

# Infectious Disease

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# Learning Objectives

Essential - Causes, recognition and Treatment of:

- ✿ Meningitis
- ✿ Sepsis
- ✿ Purpura

Important

- ✿ **Cervical Adenopathy**
- ✿ **Tonsillitis and Pharyngitis**
- ✿ Otitis Media
- ✿ **Pneumonia**
- ✿ **Red rashes – Measles, rubella, Scarlet fever and Kawasaki disease**
- ✿ **Chicken pox**
- ✿ Stomatitis

# Cervical Adenopathy

## Causes

- ❁ Reactive, secondary to infection – Scalp/ENT
  - ❁ <6weeks, <1cm
  - ❁ Viral rash, signs of infection
  - ❁ Virus URTI, Rubella, EBV, Atopic eczema
  - ❁ No action needed as long as resolves
  - ❁ KAWASACKI DISEASE (come back to this later)
- ❁ TB adenitis, Lymphoma, neuroblastoma
  - ❁ Persistent >6wks,
  - ❁ Red flags - >1cm, fixed, hard, ulceration, rapid growth
  - ❁ Investigate further – FBC, CXR, Tuberculin skin test, Biopsy

# Tonsillitis and Pharyngitis



# Tonsillitis and Pharyngitis

## ✿ Causes

- ✿ Mostly viral – EBV, adeno/rhino/entero-virus
- ✿ Bacterial – Strep. Pyogenes/Group A strep

## ✿ Management – Symptomatic

- ✿ Analgesia
- ✿ Hydration – consider IV if unable to swallow
- ✿ Airway compromise - consider corticosteroids

## ✿ Rationale for Abx – CENTOR criteria

- ✿ Fever
- ✿ Exudate
- ✿ Tender cervical adenopathy
- ✿ Absence of cough

- ✿ **3-4 consider penicillin, Avoid ampicillin/ amoxicillin -> MACULOPAPULAR RASH IF EBV**

# Tonsillitis and Pharyngitis

- ❁ Indications for tonsillectomy –Severe and n° of episodes
  - ❁ 3 in 3yrs
  - ❁ 5 in 2yrs
  - ❁ 7 in 1yr
- ❁ Complications of strep infection
  - ❁ Quinsy – peritonsillar abscess
  - ❁ Scarlet Fever
  - ❁ Rheumatic Fever
  - ❁ Acute Glomerulonephritis

# Pneumonia

## ❁ Neonates

❁ Group B strep, E.coli, chlamydia, Listeria

## ❁ Infants – Most common!

❁ Viral!! – RSV, Adenovirus

❁ Strep pneumoniae, H.influenza, Pertussis

## ❁ Children

❁ Strep pneumoniae, H.influenza, Group A strep,  
TB

❁ Cough, fever, tachypnoea, signs of  
respiratory distress

# Red Rashes



- ❁ Red-Pink Maculopapular rash

- ❁ Started on face then spread

- ❁ Not itchy

- ❁ Low grade fever began before rash appeared

- ❁ Lymphadenopathy – post-auricular and occipital

- ❁ Child is otherwise well



# Rubella (German measles)

- ❁ Mild illness in children – rash fades in 3-5days
- ❁ PREVENTION IS THE ONLY TREATMENT - VACCINE
- ❁ If risk of exposure to pregnant non-immunised woman  
-> IgM rubella serology to confirm diagnosis
- ❁ Congenital Rubella Syndrome
  - ❁ Risk is greatest in early pregnancy (<18wks, especially <8wks)
  - ❁ Deafness
  - ❁ Congenital heart defects (PDA)
  - ❁ Cataracts

# Red Rashes



- ❁ Maculopapular rash  
– begins behind ears,  
becomes confluent
- ❁ White spots on bright  
red buccal mucosa
- ❁ Fever
- ❁ Conjunctivitis
- ❁ Coryzal symptoms
- ❁ Cough

# Measles

## ❁ Complications (rare)

- ❁ Respiratory – Pneumonia, otitis media, tracheitis
- ❁ Secondary bacterial infection
- ❁ Neurological – febrile convulsions, Encephalitis, Subacute sclerosing panencephalitis (SSPE)
- ❁ Diarrhoea, hepatitis, appendicitis, corneal ulceration, myocarditis

## ❁ Management

- ❁ Symptomatic
- ❁ Ribavirin if immunocompromised
- ❁ Vitamin A supplementation in developing countries

# Red Rashes



- ❁ Fever for 2-3 days before rash
- ❁ Sore throat
- ❁ Fine papular 'sandpaper' blanching rash – lineal rash in skin folds
- ❁ Desquamates on after ~7 days

# Scarlet Fever

## ❁ Diagnosis

- ❁ Clinical but high ESR/CRP, WCC and neutrophils
- ❁ Raised anti-streptolysin O titres
- ❁ Group A strep on throat swab

## ❁ Management

- ❁ Penicillin V for 10 days (clindamycin or erythromycin if pen allergy)

## ❁ Complications

- ❁ Septic – sepsis, pneumonia, empyema, osteomyelitis
- ❁ Immune – rheumatic fever, post-strep glomerulonephritis

# Red Rashes



- ❁ Fever for 5 days ■
- ❁ Rash can be measles-like, maculopapular, erythematous or targetoid
- ❁ Cervical adenopathy



# Kawasaki Disease

- ❁ Systemic vasculitis in children aged 6mo-4yrs
- ❁ Uncommon but extremely important to recognise due to complications
- ❁ Diagnosis: fever for >5days + 4 of:
  - ❁ Cervical lymphadenopathy
  - ❁ Non-purulent conjunctivitis
  - ❁ Mucositis
  - ❁ Rash
  - ❁ Red oedematous palms and sole +/- Desquamation
  - ❁ Cardiac signs – gallop rhythm
- ❁ Incomplete cases (not all symptoms) occur especially in infants

# Kawasaki Disease

## ❁ Management

- ❁ Prompt IV Ig within 10days
- ❁ Aspirin reduces thrombosis risk

## ❁ Complications

- ❁ Coronary artery aneurysms -> scarring/stenosis -> myocardial ischaemia and sudden death
- ❁ Coronary arteries are affected in 1/3 of patients within 6weeks

## ❁ Prognosis

- ❁ Good if treated promptly
- ❁ 1-2% die of cardiac complications



# Red Rashes



- ❁ Papules -> Vesicles -> pustules -> Crusting
- ❁ Appear in crops, Very Itchy

# Chickenpox

- ✿ incubation period – 14-21 days
- ✿ Infective 2 days before rash and 5 days after
- ✿ Fever, itching, vesicular rash appears in crops
- ✿ management
  - ✿ Symptomatic
  - ✿ Aciclovir for immunocomp/adolescents
  - ✿ Human varicella zoster Ig if maternal infection around delivery
- ✿ complications and outcome.
  - ✿ Secondary bacterial infection – group A strep, staph
  - ✿ Encephalitis – cerebellitis
  - ✿ Purpura fulminans (rare)

**A 12yr girl presents with fever and a sore throat. On Examination you identify cervical lymphadenopathy and swollen exudative tonsils. Which of the following would you not consider as part of your management?**

- A. IV Fluids**
- B. PRN Paracetamol**
- C. Penicillin**
- D. Amoxicillin**
- E. Corticosteroids**

# Which of the following are complications of Chickenpox?

- A. Subacute sclerosing panencephalitis
- B. Coronary artery aneurysms
- C. Cerebellitis
- D. Deafness
- E. Purpura Fulminans
- F. Secondary bacterial infection
- G. tracheitis