

Rituximab

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Jamestown Canyon virus encephalitis: case report

A 56-year-old man developed fatal Jamestown Canyon virus (JCV) encephalitis during treatment with rituximab for mantle cell lymphoma.

The man from the USA, had mantle cell lymphoma in remission and had been receiving rituximab since 2014 [*route and dosage not stated*]. He was also empirically treated for Lyme disease without improvement. He developed progressive insomnia and inattention, and was finally admitted in April 2018, for examination of rapidly progressive dementia. On examination, he had impaired arousal and attention. Gait was wide-based and slow. Various other examinations were performed. In April 2018, a CSF specimen underwent clinical metagenomic next-generation sequencing that was positive for California encephalitis virus most closely matching JCV. Another CSF sample, in May 2018, was negative for JCV; however, concurrent serum JCV RT-PCR was positive. He was diagnosed with JCV encephalitis [*time to reaction onset not stated*]. JCV IgM and neutralising antibody test were negative for CSF and blood samples obtained in May 2018. Concurrent samples had 0% CD20+ circulating lymphocytes, attributed to rituximab treatment, that was last administered in December 2017.

The man was treated with off-label IV immune-globulin, followed by an experimental 2-week course of off-label favipiravir, without improvement. His mental status deteriorated to a comatose state. He was transitioned to comfort care but died in June 2018, approximately one year after suspected symptom onset. The autopsy examination revealed extensive neuropathologic abnormalities. Deep sequencing showed detailed characterisation of viral genomes from the CSF, cerebellum, and cerebral cortex.

Solomon IH, et al. Fatal case of chronic jamestown canyon virus encephalitis diagnosed by metagenomic sequencing in patient receiving rituximab. *Emerging Infectious Diseases* 27: 238-242, No. 1, Jan 2021. Available from: URL: <http://doi.org/10.3201/EID2701.203448>

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