

Common Childhood Infectious Diseases

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Definitions

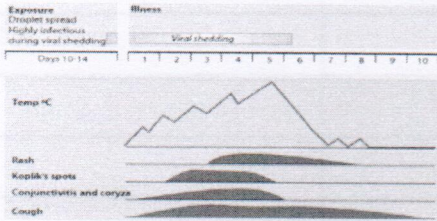
Exanthem: A skin eruption occurring as a symptom of a general disease.

Enanthem: Eruptive lesions on the mucous mb

Causes of fever and rash

Maculopapular rash		Vesicular, bullous, pustular	
Viral	<ul style="list-style-type: none"> Parvovirus B19 (Erythema infectiosum) - 42 Measles Enteroviral rash Parvovirus (slapped cheek) - usually school-age Measles - uncommon if immunized Bubola - uncommon if immunized 	Viral	<ul style="list-style-type: none"> Varicella zoster virus - chickenpox, shingles Herpes simplex virus Coxsackie - hand, feet and mouth
Bacterial	<ul style="list-style-type: none"> Scarlet fever (group A streptococcal) Erythema marginatum - rheumatic fever Staphylococcus aureus (impetigo) Classically rose spots Lyme disease - erythema migrans 	Bacterial	<ul style="list-style-type: none"> Impetigo - characteristic crusting Stabs - infection of hair follicles/sebaceous glands Staphylococcal bullous impetigo Staphylococcal scalded skin Toxic epidermal necrolysis
Other	<ul style="list-style-type: none"> Kawasaki disease Drug-induced allergic reactions 	Other	<ul style="list-style-type: none"> Trichinella multiformis (Swains) Chlamydia psittaci
		Petechial, purpuric	
		Bacterial	<ul style="list-style-type: none"> Meningococcal, other bacterial sepsis Infective endocarditis
		Viral	<ul style="list-style-type: none"> Enterovirus and other viral infections
		Other	<ul style="list-style-type: none"> Henoch-Schönlein purpura (HSP) Thrombocytopenia Vasculitis Malaria

Measles clinical features



Symptoms

- Prodrome: day 7-11 after exposure
 - Fever, cough, coryza, conjunctivitis
 - Enanthem: Koplik's spots appear 2 days before the rash, last 2 days into the rash
- rash spread downwards from face
- Highly contagious
- Treatment: symptomatic, Vitamin A
- **Prevention** 2 doses of measles vaccine
- Immunize susceptible contacts, Immune globulin

Measles: complications

- Otitis media
- Bronchopneumonia
- Encephalitis
- Myocarditis
- Pericarditis
- Subacute sclerosing panencephalitis SSPE—late sequelae due to persistent infx of the CNS

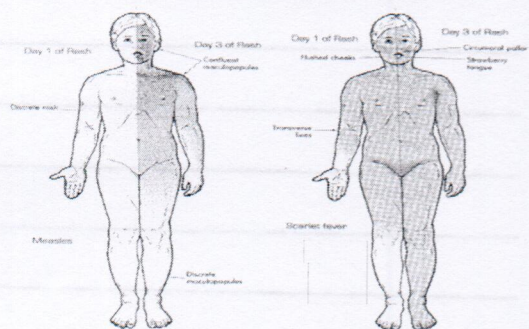
Scarlet Fever

- Abrupt onset fever, headache, vomiting, malaise, sore throat
- Bright red oral mucosa
- Palatal petechiae
- Tongue change

- Rash appears 1-2 days after the onset of illness
- Usually starts on the neck & chest, then spreads over the body
- Described as "sandpapery" in quality
- Can last for over a week
- As the rash fades, peeling (desquamation) may occur (finger tips, toes, and groin area)

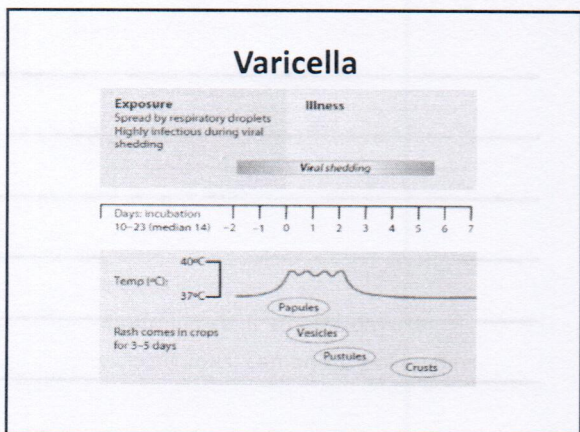
Treatment: penicillin, or erythromycin if there is penicillin allergy for 10 days

Measles versus Scarlet fever



Chicken Pox (Varicella)

- DNA Virus
- Incubation Period: 10 – 21 days
- Very contagious; can be spread by direct contact, droplet transmission, or airborne transmission
- Infectivity: 1-2 days before rash till all skin lesions have crusted (~ 6th day of rash)
- Vaccine



Complications

- Secondary infection of the blisters may occur
- pneumonia, myocarditis
- Cerebellar ataxia may appear during the recovery phase or later
- Encephalitis (rare)
- Congenital infection
- Newborns are at risk for severe infection (if mother is not immune)
- Disseminated dis: immunocompromised
- Treatment: Acyclovir

Fifth Disease (Human Parvovirus)

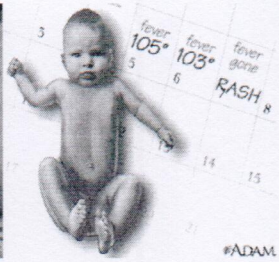
Raised, red, warm rash, first appearing on cheeks (slapped cheek appearance).

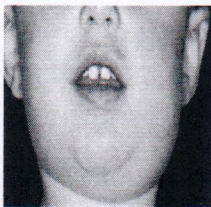
After 1 - 4 days, a lace-like rash spreads to the rest of the body.

- **Infectiousness** greatest before onset of the rash and not after the rash.
- **Control** In school outbreaks, alert pregnant staff.
- In pts hemolytic anaemia (e.g SCA)

Roseola infantum (exanthema subitum)

Human Herpesvirus-6



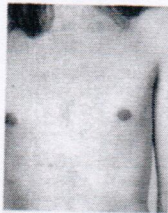


Mumps

- RNA Virus
- Incubation Period: 15 – 24 days
- Clinical Features: fever, parotitis, may be subclinical
- Complications: meningitis, encephalitis, orchitis
- Treatment
- Isolation & Infectivity: 7 days after onset of parotid swelling.
- Vaccine

Rubella - (Also known as German measles) -ssRNA


- Mild rash (macula) in children
- Infections in adults are more severe (arthritis/encephalitis)
- The virus crosses the placenta ↓
- Rubella infections of pregnant women during the first months results in birth defects, including deafness, blindness or mental retardation
- Live, attenuated vaccine against rubella is part of the MMR




Rubella

- RNA Virus
- Incubation Period: 15 – 20 days
- Spread by respiratory droplet.
- generally a mild disease in childhood, Lymphadenopathy particularly the occipital and postauricular nodes, is prominent, arthralgia and arthritis.
- Serious in pregnancy: cong. infection
- Treatment
- Isolation & Infectivity: 7 days from onset of rash
 - Congenital Rubella: until 1 year of age
- Vaccine

Rubella syndrome



Microcephaly PDA Cataracts



#ADAM

MCQ

14-year-old girl awakens with a mild sore throat, low-grade fever, and a diffuse maculopapular rash. During the next 24 hours, she develops tender swelling of her wrists and redness of her eyes. In addition, her physician notes mild tenderness and marked swelling of her posterior cervical and occipital lymph nodes. Four days after the onset of her illness, the rash has vanished. Which of the following is the most likely diagnosis?

- a. Rubella
- b. Rubeola
- c. Roseola
- d. Erythema infectiosum
- e. Erythema multiforme

Enterovirus infection

Nonpoliovirus)
and Parechovirus Infections
(Group A and B Coxsackieviruses, Echoviruses,
Numbered Enteroviruses, and Human
Parechoviruses)

Hand-Foot-and-Mouth Disease

- Coxsackievirus infection
- Usually a mild illness
- Generally complete recovery occurs in 5-7 days

Complications:

- Dehydration may occur
 - mouth lesions cause pain with swallowing

Herpes simplex virus 1

most common sites are lips and fingers or thumbs (herpes whitlow)

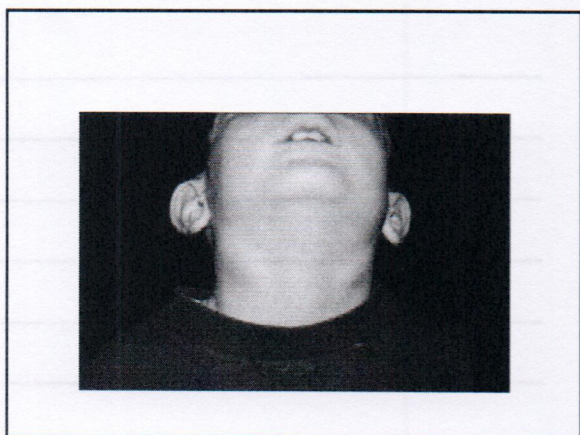


Herpes simplex virus infection

- Gingivostomatitis – may necessitate intravenous fluids and aciclovir
- Eczema herpeticum – may result in secondary bacterial infection and septicaemia
- Herpetic whitlows – painful pustules on the fingers
- Eye disease – blepharitis, conjunctivitis, corneal ulceration and scarring
- CNS – aseptic meningitis, encephalitis
- Pneumonia and disseminated infection in the immunocompromised.







- Enlarged lymph nodes
- Rash
 - Pink, measles-like rash
 - more common if given amoxicillin for throat infection
- Enlarged spleen & liver
- transmitted by saliva and close contact
- Diagnosis: serology, PCR

case

- a six month old male, had the acute onset of fever to 102° and irritability.
- He was seen in your office and examination of the tympanic membranes revealed the physical findings noted.

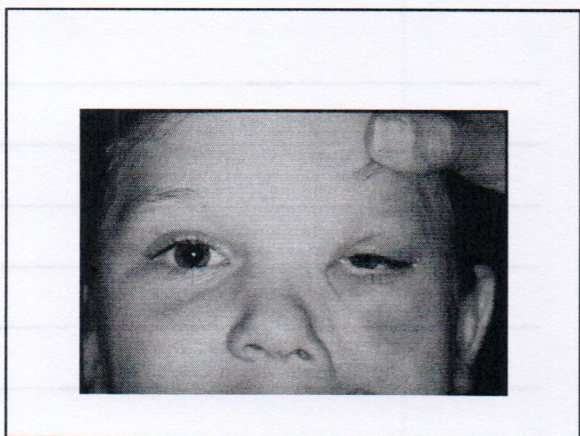
OM treatment

Amoxicillin 80 mg/kg/day divided 12 hrs

Complications of OM

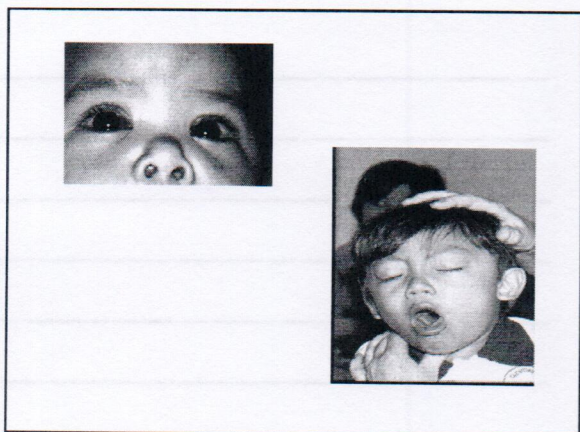
- chronic effusion, hearing loss
- cholesteatoma (mass-like keratinized epithelial growth)
- Petrositis, mastoiditis
- intracranial extension (brain abscess, subdural empyema, or venous thrombosis).

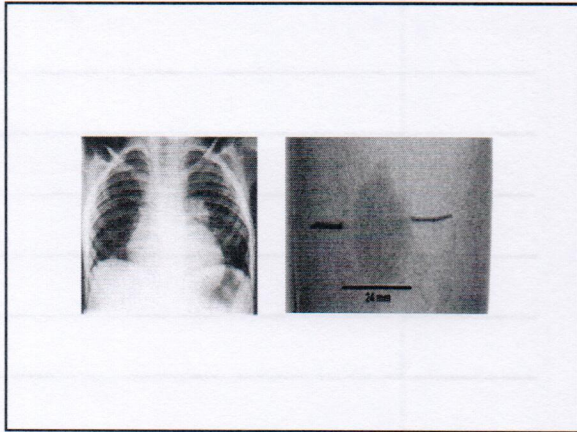




Periorbital cellulitis

- fever with erythema, tenderness, oedema of the eyelid.
- It is almost always unilateral.
- In young, unimmunised children it may also be caused by *Haemophilus influenzae* type b which may also be accompanied by infection at other sites, e.g. meningitis.
- It may follow local trauma to the skin. In older children, it may spread from a paranasal sinus infection or dental abscess
- Treatment : i.v antibiotic





Tuberculosis

- TB affects millions of children worldwide; low but increasing incidence in many developed countries.
- Diagnosis of TB in children is even more difficult than in adults. The clinical features of the disease are nonspecific, such as prolonged fever, malaise, anorexia, weight loss or focal signs of infection.
- Clinical features follow a sequence – primary infection, then dormancy, which may be followed by reactivation to post-primary TB.
- TB disease can present as local disease or may be widely disseminated, miliary TB to sites such as bones, joints, kidneys, pericardium and CNS.
- In infants and young children, seeding of the CNS is particularly likely, causing tuberculous meningitis

