

HERPES MYELITIS IN AN IMMUNOCOMPETENT PATIENT

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ABSTRACT

Herpes zoster is a common viral infection of the nervous system especially in elderly and immunocompromised patients. Pathogenesis involves reactivation of Varicella Zoster Virus (VZV), latent in the neurons of sensory ganglia following a primary infection with chickenpox. We report here an immunocomptent 36-year-old patient who developed myelitis three weeks after a skin eruption consistent with Herpes zoster. She responded to parenteral acyclovir and adjunctive low-dose steroids.

INTRODUCTION

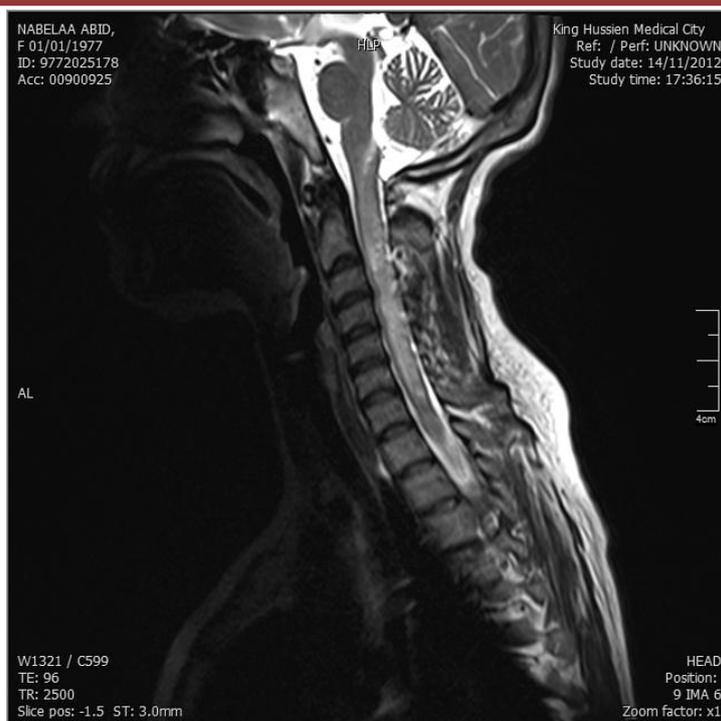
Herpes zoster is a common viral infection of the nervous system especially in elderly and immunocompromised patients. Pathogenesis involves reactivation of Varicella Zoster Virus (VZV), latent in the neurons of sensory ganglia following a primary infection with chickenpox. VZV DNA is localized primarily in trigeminal and thoracic ganglion cell corresponding to the dermatomes in which chickenpox lesions. Maximal multiplication of the virus in epidermal cells causes swelling vacuolization leading to formation of vesicles .Herpes zoster may be complicated with encephalitis, cerebellitis and myelitis. We present here an immunocompetent female patient who developed herpes zoster myelitis.

CASE REPORT

A 36- year -right handed female patient presented to rheumatology clinic with one week history of neck and right shoulder pain; then referred after developing itching and a blistering rash in a

right-sided C5 dermatome distribution. Three weeks later, she developed right-sided numbness. Examination showed diminished sensation to temperature and touch in the right upper limb with loss of proprioception distally, without loss of pain and temperature sensation. Power in the right shoulder, elbow and wrist were grade 4-/5; right lower limb power was grade 4/5 with brisk deep tendon reflexes and a Babinski sign. Cerebrospinal fluid (CSF) analysis via lumbar puncture showed a mild pleocytosis with lymphocytic predominance (white blood cell count =15) with normal protein and glucose, culture of CSF yielded negative results even for VZV PCR but positive to VZV antibody. Magnetic resonance imaging T2weighted with contrast showed an expansive intramedullary hyperintense enhancing lesion with focal swelling extends from C1 to T1, which was compatible with inflammation.





The patient was treated with acyclovir intravenously for 14 days and Dexamethasone for 5 days. Improvement started after one week of treatment. She continued to improve after the course of treatment, with intensive rehabilitation. Six weeks following her initial presentation, she was almost normal with marked resolution of the MRI lesion.

DISCUSSION

Herpes zoster is associated with several neurological complications, including postherpetic neuralgia, aseptic meningitis, meningoencephalitis, transverse myelitis, peripheral nerve palsies, cranial nerve palsies and granulomatous cerebral angiitis (1). Herpes zoster myelitis is rare among immunocompetent hosts and is characterized by predominant ipsilateral involvement of spinal segments corresponding to the affected dermatome. The frequency of myelitis after varicella is 0.3%(2,6). The typical symptoms are sensory but motor and autonomic manifestations are not uncommon(5). Studies of zoster- or varicella-induced myelitis conducted since 1990. Most of these are female with cervical cord involvement. In most cases, the vesicular lesions are found prior to neurological symptoms and myelitis is located in the cervical spinal cord(3-5). The timing of development of myelitis in relation to the onset of rash varies from days to several months. The diagnosis of VZV myelitis can be challenging; no diagnostic test is completely accurate, as the virus cannot usually

be isolated from blood or cerebrospinal fluid. In most cases, diagnosis of Herpes zoster myelitis is clinical and based on detection of typical vesicular lesions in dermatomal distribution in association with clinical features of transverse myelitis. MRI T2-weighted image is the most sensitive imaging modality for VZV myelitis(7), imaging usually shows hyperintense enhancing lesion mostly in cervical or thoracic regions which are the most common. Large controlled studies have clarified the role of combination therapy of acyclovir and corticosteroids for VZV infection(8,9,10), and have shown that patients can benefit from corticosteroids to reduce the duration of disease. Complete recovery could be seen within 2 weeks. In conclusion, early diagnosis and treatment of herpes myelitis can result in early recovery and better outcomes shown in our patients.

REFERENCES

1. Antonio V. Severe complications of herpes zoster. *Herpes* 2007; 14 Suppl 2: 35A-39A 1.
2. de Silva SM, Mark AS, Gildea DH, Mahalingam R, Balish M, Sandbrink F, Houff S. Zoster myelitis: improvement with antiviral therapy in two cases. *Neurology* 1996;47:929-31.
3. Cheng-Chia Lee, Jau-Ching Wu, Wen-Cheng Huang, Yang-Hsin Shih, Henrich Cheng: Herpes Zoster Cervical Myelitis in a Young Adult. *J Chin Med Assoc* 2010;73(11):605-610
4. Shyam S. Moudgil: Teaching NeuroImages: Herpes zoster myelitis. *Neurology* 2010;75:e55
5. Yılmaz S, Köseolu HK, Yücel E. Transverse myelitis caused by varicella zoster: case reports. *Braz J Infect Dis* 2007; 11: 179-181

6. Hyrai T, Korogi Y, Hamatake S. Case report: varicella virus myelitis — serial MR findings. *Br J Radiol* 1996; 69: 1187-1190.
7. . Outteryck O, Deramecourt V, Bombois S, et al. VZV-related myelitis: a pathophysiological hypothesis. *Rev Neurol* 2007; 163: 89-92
8. Wood MJ, Johnson RW, McKendrick MW, Taylor J, Mandal BK, Crooks J. A randomized trial of acyclovir for 7 days or 21 days with and without prednisolone for treatment of acute herpes zoster. *N Engl J Med* 1994;330:896–900 -
9. Whitley RJ, Weiss H, Gnann JW Jr, Tyring S, Mertz GJ, Pappas PG, Schlepner CJ, Hayden F, Wolf J, Soong SJ: Acyclovir with and without prednisone for the treatment of herpes zoster. A randomized placebo-controlled trial. The National Institute of Allergy and Infectious Diseases Collaborative Antiviral Study Group. *Ann Intern Med* 1996;125:376–83
10. Baik JS, Kim WC, Heo JH, Zheng HY. Recurrent herpes zoster myelitis. *J Korean Med Sci* 1997;12:360–3..