

## Case studies in dermatology

### Case study 2

#### 30 YEAR OLD PATIENT WITH BLISTERS ON THE BACK AND PAIN

##### This case study aims to

- Help understand the clinical presentation of herpes zoster
- Discuss the treatment of contact dermatitis
- Discuss the post herpetic neuralgia

##### Case

30 year-old woman experienced pain over the left scapula bone. She noticed a slight red rash on when looking in the mirror.

On examination she looked well but there was a small area of erythema on the left shoulder blade with a few tiny blisters. . The area was tender to touch. Otherwise there was no rash over the rest of her body



Diagnosis: Herpes zoster

- Herpes zoster manifests as a vesicular rash, usually in a single dermatome
- Development of the rash may be preceded by paresthesias or pain along the involved dermatome
- Ocular involvement and zoster keratitis may result if reactivation occurs along the ophthalmic division of the trigeminal nerve

##### 1. How is herpes zoster caused?

- Herpes zoster is caused by varicella zoster virus, the same virus which causes chicken pox. Varicella-zoster virus infection initially produces chickenpox. Following resolution of the chickenpox, the virus lies dormant in the dorsal root ganglia until focal reactivation along a ganglion's distribution results in herpes zoster
- Although the exact precipitants that result in viral reactivation are not known certainly, decreased cellular immunity appears to increase the risk of reactivation

##### 2. How would you treat a patient with herpes zoster?

Goals of therapy in herpes zoster infection are to

1. Shorten the clinical course
2. Provide analgesia
3. Prevent complications
4. Decrease incidence of postherpetic neuralgia

#### *Treatment of pain*

- Pain control is essential to quality patient care. Initial therapy may include nonsteroidal anti-inflammatory drugs (NSAIDs). In many cases, narcotic analgesia is necessary.
- Lotions (i.e., Calamine) may help relieve discomfort.

#### *Antiviral agents –*

Antivirals may decrease incidence of postherpetic neuralgia. Acyclovir, Famciclovir and valacyclovir are the antiviral agents used

#### *Acyclovir*

- Acyclovir reduces duration of symptomatic lesions.
- Indicated for patients presenting within 48 h of onset of rash.
- Treated patients experience less pain and faster resolution of cutaneous lesions.
- Dosage Immunocompromised adults: 800 mg PO q4h (5 times/d) for 7-10 d; alternatively, 10 mg/kg/dose or 500 mg/m<sup>2</sup>/dose IV q8h

#### *Famciclovir*

- Prodrug that, when biotransformed into active metabolite penciclovir, may inhibit viral DNA synthesis/replication.
- Dosage 500 mg PO q8h for 7 d

#### *Valacyclovir*

- Prodrug rapidly converted to acyclovir before exerting its antiviral activity. More expensive but more convenient dosing regimen than acyclovir.
- Dosage 1000 mg PO q8h for 7 d

### **3. What are the common complications of herpes zoster?**

- A common complication following herpes zoster is postherpetic neuralgia.
  - Postherpetic neuralgia is characterized by pain that persists for longer than 1 month following resolution of the vesicular rash.
  - This complication is more common in patients older than 50 years.
  - Postherpetic neuralgia may develop as a continuation of pain that accompanies acute zoster or it may develop following apparent resolution of the initial zoster reactivation.
  - Patients with PHN may experience two types of pain: a steady, aching, boring pain and a paroxysmal lancinating pain usually exacerbated by contact with the involved skin.
  - Risk factors for development of PHN include advancing age, site of HZ involvement (Lower risk - Jaw, neck, sacral, and lumbar, moderate risk – thoracic, highest risk - trigeminal (especially ophthalmic division), brachial plexus, severe prodromal pain (with HZ) and severe rash.
  - The pain of postherpetic neuralgia usually resolves within 6 months. However, 1% of patients continue to have pain for 1 year or longer
- Herpes zoster may be associated with a secondary bacterial infection (typically streptococcal or staphylococcal) of the vesicular rash

#### **4. What is the prognosis of herpes?**

- Rash usually resolves within 14-21 days.
- Postherpetic neuralgia

#### **5. How would you treat post herpetic neuralgia?**

Therapy with acyclovir and the use of corticosteroids have been reported to prevent PHN in up to 60% of HZ patients. Management of chronic pain in PHN is more problematic. The only therapy proven effective for PHN in controlled study is the use of tricyclic antidepressants, including amitriptyline and desipramine. There is good evidence of efficacy from randomized trials that gabapentin (dose 300 mg BD) and pregabalin (dose 75-150 mg BD) are of benefit in the reduction of pain from PHN. As alternative therapies, topical agents such as capsaicin, lidocaine or opioid analgesic treatment may give satisfactory results. Interventions with low risk, such as transcutaneous electrical nerve stimulation (TENS), are appropriate.