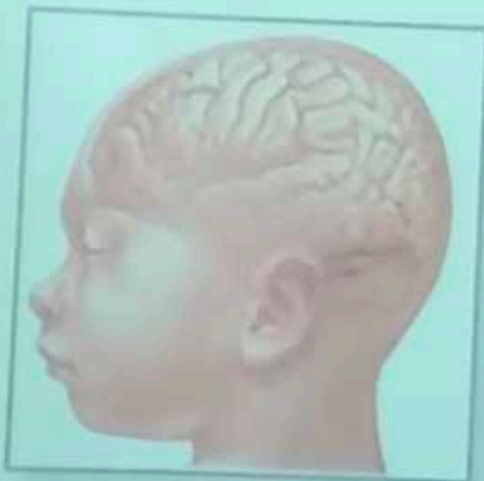


Image in a 5-year-old girl with a 4-day history of low-grade fever, symptoms consistent with upper respiratory tract infection, and rash.

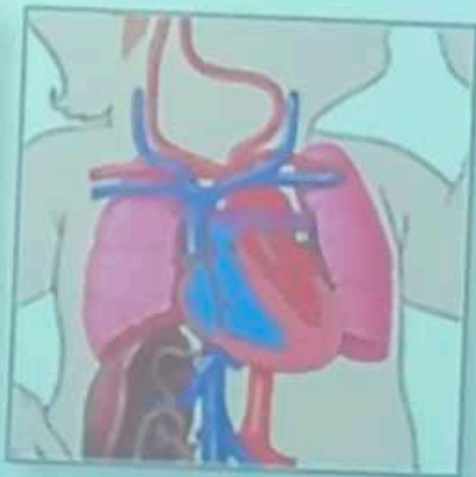
MANAGEMENT

- No specific management
- Symptomatic treatment
- No antiviral drug recommended

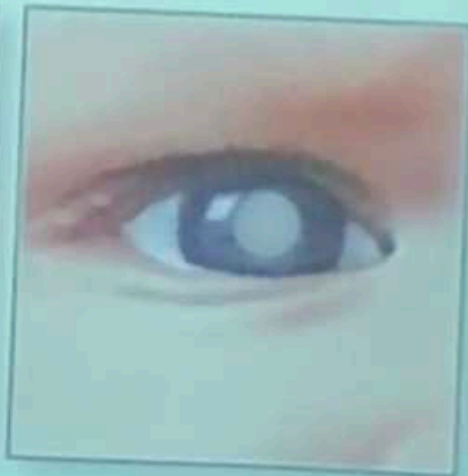
Rubella syndrome



Microcephaly



PDA



Cataracts

- Sensorineural hearing loss – 58%
- Ocular abnormalities including cataract, infantile glaucoma, Microphthalmia and pigmentary retinopathy occur in approximately 43%
- Congenital heart disease including patent ductus arteriosus (PDA) and pulmonary artery stenosis - 50%

PREVENTION

MEASLES VACCINE



- Live attenuated measles virus (Edmonston-zagreb strain) Propagated on human diploid cell (MRC-5)
- 0.5 ml of vaccine
- 0.5 ml of sterile water
- Dose – 0.5 ml
- Route of administration: Sub-cutaneously
- 3 to 5 weeks antibody level – 200mLU/ml




Chicken Pox

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- Also known as Varicella Chicken pox is an acute highly infectious disease
 - Caused by the varicella – Zoster virus
 - Characterized by the vascular rash, that may be accompanied by the fever and malaise
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Causative Agent

- Varicella – Zoster virus Humane
- Herpes virus type III or (*Humane alpha virus)

Host Factors

- ▶ Man is the host of the virus
- ▶ **Age:** Children under the 10 – years of the age
- ▶ **Immunity:** One attack of the disease give life long immunity, second attacks are rare
- ▶ **Environment:** Over-crowding increase the chance of the disease

Reservoir

- Infected persons are the reservoir
- **Source of the infection:**
 - Oropharyngeal secretion
 - Lesion of the skin and mucosa
- **Infectivity Period:** It range from the one to two days before the appearance of the rash and 4 – 5 days thereafter

Mode of Transmission

- **Direct:**

- Person to person through the droplets or air borne spread
- The virus can cross the placental barrier

- **Indirect:**

- Through the articles freshly soiled by the discharge from the mucus membrane of the patient
- Clothing

- **Incubation Period:** It is 14 – 16 days

- **Susceptibility & Resistance:** It is universal among those not previously attacked

Clinical Features

- Clinical features are characterized by the
 - Pre-eruptive stage
 - Eruptive stage

Eruptive Stage

- In children the rash is often first sign coming on the day the fever starts
- This stage is characterized by the
 1. Centripetal Distribution
 2. Rapid Evaluation
 3. Pleomorphisms
 4. Fever

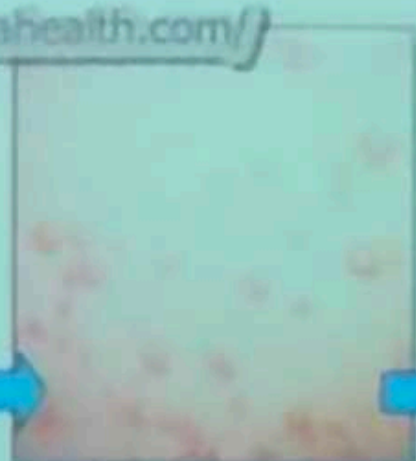


Chicken pox
Macule

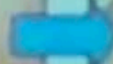


Chicken pox
Papule


<http://papahealth.com/>



Chicken pox
vesicle



Chicken pox
crusting



Chicken Pox & Herpes Zoster Virus

- The two diseases are regarded as different host responses to the same infectious agent
- It is believed that herpes Zoster is the result of the proliferation of the varicella virus in cranial and spinal nerves producing the pain and vascular eruption in innervated areas in persons partially immune as a result of the having varicella in the past
- Herpes Zoster could be either a reinfection with the virus or reactivation of the latent virus, which had persisted since the chicken pox virus



Complications

- Hemorrhage
- Pneumonia
- Encephalitis
- Acute cerebellar Ataxia
- Reye's Syndrome (Acute encephalopathy associated with the fatty degeneration of the liver)
- Fetal death and birth defects in case of the maternal varicella during the pregnancy

Preventive Measures

- Varicella Zoster immunoglobulin given within the 72 – hours of the exposure has been recommended for the prevention
- A live attenuated vaccine has proved safe and effective in preventing the disease