

Autonomic involvement in tick-borne encephalitis (TBE): report of five cases

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BACKGROUND

Tick-borne encephalitis (TBE) is a viral infection of the CNS with significant acute and long-term morbidity. Dysfunction of the autonomic nervous system may be a potentially harmful complication of TBE.

MATERIAL AND METHODS

In a retrospective case series, 5 patients with acute TBE were evaluated for clinical signs of autonomic dysfunction and subject to autonomic testing. Heart rate variability (HRV) with 6 per minute deep breathing was performed between day 9 to 31 after onset of meningitis. Follow-up data were available in three cases.

RESULTS

All patients showed clinical signs of autonomic dysfunction, including upper and lower gastrointestinal tract symptoms, orthostatic hypotension, and urinary retention. A reduced HRV was observed in 4 patients, with sustained sinus tachycardia in 2 of them. The minimum of the HRV was reached 9 to 20 days after onset of meningitis. In one patient, normalization of the HRV occurred within 3 months.

CONCLUSION

Acute TBE can be associated with autonomic dysfunction including reduced HRV and tachycardia. Prospective studies are needed to analyze the incidence of autonomic dysfunction in TBE, and to clarify which patients have the highest risk for autonomic failure.

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