

## STANDARD TREATMENT WORKFLOW (STW)

# Varicella & Herpes Zoster

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## Standard Treatment Workflow (STW) VARICELLA & HERPES ZOSTER ICD-10-B01-02

### VARICELLA (CHICKEN POX)

#### WHEN TO SUSPECT?

- Fever, malaise
- Generalized vesicular lesions on erythematous base (dew drop on a rose petal sign)
- Skin lesions in different stages of evolution: erythematous macules, papules, vesicles and crusted lesions

#### TAKE HISTORY OF

- Recent contact with a patient with varicella
- Past history of varicella/ varicella vaccination
- Immunosuppression (especially if second episode of varicella): malignancy, HIV/AIDS, transplant recipient

#### PREGNANCY AND VARICELLA

- Infection in 1st 20 weeks may lead to congenital varicella syndrome
- Treat with acyclovir
- Maternal perinatal varicella may lead to neonatal varicella; initiate treatment and refer to a specialist

### HERPES ZOSTER

#### WHEN TO SUSPECT?

- Acute, grouped, vesiculo-pustular eruption in a dermatomal distribution
- Dermatomal pain

#### TAKE HISTORY OF

- Previous varicella
- Previous episode of herpes zoster
- Immunosuppression: Diabetes mellitus, malignancy, transplant recipient, HIV

#### RED FLAG SIGNS

- V1 dermatomal involvement: forehead, periorbital, nose tip: risk of eye involvement - look for watering of eye, redness, photophobia
- Lesions on the ear or inside the ear canal: risk of facial/ vestibulocochlear nerve palsy - look for vertigo, tinnitus, hearing loss, facial asymmetry/weakness
- Multi-dermatomal involvement

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VARICELLA & HERPES ZOSTER  
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**PREGNANCY AND VARICELLA**

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**RED FLAG SIGNS AND SYMPTOMS**

- Hemorrhagic vesicles
- Difficulty in breathing
- Chest pain
- Abdominal pain
- Stiff neck, confused behaviour (CNS symptoms)
- Hemodynamic instability

**INVESTIGATIONS**

- As per availability and need:
  - Tzanck smear: from a fresh vesicle- will show multinucleate giant cells and acantholysis
  - Symptom directed: Chest X-ray, ECG, ECHO, transaminases, renal function test, brain imaging
- Optional
  - VZV PCR – skin swab
  - Skin biopsy



**TREATMENT**

- General measures
  - Isolate the patient from high risk contacts
  - Daily bath with soap
  - Antipyretics: Paracetamol; avoid aspirin as it is associated with Reye's syndrome in children
  - Antihistamines
- Specific treatment\*
  - Adults/children >40kg: Oral Acyclovir- 800mg, 5 times a day for 5-7 days
  - Children <40kg: (20mg/kg/dose) max 800mg four times a day for 7 days
  - Alternative (if available): Valacyclovir (adults-Ig TDS)
  - Give intravenous Acyclovir (10mg/kg/dose 8 hourly) if:
    - Systemic complications
    - Hemorrhagic varicella
    - Immunosuppressed patient
    - Neonatal Varicella (higher dose may be required)

\*Infants, children >12 years of age, adults, pregnant women and immunosuppressed patients should be treated with specific anti-viral medication because of risk of severe varicella  
\*Maximum benefit if acyclovir initiated 24 hours of onset of rash

**COMPLICATIONS**

- Secondary skin infections
- Pneumonia
- Encephalitis
- Hepatitis
- Pancreatitis
- Myocarditis
- Reye's syndrome

**WHEN TO REFER TO A HIGHER CENTRE**

- Diagnosis in doubt
- Systemic complications
- Hemodynamic instability
- Hemorrhagic varicella
- Not responding to oral Acyclovir
- Immunosuppressed patient
- Neonatal varicella syndrome

**HERPES ZOSTER**

**WHEN TO SUSPECT?**

- Acute, grouped, vesiculo-pustular eruption in a dermatomal distribution
- Dermatomal pain

**TAKE HISTORY OF**

- Previous varicella
- Previous episode of herpes zoster
- Immunosuppression: Diabetes mellitus, malignancy, transplant recipient, HIV

**RED FLAG SIGNS**

- V1 dermatomal involvement: forehead, periorbital, nose tip: risk of eye involvement - look for watering of eye, redness, photophobia
- Lesions on the ear or inside the ear canal: risk of facial/vestibulocochlear nerve palsy - look for vertigo, tinnitus, hearing loss, facial asymmetry/weakness
- Multi-dermatomal involvement
- Disseminated herpes zoster
- Hemorrhagic/necrotic lesions

**INVESTIGATIONS**

- Diagnosis is usually clinical
  - Tzanck smear: from a fresh vesicle- will show multinucleate giant cells and acantholysis
- Optional
  - PCR from vesicular fluid



**TREATMENT**

- Analgesics: Acute pain relief with NSAIDs.
- If uncontrolled, add the following (step wise):
  - a) Pregabalin 150-600mg/day, start with 150mg HS and titrate up as required
  - b) Gabapentin: start with 300mg/day, gradually increase upto 1800mg/day; more adverse effects than pregabalin
  - c) Amitriptyline: 10-25mg HS
  - d) Nortriptyline: start with 10-25mg/day; gradual increase upto 30-75mg/day in divided doses or HS
  - e) Carbamazepine 200 mg HS to start with
- Specific treatment\*
  - Acyclovir \*\*800mg five times a day x 7 days or
  - Valacyclovir 1gm three times a day x 7 days

\*Start <72 hours of onset for maximum benefit, can consider if new lesions are still appearing after 72 hours/ Herpes Zoster ophthalmicus/Ramsay Hunt syndrome  
\*\*Intravenous Acyclovir if multi-segmental involvement or disseminated zoster or systemic complications

**COMPLICATIONS**

- Secondary skin infections
- Herpes zoster ophthalmicus: risk when lesions present over side/tip of nose (Hutchinson's sign)
- Ramsay Hunt syndrome: Facial nerve palsy (with vesicles in the ear canal)
- Aseptic meningitis, encephalitis: In elderly and immunosuppressed mainly
- Post-herpetic neuralgia (pain persistent for more than three months, common in elderly)

**WHEN TO REFER TO A HIGHER CENTRE**

- Multi-dermatomal distribution/ disseminated Herpes Zoster syndrome
- Systemic complications
  - Facial nerve palsy
  - Eye involvement
  - Neurological involvement
- Post-herpetic neuralgia

**PREVENTION**

**VARICELLA**

- **Active immunization (live vaccine)**
  - <13 years old: 1st dose at 12-15 months, 2nd dose at 4-6 years
  - >=13 years old: 2 doses weeks apart

• **Passive immunization**

- Varicella zoster immunoglobulin may be considered where active immunization is contraindicated (pregnant women, immunosuppressed patients)

**HERPES ZOSTER**

- Active immunization may be offered to patients >50 years old, irrespective of previous history of herpes zoster

➔ **INITIATE SPECIFIC ANTIVIRAL TREATMENT AT THE EARLIEST TO PREVENT COMPLICATIONS**

This STW has been prepared by national experts of India with feasibility considerations for various levels of healthcare system in the country. These broad guidelines are advisory, and are based on expert opinions and available scientific evidence. There may be variations in the management of an individual patient based on his/her specific condition, as decided by the treating physician. There will be no indemnity for direct or indirect consequences. Kindly visit the website of DHR for more information: ([stw.icmr.org.in](http://stw.icmr.org.in)) for more information. ©Department of Health Research, Ministry of Health & Family Welfare, Government of India.