

Diagnosis

Case of the month

November 2011

Tick-borne encephalitis TBE



The TBE serology was initially negative but later an IgM titer against TBE developed and the IgG titer increased significantly. This was interpreted as a recent TBE infection. Analysis of CSF sampled at autopsy showed the presence of TBE-specific RNA, of European subtype. The last vaccination against TBE had been given eight years previously.

Tick-borne encephalitis (TBE) is a zoonosis. The natural hosts are rodents and transmission to humans occurs via tick bites. The virus causing TBE is a flavivirus, a small RNA virus. Incubation time is usually one to two weeks. There is a seasonal variation with most cases occurring during summer and fall.

The symptoms are those of an encephalitis with high fever, severe headache, occasionally seizures and paresis. For the majority of the affected the symptoms will disappear but in about a third of the patients extreme fatigue, memory disturbances etc may remain. The mortality rate is low.

The pathologic changes are mainly found in the gray matter of the diencephalon, brainstem and cerebellum. They consist of infiltrates of mononuclear cells, perivascular cuffing, microglial nodules and neuronophagia.

Ref. **Gelpi et al.** Journal of NeuroVirology 12:322-327, 2006