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# Febrile headache and leg weakness as the initial symptoms of tickborne encephalitis

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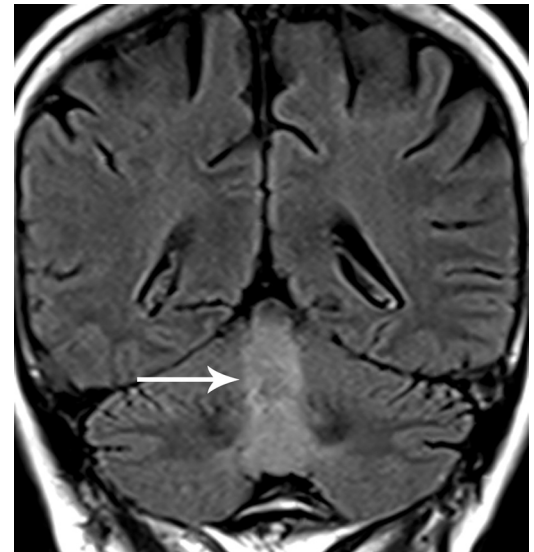
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## DESCRIPTION

A 61-year-old woman presented to the emergency department (ED) with a 1-week fever associated with progressive headache. She also reported weakness and paraesthesias in both legs. In the ED, the patient had normal vital parameters and reported no other medical history. Clinical examination showed a slight neck stiffness; the rest of the examination was normal. Laboratory findings showed a mild inflammatory syndrome. The patient had a lumbar puncture; the cerebrospinal fluid (CSF) showed moderate pleocytosis (140 leucocytes/ $\mu$ L with a mononuclear cell dominance). After a normal CT scan, an MRI examination was performed (figures 1 and 2). Several days later, intrathecal IgM and IgG antibodies came back positive.

Tickborne encephalitis virus (TBEV) is a flavivirus that is transmitted by *Ixodes* spp ticks in a vast area (from western Europe to Japan). TBEV is endemic in Europe where climatic conditions are suitable for its circulation. After an 8-day incubation period following the tick bite, frequently (1/3) unnoted by patients, the disease is usually biphasic. Initially, fever, fatigue and headache are the unspecific symptoms. The clinical spectrum in the second stage ranges from meningitis to severe encephalitis or myelitis. Serodiagnosis of TBEV is mostly straightforward (TBEV-IgM and IgG in blood or CSF).<sup>1</sup> This represents around 10 000 cases every year; morbidity is age related (highest in adults). About one-third of patients will have long-lasting sequelae (cognitive dysfunction, postencephalitic syndrome). No



**Figure 2** Coronal MRI, fluid attenuation inversion recovery sequence. Hyperintensity and swelling of the entire cerebellar vermis (arrow) with minimal involvement of the paravermis and sparing of the cerebellar hemispheres.

specific treatment exists, and active immunisation is the main preventive measure.<sup>2</sup>

## Learning points

- ▶ Flavivirus is transmitted by *Ixodes* spp (from western Europe to the eastern coast of Japan).
- ▶ The serological diagnosis is usually straightforward.
- ▶ There is no specific treatment, and immunisation is the main preventive measure.

**Contributors** PLB and CB were responsible for the design, draft and writing of the article. PB wrote the article.

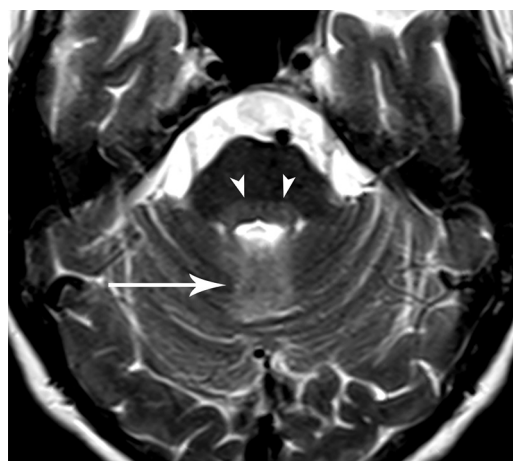
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**Patient consent** Obtained.

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**Figure 1** T2-weighted transverse MRI. Localised hyperintense band involving the tegmentum pontis (arrow heads) and the cerebellar vermis (arrow).



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