Queensland Health

Queensland Community Pharmacy Scope of Practice Pilot

Herpes Zoster (Shingles) – Clinical Practice Guideline

Guideline Overview

Pilot and professional obligations

- Initial patient eligibility and suitability for management within the scope of the pilot
- Patient informed consent
  - Pilot participation
  - Financial
  - Pharmacist communication with other health practitioners
- Professional standards
- Privacy
- Documentation and record keeping
- Interprofessional communication

Refer when

Refer to a medical practitioner if:

- The patient has 'red flag' warning signs
- The diagnosis is unclear, including if the patient presents with an atypical cutaneous presentation
- The patient is aged under 18 years of age
- The patient presents with superinfection of shingles skin lesions
- Antiviral treatment is indicated but the patient is allergic to valaciclovir, aciclovir and/or famciclovir
- The patient is pregnant and does not have a past history of VZV (or uncertain history)

Gather information and assess patient's needs

- Presenting signs and symptoms
- Complications
- Patient history
- Examination

Management and treatment plan

- Supportive management
  - Care of lesions
  - Transmission precautions
- Pharmacotherapy
  - Antiviral therapy
  - Analgesia for mild acute nociceptive shingles pain
- Zoster vaccination
- Public health notification

Treat (if clinically appropriate) and concurrently refer

- The patient is immunocompromised
- The patient presents with a multidermatomal rash or disseminated zoster
- The patient presents with complications of HZ, PHN or specific zoster syndromes
- The patient presents with HZ affecting the face or genitals
- Pain management is required for neuropathic pain or moderate to severe nociceptive pain associated with shingles or PHN
- The patient is pregnant and has a definite history of previous VZV
- The patient has been previously vaccinated against HZ
- The condition does not respond to optimal treatment or worsens

Confirm management is appropriate

- Contraindications and precautions
- Drug interactions
- Pregnancy and lactation

Communicate agreed treatment plan

- How to use
- Adverse effects
- General and preventive advice
- Recommendations for vaccination
- Communication with other health practitioners

Clinical review

- Progression of rash
- Worsening of clinical signs/ symptoms
- Complications of HZ
- Adverse effects
- Communication with other health practitioners

‘Red flag’ warning signs at patient presentation that necessitate antiviral treatment (where indicated) and concurrent referral to a medical practitioner:

- Immunocompromise (due to an underlying medical condition or medicine)
- Previous vaccination against herpes zoster
- Multidermatomal rash, disseminated zoster, or an atypical cutaneous presentation (do not commence treatment if diagnosis is uncertain)
- Complications of herpes zoster (PHN, specific zoster syndromes, neurological dysfunction, superinfection of shingles skin lesions)
- HZ on the face or genitals
- Neuropathic shingle pain or moderate to severe nociceptive pain
- Pregnancy.

Key points

- Herpes zoster (HZ) can occur to anyone who has previously been infected with varicella zoster virus (VZV) at any age, the risk increases with age [1, 2].
- Early identification and management with antivirals and analgesia (within 72 hours of the onset of the rash) reduces the acute pain, rash duration, viral shedding and potential for ocular complications of HZ [3, 4].
- Vaccination is the most effective prevention for HZ and its complications [1, 3]. The National Immunisation Program (NIP) recommends HZ vaccination for patients at risk [5].
- Under the Queensland *Public Health Regulation 2018*, VZV infection (chicken pox or shingles) is a pathological diagnosis notifiable condition; clinical notification is generally not required. See the Public health notification section for more information.

When applying the information contained within this clinical practice guideline, pharmacists are advised to exercise professional discretion and judgement. The clinical practice guideline does not override the responsibility of the pharmacist to make decisions appropriate to the circumstances of the individual, in consultation with the patient and/or their carer.

Refer when

- The patient has 'red flag' warning signs
- The diagnosis is unclear, including if the patient presents with an atypical cutaneous presentation
- The patient is aged under 18 years of age
- The patient presents with superinfection of shingles skin lesions
- Antiviral treatment is indicated but the patient is allergic to valaciclovir, aciclovir and/or famciclovir
- The patient is pregnant and does not have a past history of VZV (or uncertain history).

Treat (if clinically appropriate) and concurrently refer:

- The patient is immunocompromised
- The patient presents with a multidermatomal rash or disseminated zoster
- The patient presents with complications of HZ, PHN or specific zoster syndromes
- The patient presents with HZ affecting the face or genitals
- Pain management is required for neuropathic pain or moderate to severe nociceptive pain associated with shingles or PHN
- The patient is pregnant and has a definite history of previous VZV
- The patient has been previously vaccinated against HZ
- The condition does not respond to optimal treatment or worsens.

Gather information and assess patient's needs

Typical presentations of HZ can be diagnosed based on the patient history and examination for the characteristic appearance and distribution of the rash [1-3, 6, 7]. The clinical presentation will vary depending on the patient's age, general health and affected dermatome [7].

Presenting signs and symptoms

Prodromal symptoms

- Prodromal symptoms may be observed between 48 to 72 hours before the localised, characteristic vesicular rash becomes evident [5-8]:
  - localised nerve pain (usually described as stabbing, prickling or burning)
  - lethargy, fever, headache
  - abnormal skin sensations such as burning, itching, hyperesthesia and/or paraesthesia
  - photophobia (approximately 80% of cases) [3, 6, 7].

Rash

- The HZ rash is typically unilateral with a dermatomal distribution and distinct anterior and posterior midline cut-offs, however some satellite lesions may also appear [4-8].
- New lesions will continue to erupt for 3 to 5 days within the locality of the affected nerve, becoming pustular, before scabbing and crusting over between 7 to 10 days [2, 3, 6, 7].
- The most commonly affected areas are the chest, neck, forehead (ophthalmic) and lumbar/sacral sensory nerve supply regions [3, 6-8].
- When the ocular nerves are affected (herpes zoster ophthalmicus), the patient will present with a blistering rash around the eye/eyelid with associated pain, swelling and redness [6, 8]. Urgent referral to a medical practitioner is required.
- If the facial nerve is affected (herpes zoster oticus/Ramsay Hunt syndrome), symptoms include earache, blistering in and around the ear canal, with or without external ear and facial paralysis [6].

Complications of HZ

Complications occur in approximately 13% to 26% of patients with HZ (most prevalent in older people and those who are immunocompromised) and will require referral to a medical practitioner at presentation or at any stage if a complication develops [3, 5].

Postherpetic neuralgia (PHN)

- Neuropathic pain that persists for at least 3 months beyond the duration of the rash or reoccurs (occurs in 10 to 50% of patients, with the incidence increasing with age) [2, 3, 5, 8, 9].
- Postherpetic pain may be sharp/shooting and intermittent, or described as constant burning, often with extreme sensitivity to touch (allodynia) [7, 10].

Herpes zoster ophthalmicus

- HZ affecting the ophthalmic branch of the trigeminal nerve with a high incidence of eye complications [3, 10].
- It occurs in 10-25% of cases and commonly causes keratitis (approximately two thirds of cases) as well as conjunctivitis, uveitis, retinitis and glaucoma [3].

Vesicles on the nose have been found to be predictive of eye involvement [3]. Herpes zoster oticus (Ramsay Hunt syndrome)

- HZ affecting the facial nerve resulting in ear pain, taste loss, facial weakness or paralysis, and other neurological symptoms [3, 8].

Disseminated zoster (VZV dissemination)

- Whilst most individuals have some lesions external to the primary dermatome, disseminated zoster is defined as 20 lesions outside of the dermatome and may be clinically indistinguishable from varicella infection [2].
- Viral dissemination to the central nervous system and viscera (lungs, gut, liver and brain) may occur.

- Occurs most frequently in immunocompromised patients, although rare overall [5].

Other complications

- Neurological complications such as meningoencephalitis and myelitis (particularly in the elderly).
- Secondary bacterial skin infections (referral to a medical practitioner for swab and culture is required).
- Scarring.
- Pneumonia [5].

HZ in pregnancy

- Pregnant women who are exposed to VZV (chicken pox or HZ) for the first time (no or uncertain history of previous chicken pox infection) may develop chicken pox which can have serious consequences, including maternal mortality and morbidity, fetal varicella syndrome and the associated abnormalities [11, 12]. Urgent referral to a medical practitioner is required as zoster immunoglobulin (ZIG) should be given to all seronegative women within 96 hours [5].
- Unlike chicken pox, it is thought that HZ contracted during a healthy pregnancy is not associated with intrauterine infection or an increased foetal risk [12].

Patient history

Sufficient information should be obtained from the patient to assess the safety and appropriateness of any recommendations and medicines.

The patient history should consider:

- age
- pregnancy and lactation status (if applicable)
- nature, severity and frequency of symptoms
- nature of rash (distribution, appearance, number of lesions)
- onset and duration of symptoms
- precipitating and relieving factors
- history of VZV infection
- underlying medical conditions e.g., immunocompromise (auto-immune diseases including diabetes, rheumatoid arthritis HIV, cancer, conditions treated with immune suppressants, or renal impairment)
- current medications (including prescribed medicines, vitamins, herbs, other supplements and over-the-counter medicines)
- medication and other strategies tried to treat current symptoms
- drug allergies/ adverse drug effects
- immunisation status as per the Australian Immunisation Handbook (HZ and varicella vaccinations).

Examination

Examination of the rash and documentation of its characteristics and location, as well as any signs of complications is important for the diagnosis of HZ and the exclusion of other conditions with similar presentations.

Laboratory confirmation is generally not required for typical presentations and uncomplicated cases of HZ [3, 13]. Confirmatory pathology testing (initiated by a medical practitioner) is required for cases where diagnosis is uncertain, or in cases of HZ in people who have been previously vaccinated against HZ.

Management and treatment plan

Antiviral treatment can reduce acute pain, duration of the rash, viral shedding and ocular complications, if commenced within 72 hours of the first appearance of the rash, but is not indicated in all patients [4].

Pharmacist management of HZ involves:

- **supportive management:**
  - Education and advice regarding care for lesions (use of dressings, cleaning and appropriate clothing).
  - Education and advice regarding transmission precautions in accordance with the Queensland Health Guideline for Public Health Units [14].
- **pharmacotherapy:**
  - Antiviral therapy in accordance with Therapeutic Guidelines: Shingles[1] [4].
  - Analgesia for **mild nociceptive shingles pain**[2] in accordance with the Therapeutic Guidelines: Acute pain associated with shingles (herpes zoster) and Mild, acute nociceptive pain (oral paracetamol or nonsteroidal anti-inflammatory drugs (NSAIDs) [9, 15].

NB1: Antiviral therapy is indicated for the following groups:

- immunocompetent adults who present within 72 hours of the onset of the rash
- all immunocompromised patients (including those with a HIV infection) regardless of the time lapsed since rash onset
- patients with zoster ophthalmicus, regardless of the time lapsed from rash onset [3, 4].

NB2: Patients reporting neuropathic pain or moderate to severe nociceptive pain should be referred to a medical practitioner.

Public health notification

Under the Queensland *Public Health Regulation 2018*, VZV infection (chicken pox or shingles) is prescribed as a pathological diagnosis notifiable condition (as opposed to a clinical diagnosis notifiable condition) and must be notified in accordance with section 72 and 73 of the *Public Health Act 2005*.

- Clinical notification (based on a diagnosis made on the basis of clinic evidence) is generally not required; however, if the diagnosis is uncertain or the patient has previously been vaccinated against HZ, they should be referred to a medical practitioner who may initiate pathology testing.
- Cases of HZ confirmed by pathology testing must be notified by the director of the pathology laboratory.

Confirm management is appropriate

Pharmacists must consult the Therapeutic Guidelines, Australian Medicines Handbook, Australian Immunisation Handbook and other relevant references to confirm the treatment recommendation is appropriate, including for:

- contraindications and precautions
- drug interactions
- pregnancy and lactation.

Communicate agreed management plan

Comprehensive advice and counselling (including supporting written information when required) as per the Australian Medicines Handbook and other relevant references should be provided to the patient regarding:

  - medicine use e.g., dosing
  - how to manage adverse effects
  - recommendations for vaccination against HZ
  - when to seek further care and/or treatment, including recognising superinfection and HZ complications
  - when to return to the pharmacist for clinical review.

It is the pharmacist's responsibility to ensure the suitability and accuracy of any resources and information provided to patients (and parents/caregivers if applicable) and to ensure compliance with all copyright conditions.

The agreed management plan should be shared with members of the patient's multidisciplinary healthcare team, with the patient's consent.

General advice

All patients should be advised to contact a medical practitioner if:

- they are not responding to treatment; and/or
- their clinical signs and symptoms worsen; and/or
- they are experiencing complications (as soon as the complications become evident); and/or
- they are having unmanageable adverse effects.

The incubation period of VZV ranges between 10 and 21 days (14 to 16 days on average) [14].

Skin lesions usually heal within 2-4 weeks although it may take longer, particularly for those that are immunocompromised or those with severe disease [2].

- As the rash resolves, the pain and systemic symptoms also subside with recovery complete in 2 to 4 weeks in most cases [3, 7].

Preventing transmission

The patient should be advised to inform any high-risk contacts (pregnant women, neonates in first month of life and immunocompromised individuals) who have had significant exposure to a person with active VZV (household contacts or where there has been direct

face-to-face contact for 5 minutes or being within the same room for at least an hour) to seek medical care as soon as possible [14].

People with HZ are infectious from 1-2 days prior to the onset of the rash, until vesicles have dried and scabbed (usually 5 days after the onset of the rash) [14, 16].

- Rashes should be covered with appropriate dressings until the patient is no longer infectious and contact with pregnant women and immunocompromised people must be avoided [14, 16].

Zoster vaccination

Vaccination against HZ is the best way to prevent HZ and reduce the risk of complications, but is not indicated during an acute HZ episode or to treat PHN [5].

- People who have had a previous episode of HZ can be vaccinated against a recurrence; the interval between the episode and vaccination is dependant on the patient's immune status [5].
- Refer to the Australian Immunisation Handbook for HZ vaccination information and recommendations [5].
- The optimal age to be vaccinated against HZ and the vaccine type will differ based on immune status, duration of protection of chosen vaccine and the individual's choice [16].

Clinical review

Clinical review with the pharmacist should occur in line with recommendations in the Therapeutic Guidelines and other relevant guidelines. Clinical review is recommended **48-72 hours** after the initial presentation to assess for:

- progression of the rash (particularly if the patient presented with prodromal symptoms prior to rash onset)
- the clinical signs or symptoms of HZ
- screening for complications of HZ
- adverse effects.

Pharmacist resources

- Therapeutic Guidelines: Antibiotic
  - Shingles
  - Herpes zoster ophthalmicus
- Therapeutic Guidelines: Pain and analgesia
  - Pain associated with shingles (herpes zoster)
  - Postherpetic neuralgia
  - Mild, acute nociceptive pain
- Australian Medicines Handbook:
  - Antivirals (Guanine analogues)
  - Zoster vaccines
- Australian Immunisation Handbook - Zoster
- National Centre for Immunisation Research and Surveillance - Zoster vaccines for Australian adults factsheet
- DermNet NZ:
  - Herpes Zoster
  - Herpes Zoster images
  - Blistering skin conditions
- MSD Manual (Professional version) - Herpes Zoster

References

1. Cunningham AL, Breuer J, Dwyer DE, Gronow DW, Helme RD, Litt JC, et al. The prevention and management of herpes zoster. The Medical Journal of Australia. 2008;188(3):171-6.
2. DynaMed: Herpes Zoster: EBSCO Information Services; 2018 [cited 2022 May 23]. Available from: https://www.dynamed.com/condition/herpes-zoster.
3. Wehrhahn MC, Dwyer DE. Herpes zoster: epidemiology, clinical features, treatment and prevention. Australian Prescriber. 2012;35:143-7.
4. Therapeutic Guidelines: Antibiotic (Shingles). Melbourne: Therapeutic Guidelines Limited; 2021 [cited 2022 May 23]. Available from: https://tgldcdp.tg.org.au/viewTopic?topicfile=shingles&guidelineName=Antibiotic&topicNavigation=navigateTopic#toc_d1e47.
5. Australian Technical Advisory Group on Immunisation (ATAGI). Australian Immunisation Handbook. Canberra: Australian Government Department of Health and Aged Care; 2018 [cited 2022 May 23]. Available from: immunisationhandbook.health.gov.au.
6. Corden E. How to identify and treat herpes zoster (shingles). Journal of Community Nursing. 2014;28(6):59-64.
7. Oakley A. Herpes Zoster: DermNet New Zealand Trust; 2015 [cited 2022 May 23]. Available from: https://dermnetnz.org/topics/herpes-zoster.
8. Kaye K. MSD Manual Professional Version: Herpes Zoster: Merck & Co; 2021 [cited 2022 May 23]. Available from: https://www.msdmanuals.com/en-au/professional/infectious-diseases/herpesviruses/herpes-zoster.
9. Therapeutic Guidelines: Pain and analgesia (Acute pain associated with shingles). Melbourne: Therapeutic Guidelines Limited; 2021 [cited 2022 May 23]. Available from: https://tgldcdp.tg.org.au/viewTopic?topicfile=pain-shingles&sectionId=agg7-c34-s1#agg7-c34-s1.
10. Therapeutic Guidelines: Antibiotic (Herpes zoster ophthalmicus). Melbourne: Therapeutic Guidelines Limited; 2021 [cited 2022 May 23]. Available from: https://tgldcdp.tg.org.au/viewTopic?topicfile=keratitis&sectionId=abg16-c43-s4#abg16-c43-s4.
11. Pupco A, Bozzo P, Koren G. Herpes zoster during pregnancy. Canadian Family Physician. 2011;57(10):1133.
12. SA Maternal & Neonatal Clinical Network. Clinical Guideline: Varicella Zoster (chicken pox) in Pregnancy. Adelaide: South Australia Health; 2015.
13. Werner RN, Nikkels AF, Marinović B, Schäfer M, Czarnecka-Operacz M, Agius AM, et al. European consensus-based (S2k) Guideline on the Management of Herpes Zoster - guided by the European Dermatology Forum (EDF) in cooperation with the European Academy of Dermatology and Venereology (EADV), Part 1: Diagnosis. J Eur Acad Dermatol Venereol. 2017;31(1):9-19.
14. Queensland Health. Varicella-zoster infection (chickenpox and shingles) Brisbane: Queensland Health; 2018 [updated 2018, June 5; cited 2022 August 30]. Available from: https://www.health.qld.gov.au/cdcg/index/varicella#procedure.
15. Therapeutic Guidelines: Pain and analgesia (Mild, acute nociceptive pain). Melbourne: Therapeutic Guidelines Limited; 2021 [cited 2022 May 23]. Available from: https://tgldcdp.tg.org.au/viewTopic?topicfile=mild-acute-nociceptive-pain#toc_d1e89.
16. National Centre for Immunisation Research and Surveillance (NCIRS). Zoster vaccines for Australian adults2022 [cited 2022 May 24]. Available from: https://ncirs.org.au/ncirs-fact-sheets-faqs/zoster-vaccine-australian-adults.