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Vessel Wall Imaging: A Powerful Diagnostic Tool but Not a Substitute for Biopsies

We read with interest the letter from Drs Corrêa and Hygino da Cruz, Jr, describing their patient with Varicella zoster virus vasculitis.¹ We agree that a biopsy is not always necessary for diagnosing vascular inflammation with the use of high-resolution 3D vessel wall MR imaging (VWMRI) in the appropriate clinical context. However, we caution readers who might then believe that brain biopsy can be replaced with VWMRI.

Determining the underlying etiology of a patient's intravascular inflammation is essential to determining prognostication and treatment. In the case presented by Drs Corrêa and Hygino da Cruz, Jr, Varicella zoster virus infection was diagnosed by polymerase chain reaction performed on CSF, suggesting that VWMRI was not needed in this case. In the many cases in which serum, CSF, and other work-ups are nondiagnostic for an underlying etiology, we suggest that biopsy remains instrumental in tailoring therapy. Notably, our data indicate that VWMRI can be used to identify inflamed intracranial vessels but is otherwise unable to distinguish among primary, infectious, and/or any etiology leading to perivascular inflammation.²

Thus, VWMRI should be paired with diagnostic tools that can confirm an etiology, namely VWMRI-directed intracranial

biopsy, after which VWMRI could be useful for tracking treatment response. Thus, we disagree with the assertions of Drs Corrêa and Hygino da Cruz, Jr, that might encourage readers to turn to current VWMRI to avoid invasive procedures such as brain biopsy.

REFERENCES

1. Corrêa DG, Hygino da Cruz LC Jr. **High-resolution vessel wall MR imaging as an alternative to brain biopsy.** *AJNR Am J Neuroradiol* 2019;40:E17–18 CrossRef Medline
2. Zeiler SR, Qiao Y, Pardo CA, et al. **Vessel wall MRI for targeting biopsies of intracranial vasculitis.** *AJNR Am J Neuroradiol* 2018;39:2034–36 CrossRef Medline

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