Postherpetic Neuralgia
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Stephen S. Flitman, MD
Medical Director
21st Century Neurology
3100 North Third Ave Suite 100, Phoenix, Arizona 85013
(602) 265-6500
www.neurozone.org

Herpes zoster is the official name for shingles, a commonly experienced illness consisting of a vesicular rash on an erythematous base. It is typically well-demarcated and confined to a single dermatome. It is therefore very easy to recognize clinically. It is typically preceded by 48 hours of local prickling, itch or pain (very similar to neuralgia). Zoster is caused by VZV, the varicella zoster virus, which also causes varicella (chicken pox). When zoster emerges, the affected patient is contagious and can cause nearby susceptible children and adults to develop varicella (~15% transmission rate). Roughly 20% of patients who experience zoster can develop post-herpetic neuralgia (PHN), a painful condition which may last indefinitely, be excruciatingly painful, and can lead to depression and even suicide in affected patients.

I. Typical epidemiology of zoster
   a. African-Americans are one-fourth as likely to develop PHN as Caucasians
   b. No gender differences
   c. Age is major risk factor, 15 times higher risk for age 50+
   d. 5% of patients with zoster are children under age 15
   e. Immunocompromise from HIV, 15 times higher risk
   f. 25% of patients with Hodgkin's lymphoma
   g. Can occur in patients with cancer, but does not herald the onset of cancer

II. Pathophysiology
   a. VZV infects sensory dorsal root ganglia neurons much more than other cells during varicella infection
   b. The host's cell-mediated immunity vs. VZV prevents reactivation
   c. Reactivation occurs with natural age-related reduction in cell-mediated immunity
   d. VZV travels down sensory nerve axons to emerge on the innervated dermatome

III. Diagnostic workup
   a. History
      i. Frequency
      ii. Location
      iii. Prodrome
      iv. Provocations
         1. Surgery
         2. Stress
         3. Immunocompromise
   b. Physical examination
   c. Neurological examination
   d. Imaging and electrophysiology not needed

IV. Preventive therapy: actively treat zoster

a. Acyclovir (Zovirax) 800 mg po 5x/d x 7-10 days
b. Acyclovir (Zovirax) topical, doesn't work well[1]
c. Famciclovir (Famvir) 500 mg po tid x 7 days
d. Valacyclovir (Valtrex) 1000 mg po tid x 7 days
e. Prednisone po: 30 mg bid x 7 days, 15 mg bid x 7 days, 7.5 mg bid x 7 days

V. Therapy for PHN

a. Tricyclic antidepressants
    i. Nortriptyline (Pamelor)
    ii. Amitriptyline (Elavil)
    iii. Doxepin (Sinequan)

b. Serotonin-Noradrenalin Reuptake Inhibitors
    i. Venlafaxine extended-release (Effexor XR)
    ii. Mirtazapine (Remeron)

c. Anticonvulsants
    i. Gabapentin (Neurontin)
        1. FDA approved for PHN
        2. need high doses for best effect >2400 mg/day[1]
        3. must be given tid
    ii. Phenytoin (Dilantin)
    — Doesn't work in my experience, too many side effects
    iii. Valproic acid (Depakote)
    iv. Topiramate (Topamax)
    v. Carbamazepine (Tegretol)
    vi. Oxcarbazepine (Trileptal)
    vii. Zonisamide (Zonegran)
    viii. Levetiracetam (Keppra)

d. Opiates and opioids
    i. Tramadol (Ultram) — risk of seizures at doses exceeding 400 mg/day
    ii. Tramadol/APAP (Ultracet)
    iii. Oxycontin, etc. — NOT EFFECTIVE! [1]

e. Topicals
    i. Lidocaine 5% patch (Lidoderm)
    ii. Lidocaine 2.5% + Prilocaine 2.5% cream (EMLA)
    iii. Capsaicin 10% (Zostrix)
    — FDA approved for PHN, but seldom works[1]
    iv. Gabapentin 8% cream (compounded)

[1] In my clinical experience. The author's opinions are his own, and no liability can be assumed for errors, doses suggested or medical advice. Always tailor therapy to the individual patient. Your mileage may vary.