

## SKINimages

## Disseminated Varicella-Zoster Virus Infection in an Immunocompetent Host

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An 84-year-old female with severe Parkinson's disease requiring deep brain stimulator (DBS) presented to the emergency department with a one-week history of unilateral vesicular rash over her left chest. This developed 10 days after replacement of her DBS battery packs located subcutaneously on her chest bilaterally. The erythematous and crusted rash involved cutaneous dermatomes C2-C5 of the left chest, shoulder and back, with areas of purulence over the lateral neck (**Figure 1**). The rash did not cross the midline but involved the pinna and mandible (**Figure 2**). There was no ocular or mucosal involvement, nor facial palsies. The patient was treated empirically with intravenous (IV) acyclovir for

presumed disseminated varicella-zoster virus (VZV) infection. She was also given a seven-day course of cefalexin to prevent bacterial superinfection. Tissue culture of the lesions confirmed VZV infection. The patient was discharged home with a four-week course of oral acyclovir.

Herpes zoster is caused by reactivation of VZV which remains dormant in the dorsal root ganglia. Disseminated VZV infection is defined by the presence of more than 20 vesicular lesions in three consecutive dermatomes and occurs in 2% of the general population. Differential diagnosis of vesicular cutaneous lesions in immunocompetent hosts should include bacterial infection,

eczema herpeticum, contact dermatitis, bullous drug eruptions, and pemphigus foliaceus.

Herpes zoster is a clinical diagnosis, however disseminated infection is confirmed by VZV polymerase chain reaction testing. Disseminated infection should prompt further investigation for underlying immunodeficiency such as human immunodeficiency virus (HIV) infection, autoimmune disease, malignancy, and immunosuppressant medications.<sup>2</sup>

The likely cause of reactivation in our patient was the physical stress associated with her DBS battery change. HIV serology returned negative, and she exhibited no evidence of immunodeficiency.

Early diagnosis and initiation of antiviral treatment reduces morbidity, pain and complications including post-herpetic neuralgia. Management should also include analgesics for comfort and institution of airborne precautions.<sup>3</sup>

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