

Tick-borne Encephalitis—still a serious disease?

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Even though Tick-Borne Encephalitis (TBE) is one of the few viral diseases that can be prevented by active immunization, the incidence is still increasing in most European and Eurasian countries. The only exception is Austria, where intensive vaccination campaigns over many years have dramatically diminished the number of TBE cases. The total number of annual cases is estimated to be up to 10,000 in Russia and up to 3,000 in European countries. The annual changes of the incidence has been associated with changes in the climate, explaining a more or less activity of ticks, but it is more likely that periods of sunny weather encourage more people to spend their leisure time outside in regions where infected ticks are alive.

Infection rates of ticks vary considerably depending on the regions they were analyzed. While in Western European Countries only up to 5 % of ticks are infected by the TBE-virus, in Siberia the infection rates of ticks rise up to 38 %. In some countries goat milk and relevant products are also important infection routes of TBE virus. In most countries, the areas of risk for TBE-virus infection are defined by the number of patients with TBE. With the increasing number of subjects immunized against TBE, this kind of risk definition needs to be redefined. Dobler et al. have proposed alternative methods to define areas of risks in the future.

About one-third of patients do not report tick bites and about one-third of patients develop symptomatic disease. The incubation period on an average lasts 7–10 days. A biphasic course of illness with a prodromal period occurs in about two thirds of patients. In European countries, TBE presents as meningitis in about 50 % of patients, as meningoencephalitis in 40 %, and as meningoencephalomyelitis in 10 %. The severity of TBE increases with age; in children and adolescents, meningitis is the predominant form of the disease. Long-term

prognosis is unfavorable in about 40–50 % of patients who suffer from sequelae for months to years, mainly in terms of pareses, ataxia, and other gait disturbances. No specific treatment for TBE is known so far, the application of corticosteroids has been shown to be unfavorable for the patients. However, TBE can be successfully prevented by active immunization. Both vaccines offered in Europe (Encepur[®], FSME-Immun[®]) are safe and highly protective against TBE.

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