

## Arachnophobia - why we should all be wary of ticks

Dr Ashley M Croft

Many doctors now know about Lyme disease, a multi-system bacterial illness 'discovered' in the 1970s which infects small rodents and birds, and is transmitted to humans by Ixodes ticks.

Less well known, because less commonly encountered in some countries, is tick-borne encephalitis or TBE. Like Lyme disease, TBE is on the increase. [1] Unlike Lyme disease, TBE is a viral illness, so does not respond to antibiotic treatment.

TBE is a disease of the northern hemisphere for the simple reason that Ixodes ticks, with their hard, armour-like casing, cannot survive long in the tropics.[4] It is common in heathland and brush, and on the margins of woods in Scandinavia, Central and Eastern Europe, and across Russia. Those travelling on foot through this type of terrain should wear protective clothing against ticks, and should use a skin-applied acaricide, such as DEET. A TBE vaccine is available. [1]

Initial symptoms of TBE include fever, myalgia and malaise. But, as the name implies, it is in the central nervous system that the virus wreaks most havoc.

Patients exhibit altered consciousness, nerve palsies and, in up to 5% of cases, seizures. [2] The disease progression can be terrifying since the patient is commonly a young, fit walker or hiker.

TBE is typically a two-phase illness and should be strongly suspected in any hiker or walker who holidays in continental Europe, and who two weeks later develops a non-specific feverish illness lasting about a week, followed by a symptom-free interval again lasting about a week, followed by a dramatic relapse of illness with CNS involvement.

As with all infections associated with geography or activity, a very careful travel and social history is needed. A confounder in considering this diagnosis of TBE is that patients often cannot recall being bitten by a tick, since tick bites are frequently painless. The diagnosis can usually be confirmed through serology of CSF or serum.[3]

As with all the encephalitides (except herpes simplex encephalitis, for which early administration of intravenous aciclovir is mandatory), the treatment is essentially supportive.

Patients usually recover completely although with the most aggressive TBE variant, the Ural-Siberian virus sub-type, the case-fatality rate can be up to 8%.<sup>[5]</sup>

And remember – ticks are arachnids, and not ‘insects’. This is because they have four pairs of legs, not three!



### **Geographical distribution of clinical cases of TBE in Europe and Asia**

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**For more information please check our Best Practice topic Tick-borne Encephalitis complex (flavi) viruses.**

## About the author

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