Clinical Diagnosis

The signs and symptoms of herpes zoster are usually distinctive enough to make an accurate clinical diagnosis once the rash has appeared. However, diagnosis of herpes zoster might not be possible in the absence of a rash (i.e., before rash or in cases of zoster without rash). Herpes zoster is sometimes confused with herpes simplex, and, occasionally, with impetigo, contact dermatitis, folliculitis, scabies, insect bites, papular urticaria, candidal infection, dermatitis herpetiformitis, and drug eruptions. Herpes zoster can be more difficult to diagnose in children, younger adults, and people with compromised immune systems who are more likely to have atypical presentations.

Laboratory Testing

PCR is the most useful test

Laboratory testing may be useful in cases with less typical clinical presentations, such as in people with suppressed immune systems who may have disseminated herpes zoster (defined as appearance of lesions outside the primary or adjacent dermatomes). Polymerase chain reaction (PCR) is the most useful test for confirming cases of suspected zoster sine herpete (herpes zoster-type pain that occurs without a rash).

PCR can be used to detect VZV DNA rapidly and sensitively, and is now widely available. The ideal samples are swabs of unroofed vesicular lesions and scabs from crusted lesions; you may also detect viral DNA in saliva during acute disease, but salvia samples are less reliable for herpes zoster than they are for varicella. Biopsy samples are also useful test samples in cases of disseminated disease. It is also possible to use PCR to distinguish between wild-type and vaccine strains of VZV.

Other Tests

Direct fluorescent antibody (DFA) and Tzanck smear are not recommended due to limited sensitivity. These methods have a rapid turnaround time, but DFA is substantially less sensitive than PCR, and Tzanck is not specific for VZV. Moreover, real-time PCR protocols can be completed within one day.

Serologic methods have limited use for laboratory confirmation of herpes zoster, and should only be used when suitable specimens for PCR testing are not available. Patients with herpes zoster may mount a transient IgM response and would be expected to mount a memory IgG response. However, a positive IgM ELISA result could indicate primary VZV infection, re-infection, or re-activation. Primary infection can be distinguished from reactivation or reinfection with VZV IgG avidity testing. High avidity IgG in the context of VZV IgM is indicative of a remote infection; low avidity IgG indicates a primary infection. Measuring acute and convalescent sera also has limited value, since it is difficult to detect an increase in IgG for laboratory diagnosis of herpes zoster.

In people with compromised immune systems, it may be difficult to distinguish between varicella and disseminated herpes zoster by physical examination or serological testing. In these instances, to help with diagnosis, consider if the patient has a history of VZV exposure or of a rash that began with a dermatomal pattern, along with results of VZV antibody testing during or before the time of rash.

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