Herpes Zoster Treatment & Management

- Author: Joseph S Eastern, MD; Chief Editor: Dirk M Elston, MD more...

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Medical Care

An enormous number and variety of therapeutic approaches to the treatment of zoster have been proposed over the years, most of which probably are ineffective.[3] Reports of anecdotal evidence of efficacy are difficult to evaluate objectively because of the highly variable and self-limited nature of the disease.

Several guidelines related to treatment are available, with summaries as follows:

- International Association for the Study of Pain - Recommendations for the management of herpes zoster[4]
- Centers for Disease Control and Prevention -Prevention of varicella: recommendations of the Advisory Committee on Immunization Practices (ACIP). 2) Update: recommendations from the Advisory Committee on Immunization Practices (ACIP) regarding administration of combination MMRV vaccine[5]
- Centers for Disease Control and Prevention - Prevention of herpes zoster[6]
- American Academy of Pediatrics -Prevention of varicella: recommendations for use of varicella vaccines in children, including a recommendation for a routine 2-dose varicella immunization schedule[7]
- Systemic steroids: Many practitioners have long used oral prednisone and similar medications to reduce acute pain.[8] Some have also hoped to decrease the incidence of PHN, presumably by reducing inflammation in dorsal root ganglia and involved sensory nerves. While never conclusively demonstrated in a double-blind crossover study, some evidence exists that steroids are effective in achieving this. More study is needed.
    - A substantial dose (40-60 mg every morning) typically is administered as early as possible in the course of the disease and is continued for 1 week, followed by a rapid taper over 1-2 weeks.
    - Dissemination of viral particles beyond dermatomal limits always has been a theoretical concern, but clinically, it almost never is observed in individuals with intact immune systems.
    - Typical risks inherent in the use of systemic steroids, such as adrenocortical suppression and femoral osteonecrosis, must be kept in mind.
- Systemic antiviral agents
    - Controversy over use of systemic steroids has been rendered all but moot in recent years with the advent of effective antiviral agents.
    - Acyclovir and its derivatives (valacyclovir, famciclovir, penciclovir, and desciclovir, which is not available in the United States) all have been shown to be safe and effective in the treatment of active disease and in the prevention of PHN.
    - Usually, the earlier antiviral medications are started, the more effective they are in shortening the duration of zoster and in preventing or decreasing severity of PHN. Ideally, initiate therapy within 72 hours of the onset of symptoms.
- Varicella-zoster vaccine
    - Since 1995, live attenuated varicella virus vaccine (Varivax) has been available in the US and has been up to 99% effective in protecting susceptible individuals from varicella infection. The higher-potency vaccine introduced in 2005 (Zostavax) appears effective in preventing zoster.
    - It has been proposed that zoster occurs when varicella antibody titers and varicella-specific cellular immunity drop to a level at which they no longer are completely effective in preventing viral invasion. Evidence for this hypothesis includes observation that pediatricians, who presumably are reexposed to varicella virus routinely and thus maintain high levels of immunity, seldom develop zoster. Indeed,

administration of varicella vaccine to older individuals whose antibody titers and cellular immunity have fallen over time appears to decrease their risk of developing zoster. The high-potency, live attenuated varicella-zoster virus (VZV) vaccine introduced by Merck (Zostavax) has demonstrated a reduction in the incidence rate of herpes zoster of 51.3% during 3 years of follow-up in one study.[9]

- Prevention or attenuation of zoster is desirable in older patients because zoster is more frequent and is associated with more complications in older populations and because declining cell-mediated immunity in older age groups is associated with increased risk of zoster.
- As of October 2006, the US Centers for Disease Control and Prevention (CDC) has recommended that the zoster vaccine be given to all people aged 60 years of age and older, including those who have had a previous episode of zoster.
- In March 2011, the Food and Drug Administration (FDA) lowered the approved age for use of Zostavax to 50-59 years. Zostavax was already approved for use in individuals aged 60 years or older. Annually, in the United States, shingles affects approximately 200,000 healthy people aged 50-59 years. Approval was based on a multicenter study, the Zostavax Efficacy and Safety Trial (ZEST).[10] The trial was conducted in the United States and 4 other countries in 22,439 people aged 50-59 years. Participants were randomized in a 1:1 ratio to receive either Zostavax or placebo. Participants were monitored for at least 1 year to see if shingles developed. Compared with placebo, Zostavax significantly reduced the risk of developing zoster by approximately 70%.
- Persons with a reported history of zoster can be vaccinated. Repeated zoster has been confirmed in immunocompetent persons soon after a previous episode. Although the precise risk for and severity of zoster as a function of time following an earlier episode are unknown, some studies suggest it may be comparable to the risk in persons without a history of zoster. Furthermore, no laboratory evaluations exist to test for the previous occurrence of zoster, and any reported diagnosis or history might be erroneous. Although the safety and efficacy of the zoster vaccine have not been assessed in persons with a history of zoster, different safety concerns are not expected in this group.
- Patients older than 60 years who are about to begin biologic therapy (eg, for psoriasis, rheumatoid arthritis, or other indicated diseases) should have Zostavax (along with any other appropriate vaccines) administered before starting their course of biologic therapy. Conversely, Zostavax is a live-virus vaccine, which means it should not be given to patients who have already been started on biologic therapies.
- The vaccine is similarly contraindicated in patients receiving long-term corticosteroid treatment and in as patients receiving chemotherapy or radiation therapy for hematopoietic malignancies and solid tumors.
- The duration of protection with the zoster vaccine is not yet known. Long-term follow-up studies are now being undertaken to address that question.

- Varicella-zoster immune globulin: The CDC currently recommends administration of varicella-zoster immune globulin (VZIG) to prevent or modify clinical illness in persons with exposure to varicella or zoster who are susceptible or immunocompromised. VZIG provides maximum benefit when administered as soon as possible after the presumed exposure, but VZIG may be effective if administered as late as 96 hours after exposure. Protection after VZIG administration lasts for an average of approximately 3 weeks, according to the CDC.
- Management of PHN
  - Pain associated with zoster usually is the most debilitating symptom of the disease. Once established, pain is notoriously difficult to alleviate with traditional analgesics, including narcotics. The only consistently successful method of treating PHN is to prevent it via prompt treatment of acute zoster and its associated pain. While acute zoster pain and PHN are believed to result from different pathophysiologic mechanisms, it is clinically and experimentally impossible to determine when the 2 cross over, and some workers use the term zoster-associated pain to describe both acute and chronic pain as a continuum.
  - Initiation of antiviral therapy as early as possible in the course of acute zoster, and definitely within 72 hours of onset, has been shown to be effective in alleviating acute pain and preventing PHN in most patients.
  - A randomized clinical trial of oral analgesics for acute pain in patients with herpes zoster was conducted (n = 87; age 50 y or older). Treatment was begun within 6 days of rash onset and with worst pain within 24 hours. Patients were initiated on a 7-day course of famciclovir with controlled-release oxycodone, gabapentin, or placebo for 28 days. Discontinuing participation, primarily

associated with constipation, occurred most frequently in patients randomized to controlled-release oxycodone (27.6%) compared with placebo (6.9%). Mean worst pain was reduced the first week with controlled-release oxycodone compared with placebo (P = .01). Gabapentin did not provide significantly greater pain relief than placebo, although the first week provided a modest reduction of pain.[11]

- A randomized, double-blind, placebo-controlled study of extended-release gabapentin demonstrated improvement in average daily pain score in patients with acute herpes zoster. In those taking gabapentin, a reduction of pain of 50% or greater from baseline was reported by 25.5-28.8%, compared with 11.8% of patients taking placebo.[12]
- Once PHN has developed, various treatments are available.
  - Gabapentin and pregabalin are commonly used.[13]
  - Topical capsaicin can also be helpful; its active ingredient depletes neurotransmitters at involved nerve endings. However, the cream must be applied at least 5 times per day to be effective, and pain may increase upon application for the first few days of therapy as accumulated neurotransmitters are released. Once neurotransmitter reserves have been depleted, any resultant pain relief is temporary.
  - Tricyclic antidepressants have been used with variable success.[14]
  - Epidural injections of anesthetic and corticosteroids have been shown to be of benefit to some patients.[15]

Consultations

Consultation with the appropriate specialist may be indicated when symptoms point toward meningitis (herpes zoster ophthalmicus), dental disease (zoster of maxillary branch), ear infections or deafness (Ramsay-Hunt syndrome), oropharyngeal infections (zoster pharyngis/laryngis), meningoencephalitis, and encephalomyelitis; when motor complications are present; or when the urinary bladder, lungs, or gastrointestinal tract are involved.

Activity

Patients may self-restrict activity because of limitations imposed by pain. Additional advice from physicians is rarely, if ever, necessary.

Contributor Information and Disclosures

Author
Joseph S Eastern, MD Clinical Assistant Professor, Department of Internal Medicine, Section of Dermatology, University of Medicine and Dentistry of New Jersey

Joseph S Eastern, MD is a member of the following medical societies: American Academy of Dermatology, American Medical Association, American Society for Dermatologic Surgery, International Society for Dermatologic Surgery, and Medical Society of New Jersey

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Specialty Editor Board
Franklin Flowers, MD Chief, Division of Dermatology, Professor, Department of Medicine and Otolaryngology, Affiliate Associate Professor of Pediatrics and Pathology, University of Florida College of Medicine

Franklin Flowers, MD, is a member of the following medical societies: American College of Mohs Micrographic Surgery and Cutaneous Oncology

Disclosure: Nothing to disclose.

Richard P Vinson, MD Assistant Clinical Professor, Department of Dermatology, Texas Tech University Health Sciences Center, Paul L Foster School of Medicine; Consulting Staff, Mountain View Dermatology, PA

Richard P Vinson, MD is a member of the following medical societies: American Academy of Dermatology, Association of Military Dermatologists, Texas Dermatological Society, and Texas Medical Association

Disclosure: Nothing to disclose.

Paul Krusinski, MD Director of Dermatology, Fletcher Allen Health Care; Professor, Department of Internal Medicine, University of Vermont College of Medicine

Paul Krusinski, MD is a member of the following medical societies: American Academy of Dermatology, American College of Physicians, and Society for Investigative Dermatology

Disclosure: Nothing to disclose.

Catherine M Quirk, MD Clinical Assistant Professor, Department of Dermatology, University of Pennsylvania

Catherine M Quirk, MD is a member of the following medical societies: Alpha Omega Alpha and American Academy of Dermatology

Disclosure: Nothing to disclose.

Chief Editor
Dirk M Elston, MD Director, Department of Dermatology, Geisinger Medical Center

Dirk M Elston, MD is a member of the following medical societies: American Academy of Dermatology

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