Skin Disorders in Elderly Persons: Identifying Viral Infections

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Age-related changes, such as a weakened immune system, thinning integument, and diminished adnexal structures, heighten the risk of skin infection in elderly patients. For example, herpes zoster is more often seen in older adults. Although herpes simplex is more common in younger patients, it can result in serious complications in elderly persons.

On the following pages, I provide a pictorial guide to the various manifestations of herpes zoster and herpes simplex virus (HSV) infection in older adults.

Herpes zoster (shingles)

This infection is caused by reactivation of varicella-zoster virus (VZV), which may remain latent in the dorsal root and cranial nerve ganglia for decades. Reactivation often occurs for no apparent reason, although stress and immunosuppression may increase the risk.

Herpes zoster may begin with a systemic constellation of mild symptoms that include fever, anorexia, and lassitude. Unilateral dysesthesia and pain along the site of the future eruption usually precede the rash by 1 to 3 days. The rash consists of clusters of grouped papules, papulovesicles, vesicles (Figure 1), or erosions on an erythematous base, or urticular-like plaques (Figure 2) or erosions (Figure 3). Sometimes the eruption manifests as a plaque of crusted pustules in a dermatome (Figure 4). Elderly patients, who are relatively immunosuppressed, may have

Figure 1 – This rash, consisting of clusters of vesicles, was identified as herpes zoster.

Figure 2 – Herpes zoster can manifest as urticaria-like plaques, as it did in this patient.

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a prolonged course of herpes zoster and are more susceptible to secondary infections.

Herpes zoster remains infectious until all the vesicles and pustules have evolved into crusted plaques; they resolve over the course of 2 to 3 weeks. The differential diagnosis includes insect bites, urticaria, HSV infection, and cellulitis.

Diagnostic testing is sometimes useful. Options include Tzanck test, viral culture, direct fluorescent antibody (DFA) testing, and skin biopsy. DFA testing is more sensitive than conventional viral cultures because of the lability of VZV.

Variations of herpes zoster include scattered vesicles (satellite lesions) that occur outside 1 or 2 dermatomes. A minority of patients may experience dysesthesia without urticarial plaques or vesicles (zoster sine herpeticum).

Treatment consists of a 7-day course of acyclovir, valacyclovir, or famciclovir. A typical regimen for elderly persons is valacyclovir, 1 g tid. Antiviral agents may reduce the duration of postherpetic neuralgia.1,2 This condition, which leads to chronic pain that is often refractory, is particularly frequent and severe in elderly persons. Therapeutic options include lidocaine patches; opiates; and a variety of anticonvulsant, antidepressant, and antipsychotic agents. A live zoster vaccine has been approved for prevention of postherpetic neuralgia in patients aged 60 years and older.

Some subtypes of herpes zoster require intravenous antiviral therapy. Ophthalmic herpes zoster, which involves the first division of the fifth cranial nerve, may cause scarring of the cornea and secondary panophthalmitis, with subsequent loss of vision. Characteristic signs include vesicles on the tip of the nose and an ocular foreign-body sensation.

Ramsay Hunt syndrome is herpes zoster of the geniculate ganglion, which lies at the genu of the seventh nerve. It is characterized by ipsilateral facial palsy similar to Bell palsy and can cause deafness. Vesicles develop in the external auditory meatus, on the pinna, and sometimes in the soft palate. Glossopharyngeal and vagal clude Tzanck test, viral culture, direct fluorescent antibody (DFA) testing, and skin biopsy. DFA testing is more sensitive than conventional viral cultures because of the lability of VZV.

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Herpes zoster affects the jugular and petrosal ganglia, which are adjacent and often involved simultaneously, although individual ganglial involvement can occur.

A painful vesicular rash typically affects the palate, posterior tongue, epiglottis, tonsillar pillars, and occasionally, the external ear. The unilateral distribution helps distinguish this variation of herpes zoster from HSV infection and herpangina.

Disseminated herpes zoster involves more than 3 dermatomes or has more than 20 lesions outside a dermatome; it particularly affects patients with non-Hodgkin lymphoma or HIV infection. It manifests as generalized vesicles, papulovesicles, or erosions (Figure 5). Disseminated herpes zoster may involve internal organs; it presents as hepatitis, pneumonitis, meningoencephalitis, myelitis, or motor radiculopathy.

Ophthalmic herpes zoster, Ramsay Hunt syndrome, and disseminated herpes zoster are treated with intravenous acyclovir, 10 mg/kg every 8 hours, with renal adjustment of dosing as necessary.

Herpes simplex virus infection
Infections caused by HSV appear as grouped vesicles on an erythematous base and are less common in healthy elderly patients than in younger ones. HSV type 1 causes herpetic stomatitis, herpes labialis (Figure 6), herpetic keratoconjunctivitis, and encephalitis. HSV type 2 causes genital herpes, genital erosions (Figure 7), and systemic infections in immunocompromised patients.

HSV infections may affect elderly patients with leukemia and lymphoma. These infections, called Kaposi varicelliform eruptions, appear as large areas covered by vesiculopustules and crusts. The infections are of particular concern when they spread to skin whose integrity is undermined by xerosis or eczema.

Bullous pemphigoid also presents with vesicles, but they are not grouped, are larger, and do not contain giant cells on biopsy or Tzanck test. Darier disease (keratosis follicularis) can also manifest with widespread crusted papules, vesicles, and plaques; culture and biopsy help confirm the diagnosis. HSV infections may spread into the skin of elderly persons affected by bullous pemphigoid, Grover disease, or Darier disease. In elderly and debilitated patients, HSV infection can result in refractory flat sacral or perioral ulcers with peripheral blisters.

REFERENCES

SUGGESTED READING