



International Symposium on Tick-Borne Pathogens and Disease ITPD 2023

In honour of Gerold Stanek

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Austrian Society for Hygiene, Microbiology and Preventive Medicine (ÖGHMP)
and under the auspices of the
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BOOK OF ABSTRACTS



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P30 Comparison of tick-borne encephalitis (TBE) clinical disease in children and adults: a population-based study in Latvia, 2018-2020

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Background:

Tick-borne encephalitis (TBE) is an infection by the TBE virus (TBEV) resulting in symptoms of central nervous system inflammation. TBE follows an unpredictable clinical course with symptoms ranging from fever to severe encephalitis and death. Other studies have reported that TBEV infections are milder, with more favorable outcomes, in children than adults but population-based studies of TBEV infections are limited. Furthermore, recent studies indicate that TBE can result in severe neurological disease in children.

Methods:

Nationwide active surveillance for laboratory-identified TBEV-infected cases was conducted by Rīga Stradiņš University in Latvia from 2018-2020. Clinical and laboratory data were collected by interview and review of medical records; disease severity was judged by a neurologist using a published standard.

Results:

Surveillance identified 716 TBEV-infected cases with median age of 52.5 years; 6% (46/716) of TBEV-infected cases were in children (<17 years-of-age); Of the TBEV-infected cases, 47% (339/716) were female, and 97% (696/716) hospitalized. Among the TBEV-infected cases, 91.3% (42/46) of children and 81.3% (545/670) of adults (>18 years-of-age) had TBE. Among the TBE cases, meningitis was diagnosed in 86% (36/42) of children and 87% (474/545) of adults while meningoencephalitis was diagnosed in 14% (6/42) of children and 9% (50/545) adults. The median hospitalization length was 8.5 days for children and 12 days for adults. All 13 deaths and all 21 of the patients discharged from the hospital with persisting paresis were adults.

Conclusions:

In a population-based study in Latvia, TBEV infections followed a similar clinical course in children and adults with meningitis predominating; importantly, many of cases with meningitis had a moderate or severe clinical course. Among patients with TBE, the disease more frequently progressed to severe and lethal consequences in adults. The importance of TBE vaccination, which is the most effective method to prevent TBE, should be emphasized for all age groups.