VARICELLA ZOSTER VASCULOPATHY: AN UNCOMMON CAUSE OF MULTIFOCAL CEREBRAL INFARCTS

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INTRODUCTION

Varicella zoster virus (VZV) is a neurotropic human herpesvirus. Primary infection causes chickenpox, after which the virus becomes latent. As cell-mediated immunity declines with advancing age or immunosuppression, it reactivates to cause shingles. One of the serious complications of zoster is vasculopathy.

CASE PRESENTATION

63-year-old male was admitted to the hospital with left sided spastic hemiparesis. Magnetic Resonance Imaging (MRI) of the brain showed diffusion restriction in bilateral middle cerebral arteries and left posterior cerebral artery territories indicative of multifocal infarctions (figure 1). Electrocardiogram (EKG) and echocardiogram excluded atrial fibrillation and vegetations respectively as etiology. Lumbar puncture was positive for VZV DNA. CT Angiography of the head and neck was inconclusive of vascular beading consistent with CNS vasculitis. The patient was treated with 14-day course of Acyclovir and Prednisone with marked improvement in his neurologic exam.

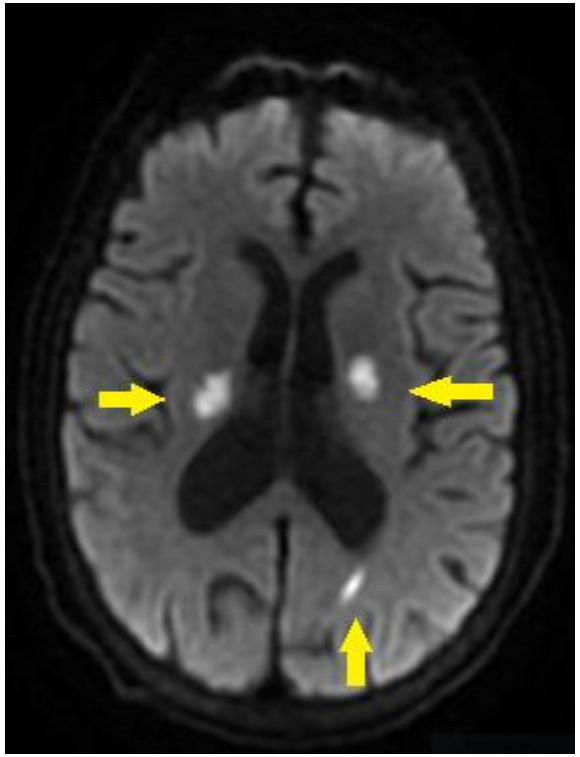

Figure 1: MRI brain showing bi-hemespheric acute infarcts (yellow arrows).

DISCUSSION

Varicella zoster virus (VZV) is one of eight known human herpesviruses. Primary infection occurs via aerosols, after which the virus becomes latent along the entire neuraxis. In adults, the classic neurologic manifestation is ophthalmic involvement followed by acute contralateral hemiplegia. Brain MRI typically demonstrates both superficial and deep-seated lesions in both gray and white matter. Angiographic features include segmental constriction with post stenotic dilatation; however, a negative angiogram does not exclude the diagnosis. Confirmatory diagnosis is made by detection of either anti-VZV antibodies or viral DNA in CSF. Treatment is with a two-week course of intravenous Acyclovir and Prednisone; however, duration of therapy can be extended for additional two to four weeks if the patient does not improve or develop new lesions.

CONCLUSION

Although multifocal infarcts are usually attributed to cardioembolic sources, we learned from our case not to overlook other uncommon causes such as VZV vasculopathy. VZV vasculopathy responds well to antiviral and steroid therapy.