VARICELLA (CHICKEN POX)
CHICKEN POX

EPIDEMIOLOGY
• Agent – Varicella Zoster Virus
• Reservoir - Humans
• Transmission – Direct contact, Airborne
• Period of infectivity – 2 days before the onset of rash until all the lesions are crusted
• Secondary attack rate - 90%
• Age - 5-9 years
• Season – Jan - May
CLINICAL PRESENTATION

• Incubation period - 11 to 21 days
• Prodromal phase – Mild fever for 1-2 days
• Eruptive phase -
  - Rash initially on face and trunk
  - Centripetal distribution
  - Macule - papule- tear drop vesicles – cloudy & crusting
  - Pleomorphism - presence of lesions in different stages of development at the same time
  - Intensely pruritic
  - Lesions also occur on mucosae recovery in one week
PLEOMORPHIC RASH OF CHICKEN POX

![Image of chickenpox rash on face and back]
RISK FACTORS FOR SEVERE VARICELLA

• First month of life - especially if the mother is seronegative
• Delivery before 28 weeks of gestation
• Adolescence and adulthood
• Immunocompromised state
• Pregnancy: Pregnant women have high risk of severe varicella, especially pneumonia
DIAGNOSIS

• Mainly Clinical
• IgM antibody and PCR assay
• Virus isolation
TREATMENT

• Antipruritic Agents
  - Topical calamine lotion
  - Oral antihistamines

• Antipyretics
  - Paracetamol is drug of choice
  - Avoid using Aspirin

• Acyclovir
  Not routinely given except for severe cases
PREVENTION

• Active Immunization - at 15 months of age followed by 2nd dose 3 months later

• Passive Immunization (VZIG)
  - Post exposure prophylaxis for high risk individuals
  - Newborns, Seronegative pregnant women
  - Immunocompromised patients
COMPLICATIONS

• Secondary bacterial infection
  - Staphylococcus aureus and Streptococcus
  - Persistent fever
• Encephalitis (typically post infectious with cerebellar involvement)
• Pneumonia
• Disseminated hemorrhagic chicken pox
• Arthritis, hepatitis, pancreatitis, nephritis
<table>
<thead>
<tr>
<th>Time of maternal infection</th>
<th>Consequences in fetus / neonate</th>
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<tbody>
<tr>
<td>Early pregnancy (first 20wks)</td>
<td>Spontaneous abortion, fetal varicella syndrome</td>
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<tr>
<td>At any stage</td>
<td>Intra-uterine deaths, Herpes Zoster in 1\textsuperscript{st} yr of life</td>
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<tr>
<td>Near term</td>
<td>Congenital varicella or Neonatal varicella</td>
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CONGENITAL VARICELLA SYNDROME

- Occurs in 2% of children born to mother developing varicella in 1st or 2nd trimester
- Manifest as – IUGR, microcephaly, cortical atrophy, limb hypoplasia, micro-opthalmia, cataracts, chorioretinitis, cutaneous scarring
- Fetal injury risk is unrelated to severity of maternal disease
- Zoster exposure during pregnancy is not associated with fetal injury
NEONATAL VARICELLA

• Neonatal varicella can be a serious illness
  – depending upon the timing of maternal varicella and delivery

• If the mother develops varicella within 5 days before or 2 days after delivery, the baby is exposed to the secondary viremia of the mother, baby acquires the virus transplacentally

• But acquires no protective antibodies because of insufficient time for antibodies to develop in the mother

• In these circumstances, neonatal varicella is likely to be severe and disseminated
SHINGLES

• Some people who have had chickenpox may develop shingles later in life
• Shingles or zoster caused by a reactivation of the same varicella virus that causes chickenpox
• Usually presents as a painful vesicular rash tending to occur on one side of the body, usually on the trunk or face – one or more dermatomes
• There may be pain, numbness or tingling in the area 2-4 days prior to the rash, which can persist sometimes for as long as a year after the rash is gone
HERPES ZOSTER
Thank You