

VARICELLA

RECOGNITION AND ASSESSMENT

Definition

- If mother develops chickenpox rash (not zoster) during 3 weeks before delivery, there is a 25% chance of baby developing the illness
- This risk is greater for babies exposed to secondary maternal viraemia, who do not have a chance to receive transplacental maternal antibodies (e.g. babies born within 5 days of appearance of maternal rash)
- Premature babies <1 kg, <28 weeks are considered high risk

SYMPTOMS AND SIGNS

Fetal varicella

Congenital varicella syndrome – following maternal chickenpox usually in the first 20 weeks of pregnancy

- Limb atrophy
- Scarring of extremities
- Cortical atrophy
- Chorioretinitis and cataracts

Neonatal varicella

- Mild: vesicular rash
- Severe: pneumonitis, pulmonary necrosis, fulminant hepatitis
- mortality 30% without varicella zoster immunoglobulin (VZIG)

INVESTIGATIONS

Maternal

- If no history of chickenpox, check maternal VZ IgG at time of contact
- urgent assays can be done within 48 hr

Neonatal

- VZ IgM for evidence of fetal varicella infection

IMMEDIATE TREATMENT

Varicella zoster immunoglobulin (VZIG)

- VZIG is usually obtained from Microbiology

Neonate born to mother who develops chickenpox rash (but not zoster) within 7 days before birth, or 7 days after birth

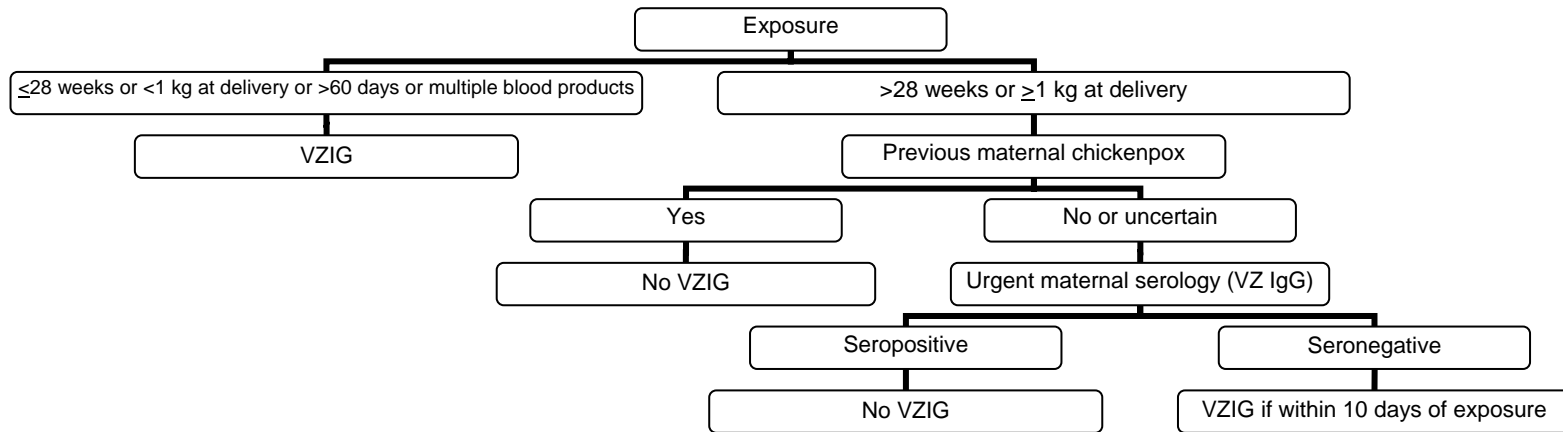
- Give VZIG 250 mg (2 mL) IM (**not** IV) as soon as possible after delivery (must be within 72 hr)
- VZIG can be given without antibody testing of infant
- VZIG is of no benefit once neonatal chickenpox has developed
- VZIG is not needed for neonates born after 7 days of appearance of maternal chickenpox, or where mother has zoster, as these neonates should have transplacental antibodies
- VZIG can be given for up to 10 days after initial exposure
- If VZIG not available, give IVIG (less effective)

Postnatal exposure to chickenpox – see flow diagram

- Significant exposure: household, face-to-face for 5 min, in same room for >15 min
- a case of chickenpox or disseminated zoster is infectious between 48 hours before onset of rash until crusting of lesions
- VZIG is also given in the following cases of postnatal exposure to chickenpox:

- varicella antibody-negative infants (this can be determined by testing mother for varicella antibodies) exposed to chickenpox or herpes zoster from any other contact other than mother, in first 7 days of life (see flow chart)
- VZ antibody-negative infants of any age, exposed to chickenpox or herpes zoster while still requiring intensive or prolonged special care nursing
- for infants in these two exposure groups who were weighing <1 kg at birth, or were <28 weeks gestation at birth, or are more than 60 days old, or who have had repeated blood sampling with replacement by packed cell infusions

Decision pathway for VZV contact



Aciclovir

Indications:

- Infants with postnatal exposure for whom VZIG was indicated (as above) but did not receive VZIG within 24 hr of exposure
- Chickenpox in infant currently treated with corticosteroids or who was born prematurely or is immunocompromised
- If rash develops within 5 days of birth, give aciclovir 10 mg/kg IV (over 1 hr) 8 hrly, diluted to 5 mg/mL
- increase dose to 20 mg/kg if severely systemically symptomatic
- treat for at least 7 days, up to 14 days if severe

SUBSEQUENT MANAGEMENT

- On postnatal wards, unless infant requires neonatal intensive care support:
- isolate mother and baby together in separate room until 5 days after onset of rash and all lesions crusted over
- if infant already exposed, breastfeeding can continue but explain to mother the risk of transmission
- Exposed staff with no history of chickenpox, VZ vaccination or of unknown VZ IgG status should have VZ IgG measured by Occupational Health
- if VZ IgG negative, immunise with varicella vaccine
- remove from clinical duties during days 7-21 following exposure
- offer VZIG if in high risk group for complications (immunocompromised)

MONITORING TREATMENT

- Aciclovir
- ensure good hydration
- stop once clinical improvement occurs or when all lesions crusted

DISCHARGE POLICY

Maternal infection

- After neonate has had VZIG, discharge
- Monitor neonate for signs of infection, especially if onset of maternal chickenpox occurred 4 days before to 2 days after delivery
- Advise GP and midwife to recommend admission to isolation cubicle if rash develops

Fetal infection

- **Diagnosed with positive VZ IgM**
- Ophthalmic examination
- Cranial ultrasound
- Developmental follow up